

**Parental perceptions and decisions relating to
violent video games before and after the
COVID-19 pandemic**

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ABSTRACT

Video games have become an increasingly popular pastime and form of entertainment for all ages and demographics. However, video games with violent themes have been a societal concern since the release of what was deemed the first violent video game in 1976. While formal definitions of what constitutes a “violent video game” may differ, previous research that explored the effect of violent video games on players has shown a connection between aggressive or violent behaviour and playing violent video games, yet many other studies disproved any correlation, much less causation. Thus, parents are left with an unclear evidence base, mixed messages, and assessments to make when their children ask to play video games with violent content. This thesis explores parents’ opinions on violence in video games, their perceptions of the impact of violent video games on children, and it examines parents’ general concerns about video game play. The research investigates how parents make decisions for their school-age children regarding violent video games, including their own childhood experiences, their child’s age, video game rating systems, and where and how they seek advice and information. Additionally, this work considers potential changes in parents’ attitudes and decisions about violent video game play in their homes during the COVID-19 pandemic quarantine periods. This study also analyses headlines from 2020-2021 to ascertain the media’s view of violent video games and its prospective impact on parents’ perceptions or decisions. This thesis posits that not only do parents need better access to accurate information about violent video games to make informed decisions for children, but it is necessary for schools to be more informed on violent video game play so they can better support children and their families. Therefore, this research project provides a timely foundation for more evidence-informed critical discussions with children, parents, and policymakers at various levels.

DECLARATIONS AND STATEMENTS

Declaration


This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

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Statement 1

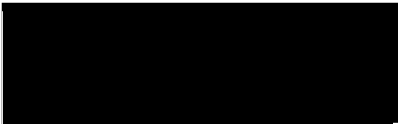
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DEFINITIONS AND ABBREVIATIONS

Video Games - includes games played on a computer, mobile phone, or gaming system such as (but not limited to) Xbox, PlayStation, and Nintendo. Gamer and Player are used interchangeably in this thesis. They both refer to an individual who plays video games either yearly, monthly, weekly, or daily. Unless noted, no distinction is made between the amount of time the individual spends playing video games.

AAP - American Academy of Pediatrics

ADHD - Attention Deficit Hyperactivity Disorder

AERA - American Educational Research Association

AIR - American Institutes for Research

AMA - American Medical Association

APA - American Psychiatric Association

ASD - Autism Spectrum Disorder

BERA - British Educational Research Association

CCOSA - Cooperative Council for Oklahoma School Administrators

CSM - Common Sense Media

DSM - Diagnostic and Statistical Manual of Mental Disorders

EDSAC - Electronic Delay Storage Automatic Calculator

EECERA - European Early Childhood Education Research Association

ELSPA - Entertainment and Leisure Software Publishers' Association

ESA - Entertainment Software Association

ESRB - Educational Software Review Board

FDA - U.S. Food and Drug Administration

FGC - Fighting Games Community

FTC - Federal Trade Commission

FPS - First-Person Shooter

GAM - General Aggression Model

GD - Gaming Disorder

GTA - Grand Theft Auto

HFA - High Functioning Autism

IGD - Internet Gaming Disorder

IPA - International Play Association
MCTBRP - Multinational Comparative Time Budget Research Project
MMOGs - Massive Multiplayer Online Games
MMORPGs- Massive Multiplayer Online Role-Playing Games
NAEYC - National Association for the Education of Young Children
NPC - Non-Playable Character
NES - Nintendo Entertainment System
PEGI - Pan European Game Information
PC - Personal Computer
PIU - Problematic Internet Usage
PPCT - Process-Person-Context-Time model
PSP - PlayStation Portable
RPGs - Role-Playing Games
SES - Socioeconomic Status
SPSS - Statistical Package for Social Sciences
UNICEF - United Nations Children's Fund
UK - United Kingdom
US - United States
VR - Virtual Reality
WHO - World Health Organization

1. INTRODUCTION

Violent video games have been a topic of discussion and a source of debate since the first video game deemed violent was released in 1976 (AMA Council on Science and Public Health, 2007; Egenfeldt-Nielsen et al., 2012). The release of *Mortal Kombat* in 1993 led to the creation of the Entertainment Software Ratings Board in the United States the following year, with the intent to inform parents about the content in their children's video games (Entertainment Software Association, 2023b; Robinson, 2012). The gun deaths at Columbine High School in Colorado in 1999, the "Beltway sniper" in 2002, and a shooter at Virginia Tech in 2007 "led to increased public scrutiny of the effects of violent video game play" (Adachi & Willoughby, 2011, p. 55).

There is subjectivity in describing what constitutes a violent video game, though, as there is no definition on which everyone agrees, and certainly in the wider research and policy literature. Therein lies part of the problem. Parents read and discuss news stories about mass shootings, and in the US, their children participate in lockdown drills at school to prepare for a potential intruder with a weapon. As a result, about one-third of parents in the US are very or extremely worried that a shooting could happen at their child's school (Hurst, 2022). These school shootings have led to some lawmakers and media outlets placing the blame on violent video games (Bella, 2019; Draper, 2019; Krigman, 2012). Consequently, many parents are not sure if it is acceptable for their children to be spending time playing violent video games.

In early 2020, the COVID-19 global pandemic emerged, and families were faced with unprecedented experiences (World Health Organization, 2024). For many, fear of contracting the virus kept everyone inside and isolated from others. Families of more than 48 million children worldwide (United Nations Children's Fund, 2020) were faced with virtual schoolwork for their children, some places of employment switched to remote working environments, and other parents lost their jobs as companies could not operate during lockdown conditions. Children were separated from their peers, and parents were isolated from in-person contact with other adults. Technology became an increasingly important communication tool, and parents were

forced to make unexpected decisions about video game play for the children in their household.

1.1 PERSONAL EXPERIENCE

As an early childhood educator, I believed that I witnessed a change in young children's behaviour as video games became more mainstream. I began my teaching career in 2003, with my first class of six- and seven-year-old children. From 2003 to 2019, I taught classrooms of children ranging from age three to age nine. A few years after I started teaching, I wondered about the video games children were playing at home and how much time they were spending on these games. I remembered video game play from my own childhood as a small part of our weekly activities, not nearly as often as my students were playing. Their video game play appeared to infiltrate their pretend play and impact their creativity. It seemed that their playground games and interactions became more physical and violent, as did their drawings and stories.

Around the same time, when I became a parent for the first time in 2007, the issue of violent video games became even more personal. As my three children grew, attended school, and made friends, they frequently asked to play games that I did not know, and sometimes those games involved shooting and killing. It made me uncomfortable to allow my young children to pretend to kill characters on a screen, even if it wasn't real. I was unsure if I should allow my children to play video games at all, much less violent ones. I had no interest in violent gaming as an adult or as a child. Although I did play video games in the mid 1980s when Nintendo released its first gaming system, the games that I played were clearly imaginary, with cartoon characters and unrealistic graphics. My memories of childhood video games include scenes from Super Mario Bros., Excitebike, Paperboy, and the Lion King video game based on the animated Disney movie. I also have fond memories of playing arcade games such as PacMan and Asteroids. None of those games involved killing another person, committing realistic violent acts, or displayed any blood or gore. I remember friends playing Mortal Kombat, where players battled to beat each other up and blood squirted from a character once it was defeated, but even with very unrealistic graphics, I did not enjoy watching others play this

game, much less desire to play it myself. I also grew up in a part of the US where gun ownership was uncommon, and I fortunately had no experience with real-life violence. I did not comprehend the appeal of playing violent video games and could not appreciate the gaming culture.

My spouse's childhood experiences with video games and weapons were different from mine. Their family owns guns and knives, frequently went hunting with dogs they raised for that purpose, and they often played many video games that involved weapons and killing. No one in my spouse's family is aggressive or violent, as they are all calm, not to mention highly successful, individuals. This challenged my notion of violent video games being harmful for players. However, I also realised that violent video games in the early 21st century looked much different than violent video games from the late 20th century. It did not dissuade me completely from considering if (and how) violent video games could harm children, causing them to behave violently or hinder their creativity. I observed my students and my own children for over a decade, and these thoughts did not dissipate. When I began this research, my children were aged twelve, eleven, and eight. All three played video games daily, and the older two played a few games that I would consider violent. The content bothered me but not my spouse, as they had experience playing similar games as a child.

Discussions with students' parents, my children's friends' parents, and my own friends have shown me that parents hear different opinions and are trying to discern what is factual and what is speculation. Some parents allow violent video games, others forbid all video games with violent content, while many make judgement calls on a game-by-game basis. I was curious if what I thought about children's behaviour in the classroom was real or imagined. I needed to know how I should approach the subject of violent video games with my own children as well as with students' parents who asked me for advice about their children. I wondered what other parents thought and what decisions they were making in their households regarding their children playing violent video games. I wondered if there was anything I could or needed to do in my classroom to support my students who were playing violent video games at home. I also wondered if parents' perceptions or decisions could affect my advocacy work, as I am involved in local and national professional

organisations for early childhood education, take trips to my state capitol to talk with legislators, and write letters to both state and national legislators. When the COVID-19 pandemic emerged in early 2020, parents all over the world were lamenting that their children were having entirely too much video game time. I wondered if they were playing the same games they always played or if social isolation changed some household rules.

1.2 FOCUS OF THE RESEARCH STUDY

In the past three decades, much of the research about violent video games has focused on whether violent video games incite violent and aggressive behaviour, particularly in children. As Durkin and Barber (2002) summarized, “The available evidence is controversial” (p. 375). Many studies found that violent video games led to aggressive behaviour in frustrating situations (Irwin & Gross, 1995), decreased prosocial behaviour (Anderson & Bushman, 2001), or should be considered a risk factor for later aggression (Anderson et al., 2008). One study suggested that previous research actually *underestimated* the negative impact on behaviour, cognition, and affect (Anderson, 2003). Conversely, a number of studies determined that violent video games do not irrefutably lead to acts of aggression or real-world violence (Bensley & Van Eenwyk, 2001; Markey, Markey, et al., 2015). Other experimental studies found an increase in short-term anxiety but not hostility levels after playing a violent video game (Baldaro et al., 2004), found no link at all (Przybylski & Weinstein, 2019), or even proposed that violent video games can have a positive effect on players (Ferguson, 2010). Some researchers (Ritter & Eslea, 2005; Tedeschi & Quigley, 1996) questioned the laboratory paradigms used to study aggression, such as Bobo doll modelling (Bandura, 1965), the teacher/learner paradigm (Buss, 1961), the essay evaluations (Berkowitz et al., 1963), the competitive reaction time game procedures (Taylor, 1967), the hot sauce allocation (Lieberman et al., 1999), the bungled procedure (Russell et al., 1996), and the experimental graffiti and tearing procedure (Norlander et al., 1998). Other researchers (Adachi & Willoughby, 2011) wondered whether previous studies evaluated aggressiveness or competitiveness. Elson and Ferguson (2014) critically analysed twenty-five years’ worth of research on

violent video games and concluded that real-life violence and aggression are explained by family background and differences in parenting, not by violent video game play. Moreover, in a 2020 resolution, the American Psychological Association acknowledged the research showing a link between violent video game play and violent behaviour but cautioned that, “Attributing violence to violent video gaming is not scientifically sound and draws attention away from other factors” (American Psychological Association, 2020, p. 1).

Despite this conclusion, the stigma of violent video games as a negative influence persists, as evidenced by headlines such as “Ten Reasons why Children under the Age of 12 Should NOT Play Violent Video Games” (Daughtry, 2022) and “Violent Video Games Can Lead to Violent Behavior” (Triggs, 2022). Books like *Glow Kids: How Screen Addiction is Hijacking Our Kids – and How to Break the Trance* (Kardaras, 2016) warn parents about the dangers of video games. On the contrary, there are internet articles such as “Video Games Aren’t Why Shootings Happen. Politicians Still Blame Them” (Draper, 2019). There are books written for parents that praise the positive contribution video games have made and will continue to make, such as *Bit by Bit: How Video Games Transformed Our World* (Ervin, 2017) and *Lost in a Good Game: Why We Play Video Games and What They Can Do For Us* (Etchells, 2019). Similar books for parents such as *Moral Combat: Why the War on Violent Games is Wrong* (Markey & Ferguson, 2017b) attempt to dispel the myth that violent games are inherently harmful.

A simple Google search for “violent video games” returned a Wikipedia page with the headline “Video games linked to violence” as the first result, along with a note about the 1999 Columbine massacre and that some research concludes violent video games may cause an increase in aggressive behaviour. If one clicked on the Wikipedia page, however, you would see the next sentence, “Other research argues that there are no such effects of violent video games” (*Violence and Video Games*, 2023). Although Wikipedia is not deemed a scholarly source, parents searching for advice on the internet are likely to see this result. The internet is a constantly changing and evolving entity, as repeating a Google search with the same terms one week later gave slightly different results. The top result became “Violent video games can increase aggression” and the next result under a title “Violence and video

games” was subtext that read, in bold type, “Studies have shown no connection between video games and violent behavior.” You would also see headlines such as “Playing violent video games does not appear to have a meaningful impact on aggression” and “Video games unlikely to cause real-world violence, experts say” in that search.

Parents are thus receiving confusing and mixed messages from media, various professionals, friends, and family members. Yet research on how parents make decisions about their children's involvement in violent video game play is sparse and it is challenging to use it to help shape policies and behaviours. This study focuses on parental opinions and decisions regarding their children playing video games with violent content. It considers parents' childhood experiences with violent video games, whether they limit their child's violent video game play, how parents evaluate whether a game is violent or not, and the effectiveness of video game rating systems. In addition, it considers the potential impact of the COVID-19 pandemic and subsequent quarantine periods on parents' perceptions and decisions about violent video games, as well as whether news media is an influential source of information for parents and their perceptions of violent video games. This study does not consider other potential negative aspects of video games, including but not limited to sexualizing or stereotyping characters based on their gender, race, ethnicity, or other related factors. While concepts related to gender or sexual content arose during interviews with parents, that was not the intended focus of this study.

1.2.1 RESEARCH QUESTIONS

The following research questions were created after an exhaustive review of the existing literature on violent video games and their potential effect on real-life aggression. They are explained more in depth in *Chapter 3: Research Questions*.

1. What attributes of video games do parents consider violent?
2. What are parents' perceptions of the impact of violent video games on children?

3. How do parents make decisions regarding their children's access to violent video games and what are their concerns?
4. Has the COVID-19 global pandemic altered parents' perceptions of and/or decisions about violent video game play?
5. What narrative do media headlines mentioning violent video games portray and what are parents' perceptions of media reports?

1.3 CONTRIBUTION TO THE FIELD OF STUDY

This study investigates the parental aspect of children's access to violent video games and considers the potential effects of both the COVID-19 pandemic and news media on their perceptions and decisions. The findings show that parents make decisions about violent video game play in their homes based on their child's age, behaviour, and their own personal experience and opinions, not necessarily based on ratings or others' viewpoints. However, the internet can be a powerful source of information for parents, and what parents find can affect their choices. When forced into the unprecedented situation of a global health emergency, rules for video game play were adapted and circumstances altered some parents' perceptions of violent video games. The results of this study question the effectiveness of video game ratings in the US and offer valuable information regarding laws or policies related to young children and their access to violent video games. Additionally, the findings of this study provide valuable information for classroom teachers and families. It provides a look at violent video games in the context of the systems in which children grow and develop. As teachers and parents observe the interactions of children in and out of the classroom, they can use these findings to help evaluate children's behaviour and determine causes. Knowing what may be causing a child's violent behaviour will lead to appropriate interventions to improve their well-being.

1.4 THESIS OUTLINE

The thesis is structured as follows:

Chapter 2: Review of the Literature explores the relevant literature in the area. Chapter 2 discusses research about video games as a form of play and concerns about violence in video games. It also examines previous research conducted regarding violent video games and their effect on individuals. Additionally, Chapter 2 addresses current video game rating systems and policies, and the media narrative of violent video games. This chapter concludes with a section on the most recent research studies about the COVID-19 pandemic and its effect on both video game play and parents' perceptions of the effects of video game play, including how much time during the day was spent engaged in play.

Chapter 3: Research Mapping explains each research question and details the process by which each question was selected for this study. This chapter covers the overarching goal of this study and what each research question was aiming to discover.

Chapter 4: Theoretical Framework: Beginning with Ecological Systems Theory examines the theoretical framework in which this research can be understood. Chapter 4 explores adaptations of ecological systems theory that recognize the influence of genetic factors, technology, and violence on the individual. This chapter includes the research aims for this study.

Chapter 5: Methodology and Methods explains how this mixed-methods research study was conducted. This chapter considers planning the research amid a global pandemic and details the procedures for designing and collecting data. It also details the methods used for the survey, interviews, and media content analysis, including the participants and materials for the survey and interviews and the procedures for each data collection method.

Chapter 6: Findings analyses the quantitative data from the survey responses, the qualitative data from the interviews, and discusses the results of the media content analysis.

Chapter 7: Discussion revisits the findings from the survey, interview, and media content analysis. This chapter examines the significance of the findings relative to the research questions, current literature, and the theoretical framework used to frame the study.

Chapter 8: Conclusion summarizes the body of work in this thesis. This chapter also offers suggestions on remedying information disconnect and proposes future research topics.

Chapter 9: Appendices contains the survey and interview consent forms, survey and interview questions, tables for all graphs included in the body of this thesis, an example of the interview notes coding process, and a record of previous NexisUni searches for the media content analysis.

Chapter 10: References details all the work cited in this thesis.

2. REVIEW OF THE LITERATURE

2.1 INTRODUCTION

This chapter will review the current literature concerning the following aspects of video games: their association with the many types of play, societal concerns about their impact on social skills, the areas of cognitive development and creativity, and dangers of addiction, desensitisation to violence, and problems with mental health. This chapter will also discuss the history of violent video games and evaluate prior research about violence in video games and its impact on children. It will review current policies that affect the sale and distribution of violent video games. Additionally, this chapter will explore previous research evaluating the media's impact on the public's perception of violent video games. And lastly, it will critically evaluate research from the past four years that addresses the COVID-19 pandemic as it relates to video games.

Resources for this literature review were found through multiple methods. Initial searches were conducted utilising the iFind online search engine accessed through both Swansea University and the University of Central Oklahoma and through Google Scholar. A combination of keywords and phrases were used, such as "violence and video games," "aggression and video games," "violent behaviour and children and video games," "violent video games," "effect of violent video games on aggression," and "effect of violent video games on behaviour." If a relevant article was discovered without the full text using one of these databases, the other database was used to search for that resource. Additionally, a snowball approach was often followed, by searching iFind or Google Scholar for articles cited in primary resources. Research Rabbit was also utilised for this purpose of finding secondary sources; journal article titles entered into the Research Rabbit system led to many other connected articles that cited or were cited in that one particular article. The ProQuest database was useful when searching for specific themes, such as video game history. Books found through any of these search options were located either in the library at the University of Central Oklahoma (UCO), the local public Metropolitan Library System, online through Google

Books, or on the bookshelves of other researchers at UCO. Articles and books unavailable in full print were requested through the Inter-Library Loan system at the University of Central Oklahoma.

2.2 HISTORICAL CONTEXT

To understand this study and its findings, it is necessary to explore the history of video games. This includes when and how video games became part of mainstream culture. The first video games were played in labs on college campuses and do not compare to the video games people play at home today (Egenfeldt-Nielsen et al., 2012; Montfort & Bogost, 2020; Nyitray, 2019). Violent video games have been a topic of discussion ever since the first video game that caused harm on a screen was released (Egenfeldt-Nielsen et al., 2012). As Stanton (2015) articulated, “The history of games is not a straight line of jewels but a twisted path with many beautiful failures and inexplicably popular dead ends” (p. 6). As consumer technology in countries such as Russia and China tend to lag behind (Stanton, 2015), the following sections explore the history of both video games in general and the introduction of violent video games in the western world.

2.2.1 THE HISTORY OF VIDEO GAMES

Video games have been part of American culture for nearly 75 years (AMA Council on Science and Public Health, 2007), when the first known video game, created in the United Kingdom in the early 1950s, was marketed in the United States (Egenfeldt-Nielsen et al., 2012). Although there is no one definition of a video game, it can be defined as “an interactive game experience that uses a device to display graphics on a screen” (Nytiray, 2019, p. 7). What we now consider a video game has changed drastically since arcade game era (Jagoda, 2017). Video games combine the arts, humanities, social sciences, and computer science and have an everlasting impact on popular culture (Nytiray, 2019). What was once something for younger audiences, video games have increasingly become a significant facet of society (Nytiray, 2019). College students are enrolling in degree programs geared towards video games, books are being written to support academic interests in video games,

and video game artifacts are being preserved and studied for archival purposes (Nyitray, 2019).

Late twentieth and early twenty-first century video games often mimic and build upon designs from earlier games, both digital and non-digital (Egenfeldt-Nielsen et al., 2012). For example, the role-playing tabletop board game *Dungeons and Dragons*, whose monthly sales reached 7000 copies by 1979, was one precursor to computer-based role-playing video games. Gamers were inspired by the game's complex, adaptable rules that allowed players to create new fantasy worlds using their imagination. In the next decade, many role-playing games followed, such as *Call of Cthulhu*, *Toon*, *Paranoia*, *Cyberpunk*, and *Vampire*. Role-Playing Games (RPGs) in the video game market share specific qualities with their tabletop ancestors. "Characters grow by accumulating 'experience points,' which are often acquired by fighting and picking up treasure; similarly, many games revolve around simple missions (also called quests) where a player's ability to hack and slash is all-important" (Egenfeldt-Nielsen et al., 2012, p. 56). These early digital role-playing games have evolved into today's Massively Multiplayer Online Role-Playing Games (MMORPGs) (Egenfeldt-Nielsen et al., 2012).

In 1949, researchers at the University of Cambridge operated one of the very first computers in the world that could store a program, named the Electronic Delay Storage Automatic Calculator (EDSAC). In 1952, A.S. Douglas, a PhD student, programmed a digital game on the EDSAC that he called *Noughts and Crosses*, which was essentially a one-player versus the computer version of *Tic-Tac-Toe*. It could only be played on the EDSAC, but it was possibly the first video game created. In 1958, Willy Higinbotham created the first digital tennis game, which he called *Tennis for Two*. It ran on an analogue computer and was intended to be a distraction from mundane lab work at Brookhaven National Laboratory in Long Island (Egenfeldt-Nielsen et al., 2012; Montfort & Bogost, 2020). It was the first game on a screen that could be controlled in real time, and it wasn't based on a board game (Stanton, 2015). In order to play the game, visitors to the laboratory had to push a button on a separate piece of equipment, which introduced the idea of joysticks to control the game (Egenfeldt-Nielsen et al., 2012).

In 1961, at the Massachusetts Institute of Technology, three employees created interactive programs, including *Bouncing Ball*, *Mouse in the Maze*, and *Tic-Tac-Toe*. Although these games were not captivating, they led the MIT employees to develop *Spacewar!* the following year. *Spacewar!* was a game co-starring two spaceships that were battling in galactic warfare. It was successful, though not commercially, as its inventors did not believe that it held any commercial value. Early programmers created new versions of the game, updating it, and introducing more strategy and aesthetics. *Spacewar!* was a novel game, as its “adherence to programming standards (as opposed to games which were directly bound to unique machines) would serve as direct inspiration for later game development” (Egenfeldt-Nielsen et al., 2012, pp. 58-59).

Ralph H. Baer, a television engineer, invented a prototype for the first video game console in 1967. It plugged into a television to play a game called *Fox and Hounds*, in which a player navigated his spot (a fox) to capture other spots (hounds). This game was soon followed by a shooting game, a game called *Firefighter*, and a ping-pong game. In 1968, Baer and his team entered a contract with Magnavox to sell their console, but this deal was not realized until the next decade. The 1970s launched the popularity of arcade games and gaming culture (Egenfeldt-Nielsen et al., 2012).

Pong, released in 1972, is considered the first successful video game (Montfort & Bogost, 2020) and referred to as the “grandfather of video games” (Hansen, 2016, p. 1). It was not the first computer game, nor was it even the first digital tennis game, as that title belongs to Willy Higinbotham’s *Tennis for Two*, but it was the first commercially successful game (Montfort & Bogost, 2020). *Pong* was created by Nolan Bushnell, an engineering college student at the University of Utah. In 1962, he played *Spacewar!* which ignited his desire to design a comparable game that could be played in an arcade. In 1970, he created the world’s first arcade game, *Computer Space*, which despite its failure, led the way for *Pong*’s success (Egenfeldt-Nielsen et al., 2012). In 1972, he started Atari and invented *Pong*. Bushnell placed *Pong* in a nearby tavern, and it was an overnight phenomenon. *Pong*’s success derived from four aspects: it was cheap, only 25 cents; you played it with friends; it had a name that was fun to say; it was easy (Hansen, 2016). It was so prosperous,

that in just two years, 100,000 *Pong*-style machines were produced and installed in taverns, spaces that are designed for social encounters and already contained multiplayer games such as darts, pool, and pinball machines (Montfort & Bogost, 2020).

Atari and *Pong* were not the only things to hit the market in 1972. That same year, the Magnavox Odyssey became the world's first home video game console (Egenfeldt-Nielsen et al., 2012; Montfort & Bogost, 2020). Ralph Baer, the creator of the Odyssey, brought several lawsuits against other companies. Magnavox prevailed in suing Bushnell for his *Pong* game, as there was a television tennis game on the Odyssey that debuted before *Pong's* inception. In 1973, Atari also entered the home video game console market, targeting families and children, with a home version of *Pong*. The Odyssey had the capability to play 12 games, but it was necessary to attach different plastic overlays on the television screen to switch between games. As the machine had no memory or processor, its simplicity did not last more than three years; it was discontinued in 1975 (Montfort & Bogost, 2020). Home-Pong, Atari's one-game-only console, entered homes in 1975. The following year, Atari released their Channel F console that used plug-in cartridges containing individual games. It was the first of its kind, as previous consoles were pre-loaded with games that required players to flip switches to alternate between those games. This was a revolutionary idea, which Atari continued with its next console, the Atari 2600 (Egenfeldt-Nielsen et al., 2012).

The next prosperous game debuted a few years later in 1978. Like *Pong*, *Space Invaders* was a large arcade game that required quarters to play. It differed in that it was a single-player game with multiple buttons to move and fire lasers from your tank at the aliens. Over 400,000 *Space Invaders* games were installed in arcades, and the equivalent of \$13 billion today. Tomohiro Nishikado single-handedly designed and crafted *Space Invaders*, a game that introduced many "firsts" to the field of video games. It was not only the first game to introduce the concept of a "high score" but the first to save a player's score. There was also no end to *Space Invaders*, for as a player did well, they simply moved on to harder, faster levels of play. In essence, *Space Invaders* was the first shooter game, as a player had to shoot at enemies and dodge lasers being shot at them. Additionally, it was the first game to have a

continuous soundtrack, one that got faster as the levels got more difficult (Hansen, 2016). *Space Invaders* brought arcade games to more of the public, as it was played not only in arcades, but in malls, convenience stores, and restaurants in the US. Although it did not have the larger cultural impact as *Space Invaders*, Atari's game *Asteroids* hit arcades in 1979 and amassed a greater profit than *Space Invaders* (Egenfeldt-Nielsen et al., 2012).

In Japan in 1979, Pac-Man, originally called *Pakkuman*, was created by Toru Iwatani. He wanted to create a game that would entice girls to play, as previous games like *Space Invaders* were largely played by boys. When Pac-Man came to America in 1980, it was an immediate success that quickly out-earned *Space Invaders*. It was colourful, fast, and not easy. An important addition to the video game industry, Pac-Man also had a main character, supporting characters, ghosts Inky, Pinky, Blinky, and Clyde, and a story. Soon there was Pac-Man merchandise and a tv show. Pac-Man was cited as the world's most recognizable video game character in the Guinness Book of World Records (Hansen, 2016). At the same time, home computer systems were also evolving to be able to play games on cartridges and floppy disks (Wolf et al., 2012).

In 1981, the arcade video game industry profited around \$5 to 7 billion each year, and the home video game sales tripled (Egenfeldt-Nielsen et al., 2012; Wolf et al., 2012). More home video game consoles were released in 1982 than any other year: Atari's 520 Super System, Emerson's Arcadia 2001, Milton Bradley's Vectrex, and Coleco released the ColecoVision and the Gemini (Hansen, 2016). The market was oversaturated by the end of the year, as profits plummeted 35 percent from 1982 to 1983 (Wolf et al., 2012). By 1984, one out of every four homes in the US owned a home video game console (Egenfeldt-Nielsen et al., 2012), and rather than continuously buying new consoles to play at home, gamers spent their money at arcades where they could play a variety of games for mere quarters (Hansen, 2016). Atari made several failed ventures in the early 1980s. They released a poorly adapted version of *Pac-Man* and created the video game flop *E.T. the Extra-Terrestrial* for their Atari 2600 in 1981 (Egenfeldt-Nielsen et al., 2012). Atari also released their failed three-dimensional game *I, Robot* in 1983, which led to a loss of 500 billion dollars (Wolf et al., 2012). Atari lost court cases to

independent developers, which resulted in third-party publishers creating games for the Atari machines. These games were of uncertain quality (Egenfeldt-Nielsen et al., 2012). Games were being produced rapidly and cheaply as competition grew among companies (Wolf et al., 2012). At this time, Mattel left the home video game industry, and the only system to enter the market in 1984, Rick Dyer's Halcyon laserdisc game system, failed as well (Wolf et al., 2012). Another development that cannot be ignored was the introduction and affordability of personal computers. Consumers realized the versatility of a home computer, which could also play games on floppy disks, and opted to buy a computer instead of a home video game console (Egenfeldt-Nielsen et al., 2012). This was the Great Video Game Industry Crash of North America that continued until 1985 when Nintendo introduced their Nintendo Entertainment System (NES) to the United States (Wolf et al., 2012).

Nintendo, a Japanese company, had originally begun selling their home consoles in 1980 (Hansen, 2016). In 1983, they released the NES, originally called the Nintendo Famicom (Egenfeldt-Nielsen et al., 2012; Wolf et al., 2012), short for family computer, in Japan where it did very well (Egenfeldt-Nielsen et al., 2012). Up to this point, Nintendo's Donkey Kong and *Mario* games had done well in US arcades. Hiroshi Yamauchi, the president of Nintendo, recognized that their hit game *Mario Bros.* was the key to selling more of their home consoles. An artist, Yamauchi gave Mario a new home in what he called The Mushroom Kingdom, filled with cute, colourful characters and backdrops. His artistic vision propelled sales of Nintendo's home console in the US. By 1989, Nintendo dominated the video game console industry (Hansen, 2016) and home video game console systems eclipsed arcades in the 1990s (Wolf et al., 2012). Since then, Mario has become more recognizable than Mickey Mouse, competed in over 200 video games, had operas written about him, starred in his own cartoon series, and two films (Hansen, 2016). Most recently, the *Super Mario Bros. Movie* debuted in movie theatres in the US on 5 April 2023 and Japan on 28 April 2023. The NES successfully distanced itself from the calamitous reputation of previous consoles and remained on the market until 1995 (Science Museum Group, 2021).

The Sega Mega Drive was released in Japan in 1988 and under the name Sega Genesis in the US in 1989 (Kent, 2021; Stanton, 2015). Sega saw success with *Sonic the Hedgehog*, released in 1991 for its Mega Drive/Genesis game console. *Sonic the Hedgehog* was colourful and engaging, and moved at speeds quicker than any other game, causing the Genesis to outsell Nintendo's Super Nintendo that Christmas (Stanton, 2015).

Nintendo expanded the home video game console market in 1989 by introducing Game Boy, their hand-held system that could travel with gamers wherever they went (Hansen, 2016). Despite competition with Atari's Lynx, and Sega's Game Gear, Nintendo's Game Boy prevailed (Stanton, 2015). It was not the most powerful handheld console on the market, but it was the most successful, in part because its black and white screen prolonged battery life, compared to Sega's Game Gear and Atari's Lynx (Stanton, 2015). After tracking down the rights that were being sold illegally, Nintendo paid the Soviet Union to acquire *Tetris* from Alexey Pajitnov, a Russian engineer (Hansen, 2016). They produced a version to be played on the Game Boy and packaged the game with the device, and thereby began a *Tetris* sensation (Hansen, 2016). Research has since discovered that playing Tetris is not only good for our brains, but it can help with post-traumatic stress and weight loss (Hansen, 2016). In the few years following Game Boy's release, Nintendo released other successful games for their handheld console, including *Super Mario Land*, *Donkey Kong*, and *The Legend of Zelda: Links Awakening* (Stanton, 2015). Nintendo released their dual-screen handheld with touch-screen capabilities, the Nintendo DS, in 2004, which competed with Sony's PlayStation Portable (PSP) that was released the same year (Stanton, 2015). The PSP had a beautiful screen, online capabilities, and more storage for games and did well until it was retired in 2014 (Stanton, 2015).

The early 1990s saw the emergence of 3D graphics in video games, specifically the arcade games *Virtua Racing* and *Virtua Fighter*, and although the technology produced crude images, it laid the foundation for more advanced graphics and movements in future games (Kent, 2010). Nintendo's *Donkey Kong Country* series featured 3D images that outshone any on Sega's current games (Stanton, 2015). Sony released their first PlayStation console in 1994 (Kent, 2010), and this began their influence in the era of interactive

video game play (Kline et al., 2003). The timing of the release of Sony's PlayStation was perfectly timed in the hole when Sega players were frustrated with the failures of the Saturn and Nintendo players were awaiting the new N64 console (Kline et al., 2003). Sony targeted 12 to 24-year-olds who were familiar with their brand, had disposable income, and appealed to them with their Crash Bandicoot character, featured in a series of PlayStation games (Kline et al., 2003). The 3D geometry engine in a single processing chip made it easy to program, and with only a ten-dollar licensing fee, Sony made the PlayStation an appealing venture for game developers (Kent, 2010). The success of Sony's PlayStation was evident when it earned 40% of Sony's profits by 1998, and 20% of households owned a PlayStation by 2001 (Kline et al., 2003).

The same year the first PlayStation was released, Windows95 enabled video games to be installed and run easier on computers. This invention expanded the video game community to males in their 30s by introducing sports games and civic games such as *Sim City* that could be played on a personal computer (PC). The availability of the internet expanded the popularity of PC games by facilitating massive multiplayer gaming and persistent universe games, in which "the 'world' exists on an ongoing basis, regardless of the entry or exit of any particular participant" (Kline et al., 2003, p. 159). Services such as PlayStation Network, Xbox Live, and Steam emerged as platforms that both distributed games to consumers (Jagoda, 2017) and updated them automatically, and in 2014, 70-80% of PC games were marketed through Steam (Stanton, 2015).

Sega re-entered the scene with the release of their new console the Dreamcast and seventeen games, including *Sonic Adventure* in 1998 (Stanton, 2015). Sony released the PlayStation 2 the following year, and crucial features of its success were that it played all previous PlayStation games and was also a DVD player (Stanton, 2015). In 1998 and 1999, Nintendo experienced such success with its handheld *Pokémon* games that it opened an entirely new company just for *Pokémon* (Stanton, 2015). Microsoft, which already created PC games, entered the home console market in 2001, with little hope of their Xbox outperforming the PlayStation 2 (Stanton, 2015).

Although the first game with the capacity for multiple players to connect, titled Multi-User Dungeon (MUD), was created in 1980, it wasn't until widespread internet access in the mid 1990s along with YouTube and Twitch's ability to stream virtual games that online competition games took hold of the gaming community (Stanton, 2015). Massive Multiplayer Online Games (MMOGs) such as *Meridian 59*, which was the first subscription-model game, *World of Warcraft*, *Ultima Online*, and *EverQuest* required an ongoing relationship between players and game developers to keep the games updated and relevant (Stanton, 2015).

A new type of gaming arose in 2006 with Nintendo's release of the Wii console (Jagoda, 2017), which had a controller like a television remote, a grid of options including weather and news, customizable Mii characters, and came packaged with their new game *Wii Sports* (Stanton, 2015). The Wii targeted the general population rather than skilled gamers (Jagoda, 2017). Stanton (2015) declared, "*Wii Sports* may be the best and is definitely the most important piece of launch software in video-game history. ...it encapsulated the most important technology advance since 3D visuals" (p. 314). By 2007, the Nintendo Wii outsold Sony's PS3 and Microsoft's Xbox 360 combined, and by 2008, 2.4 million Wii consoles were being produced and sold each month (Stanton, 2015). While many Wii games did not survive, *Wii Fit* and *Carnival Games* in 2007 and *Just Dance* in 2009 appealed to consumers from children to those in nursing homes (Stanton, 2015).

The internet continued to change the gaming landscape, with the capability of independent coders to create and publish their own games online (Stanton, 2015). The most successful indie game thus far is *Minecraft*, created by Markus Persson in 2009 and sold to Microsoft in 2014 for \$2.5 billion (Stanton 2015). *Minecraft* is a game of creation, and "it is a universe where cooperation is not just great fun but almost mandatory in order to create truly impressive structures or embark on the toughest adventures" (Stanton, 2015, p. 360). The open-world game allows players to add user-created mods, one of the features that makes the game appealing to young children especially (Stanton 2015).

2.2.2 THE HISTORY OF VIOLENT VIDEO GAMES

The first video game that could be potentially classified as violent was released in 1976. In this arcade game, players drove a “car” over stick figure “gremlins” that turned into gravestones. The graphics were poor and the game not realistic, but the intent was violent (Egenfeldt-Nielsen et al., 2012; D. A. Gentile & Anderson, 2003). *Death Race* marked “the beginning of a long-standing tradition of public outrage and worry over the morality of games and their players” (Egenfeldt-Nielsen et al., 2012, p. 62). In response to public concerns and complaints, it was removed from the market (AMA Council on Science and Public Health, 2007).

Atari dominated the video game market in the 1970s and through to 1985. Atari would not permit violence against people, only inanimate objects such as flying saucers or tanks. When Nintendo entered the home entertainment scene in 1985, graphics and audio capabilities were improved, and Nintendo experimented “with what the public wanted and would accept in video games...[but] Gradually it became clear that games sold better if they contained more violence” (D. A. Gentile & Anderson, 2003, pp. 137-138). Sega released *Altered Beast*, a game where your character beats up opponents and can acquire power-ups to change into various beasts with power-ups (Stanton, 2015). Sega debuted *Herzog Swein* in 1990, a military game that combined shooter mechanics with real-time strategy, which influenced the later *Dune II* game (Stanton, 2015). *Double Dragon* and *Mortal Kombat* became best-selling one-on-one fighting games (D. A. Gentile & Anderson, 2003), and *Street Fighter II* changed the fighting video game scene in 1991 (Hansen, 2016). *Street Fighter II* allowed players to choose not only one of multiple fighting styles, but also between multiple characters with their own unique controls and backstory (Hansen, 2016).

The first first-person shooter (FPS) game, *Wolfenstein 3D*, was released in 1992 and another titled *Doom* followed in 1993. *Doom* had more blood, gore, and opportunities to kill other players rather than monsters (D. A. Gentile & Anderson, 2003). Shortly afterwards, PlayStation games were released on disks, which enabled Sony to increase the quality of game graphics (D. A. Gentile & Anderson, 2003). This technological advance made it possible for

game designers to create more realistic violence (D. A. Gentile & Anderson, 2003).

After its success in arcades, SEGA released *Mortal Kombat* for home video game consoles in 1993. *Mortal Kombat's* popularity continued to soar, and within two years, it could be played on nearly every home video game console system (Hansen, 2016). Stanton (2015) described, "The game's 'fatalities' were one of the marketing triumphs of the 1990s, and arguably in videogame history, both enticing impressionable youth and scandalizing their parents" (p. 181). In 1995, New Line Cinema produced an action-packed film based on the game that earned 120 million dollars around the world. The arcade version of *Mortal Kombat* is the ninth all-time bestselling game, and the home video game version ranks in the top 50 bestselling game franchises, with over 32.5 million copies sold (Stanton, 2015).

When Windows95 enhanced the ability of video games to jump into the PC market, the end of the 20th century saw the release of popular war strategy video games such as *Civilisation* and *Gettysburg*, ultraviolent games like *Doom* and *Quake*, and a series of Star Wars games (Kline et al., 2003). *Deer Hunter*, introduced in 1998, was a rudimentary PC hunting game that experienced surprising success, as it also expanded the gaming community (Kline et al., 2003). The series of violent medieval *Ultima* games created by Richard Garriott (Kline et al., 2003) evolved into *Ultima Online*, which emerged in 1998 (Kolo & Baur, 2004). While "early *Ultima* games were governed by the straightforward logic of violent conquest and unrestrained pillage" (Kline et al., 2003, p. 161) subsequent *Ultima* games required players to exhibit eight specific virtues to achieve success in the game, which set it apart from other violent games on the market at the time. In 2000, the PC game *Soldier of Fortune* was released,

...marking an all-time high in video game violence realism. This first-person shooter game was designed in collaboration with an ex-army colonel and features 26 different 'killing zones' in the body. The characters in the game respond realistically to different shots depending on where in the body they are shot, with what weapons, and from what distance. (D. A. Gentile & Anderson, 2003, p. 138)

First-person shooter games were well-suited to PCs due to the precision of the mouse and keyboard, but they emerged on consoles with the 1997 release of Nintendo's *Goldeneye 007* (Stanton, 2015). The level of detail in the game, allowing players to zoom their rifle view and stealthily attack enemies, made *Goldeneye 007* a success (Stanton, 2015). *Goldeneye* paved the way for *Halo*, a FPS game with some new ideas around main characters, helpful non-playable character (NPC) marines, a regenerating shield, a jeep with a back-mounted cannon that can drive at high speeds across the sprawling landscapes, increasingly difficult levels, (Stanton, 2015). A few years later, Microsoft acquired *Halo: Combat Evolved* to release exclusively on their new Xbox in 2001, which was a success (Stanton, 2015).

Online gaming paved the way for the eSports genre and FPS games like the *Counter-Strike* series, with the most recent version created in 2012, where you are either a terrorist or counterterrorist attempting to plant or diffuse bombs (Stanton, 2015). Each gun utilised in the game has its own specific recoil and features, and the economy aspect of the game rewards players so they can purchase better guns (Stanton, 2015). Multiplayer Online Battle Arena games (MOBAs) such as *League of Legends* released in 2009, *Starcraft II* in 2010, and *Dota 2* in 2013, dominated eSports arenas, with *League of Legends* boasting 27 million players each day in 2014 (Stanton, 2015).

Originally called *Race and Chase*, the *Grand Theft Auto* series debuted on the PlayStation in 1997 (Stanton 2015). It combined driving and shooting in an open-world game that really came to life when it added 3D graphics (Stanton 2015). Players can do almost anything they'd like, drive any car on the road, and explore the city. It has since been released on multiple consoles, and sequels include titles such as *Grand Theft Auto II - V*, *Grand Theft Auto: Vice City*, *Grand Theft Auto: Chinatown Wars*, *Grand Theft Auto: Tales from Liberty City*, *Grand Theft Auto: San Andreas*. Stanton (2015) explained that *Vice City* was "heavily inspired by Miami Vice and sending up the coke-fuelled excesses of that era...where crime is almost incidental to the fun...all sun, sex and drugs" (p. 348). In 2004, *San Andreas* expanded upon the free-roaming concept of the game, and a player felt like they could play for hours and never see everything on the map (Stanton 2015). *Grand Theft Auto* has been a controversial game since its first release. Stanton (2015) explained:

The fact that the *Grand Theft Auto* games allow players to break the law, drive over innocent bystanders and even shoot police officers means that ever since the originals there has been controversy. Such tabloid outrages, of course, ignore the fact that it would never occur to the vast majority of human beings to link virtual acts to their real-world equivalents, never mind be encouraged by a video game to go and jack a car. (p. 350)

San Andreas originally had a minigame within it that allowed players to have sex with other characters, a feature that was eliminated from the final product but released by hackers (Stanton 2015). This event caused game sales to be halted while ESRB re-rated the game, and lawsuits were filed against the publisher instigating a federal investigation (Stanton 2015).

Another game series, *Call of Duty*, that has always had an age rating above 15 years old and remains popular among teenagers, boasts authentic on-screen reproductions of guns used by the US military and law enforcement agencies (Stanton, 2015). Stanton (2015) reflects that people are uncomfortable with this combination of real-life weapons and fantasy violence, and yet, “The simple fact is that a large number of the most popular video games are still based on the central idea of shooting lots of people” (p. 369).

Games are increasingly relying on NPCs and players’ interaction with them, such as in *The Last of Us*, released in 2013. Worlds and characters can respond to players’ movements when using Virtual Reality (VR) headsets such as the Oculus Rift (Stanton, 2015). Rating companies do not distinguish between VR and non-VR games, as both versions of a game are given the same rating (G. Wilson & McGill, 2018). Wilson and McGill (2018) argued that this needs to change, as their research found that participants described violent games in a VR format as feeling more real and personal. The authors felt that VR games required added content descriptors on their ratings (G. Wilson & McGill, 2018).

2.3 THE PLAYERS

This study focuses on parents’ decisions about video games, and specifically violent video games, for their children. Children, however, are not the only ones who play video games. There are many reasons why people play video

games, and sometimes different reasons for why they play violent video games. This section reviews current data on video game players and their motivation for playing both violent and nonviolent video games.

2.3.1 WHO PLAYS VIDEO GAMES AND WHY

“We are a nation of video game players” (Entertainment Software Association, 2021). More than two-thirds of the US population, 215.5 million people, played video games for at least an hour a week in 2022, and at least one video game player lived in 69% of households in the US (Entertainment Software Association, 2022). The Pew Research Center found that 97% of US children aged 12-17 play video games in some form (Lenhart et al., 2008). The Entertainment Software Association (ESA) is “the voice and advocate for the video game industry” in the United States, “where the major players of the video game industry work together to support the future of video games” (*Entertainment Software Association, 2023a*). The ESA surveys Americans each year and collects annual data on video game play, including players’ age, gender, habits, and opinions based on their game play experiences.

On the ESA’s survey from 2022, the association uncovered that 66% of Americans played video games weekly or more often. The average age of an American gamer in 2022 was 33 years old. The majority of players are adults (over 18 years old), who comprised 76% of players, and 31% of those adult gamers had children (under the age of 18) living in their household. The gaming community was not constrained by gender, as 48% of players identified as female and 52% of players identified as male. Including children, 70% of men and boys play video games, compared with 62% of women and girls (Entertainment Software Association, 2022).

Nearly three-quarters (71%) of American children played video games in 2022, constituting 24% of all video game players in the US (Entertainment Software Association, 2022). The number of parents who play video games with their children is growing. In 2020, 55% of parents reported playing video games with their children (Entertainment Software Association, 2020). In 2021, 74% played video games with their children (Entertainment Software Association, 2021), and in 2022, 77% played video games with their children. Additionally, 73% of Americans agree that video games are a healthy way to

teach children about winning and losing (Entertainment Software Association, 2022).

Overall, 97% of Americans viewed video games as beneficial in some way. Nearly 9 out of 10 Americans (89%), both players and nonplayers, agree that video games could be useful for building skills. Of Americans who play video games, 93% of them reported that gaming brought them joy, 91% reported that gaming provided them mental stimulation, and 89% reported that gaming provided stress relief. Adult gamers reported multiple reasons for playing video games. Younger adults (age 18-24) frequently cited comfort, connection, unwinding, and excitement as reasons they play video games. Older adults (age 65 and older) were more likely to report that video games were good for passing the time, for self-improvement, as an activity done during personal time, and for utilizing their brains. In total, 63% of players reported that they played video games to have fun, 57% played to unwind, 46% played to escape, 44% played to use their brains, 38% played for comfort, and 26% played for connection. One player acknowledged, “My older sibling has autism and quickly developed a special interest in video games. I bonded with him and spent time with him through video games, and I still do today” (Entertainment Software Association, 2022, p. 7).

Children play video games for a multitude of reasons that can be social, emotional, or intellectual (Olson, 2010). Socially, video games can provide a connection, a way to start a conversation among peers. Video games are a way to make friends, and they are an activity that children can enjoy together. Children enjoy competing and winning, which are important facets of video game play. Video games present an opportunity for children to lead and to teach each other new skills. Emotionally, video games can help children regulate their feelings, specifically anger. Several studies have connected video games to the state of flow, being pleasantly and completely absorbed by a goal-driven activity” (Olson, 2010, p. 3). Intellectually, video games provide challenges and opportunities for mastery. Video games afford players the chance to express their creativity, and to be curious and discover things outside the realm of real life. Through customizing characters, players can experiment with different identities and fantasies, such as being a powerful leader or breaking rules (Olson, 2010).

Video games are increasingly social and family activities, as the number of US players who report playing with others weekly, either online or in person, continues to rise dramatically. In 2020, the percentage of American gamers who played video games socially was 65%. That number jumped to 77% in 2021 and 83% in 2022. The number of players who meet other people online and play video games with them is also increasing. In 2021, 78% of Americans believed that games introduced people and initiated new friendships and relationships; this number rose to 83% of Americans in 2022. In 2021, 54% of Americans reported that through video games, they met people online who they otherwise wouldn't have met; this number rose to 61% in 2022. In 2021, 42% of Americans reported meeting a good friend, spouse, or significant other through video game play; this number rose to 46% in 2022 (Entertainment Software Association, 2021, 2022). Over half (56%) of American gamers played video games with their friends in 2022, 43% had "online only" friends with whom they play, 35% played with their spouse or partner, 32% played with other family members, 25% played with their children, and 7% of gamers played with their parents. Regarding connecting gamers to others, 88% of players agreed that video games bring different types of people together, and 83% believed that video games create a community feeling (Entertainment Software Association, 2022).

2.3.2 WHO PLAYS VIOLENT VIDEO GAMES AND WHY

A few studies (Markey & Markey, 2010; Przybylski et al., 2009) found that individuals with high trait aggression were more likely to prefer violent video games, though that did not affect their level of enjoyment of the game. Another study (C. Olson et al., 2009), however, did not find any link between aggressive traits and a preference for violent video games. In a previous study (Olson et al., 2008), researchers found that several adolescent boys appreciated playing violent games because those games allowed them to act in ways and do things you could not in real life. Other boys claimed that they enjoyed violent games because they were more challenging, involved more action, and provided more play options within the game. Many adults fear children playing "a thug" in violent video games such as *Grand Theft Auto* "may amount to rehearsal for real-life thuggery" (Olson, 2010, p. 5). Studies that explore why children are

attracted to violent video games, however, reveal a less deviant and much more complex explanation. Olson et al. (2007) discovered that children enjoy violent video games to get anger out, for the thrill of the competition, because they like “mod” games where they can modify part of the structure of a game, or because they like the weapons involved in the game. This last reason could be indicative of the challenge players face when using new weapons in a video game, the graphics during an in-game explosion, or creating new ways to blast opponents in a video game (Olson, 2010).

Olson et al. (2008) found five reasons why adolescent boys, in particular, enjoyed playing violent video games. First, violent video games provided boys with an opportunity to play out fantasies of power, fame, and glory. Second, violent video games innately offered more challenge and exploration. Boys enjoyed the action and excitement that occurred with violent video game play. Third, boys used violent video games as an outlet for strong feelings of frustration and anger. They described being angry at school due to teachers or bullies, then coming home to play a violent game and feeling better afterwards. The violent video game helped regulate their emotions and alleviate their stress. Fourth, violent video games were both conversation starters with peers and a social activity. Games were an activity that boys could talk about and play in person with friends and with other children they met through online gaming. And fifth, boys enjoyed playing violent video games because they helped them to learn new skills. Video games allow boys to cooperate with others in a social situation and gain status with their peers when they master skills in a video game (Olson et al., 2008).

Being attracted to violent or scary themes is part of normal childhood development. Exposure to fear-provoking images allows children to master their feelings when presented with frightening situations. Young adult players have discussed repeatedly playing survival or horror video games until the content was mastered, thus suggesting that they are possibly using the games to process fear (Olson, 2010). Males have historically been drawn to violent group experiences such as wrestling and boxing matches, war games, and horror films (Ferguson, 2010). Violent video games are one form of exposure to menacing images and situations (Ferguson, 2010).

2.4 ARE VIDEO GAMES PLAY?

To answer the question of whether video game play is considered play, it is necessary to analyse existing literature on play. This section reviews literature on early childhood development to define play and explores current theories about which activities are categorized as play. The social, cognitive, and emotional benefits of play are outlined in the following subsection. This section concludes by detailing multiple different types of play and investigates how they relate to playing video games.

2.4.1 WHAT IS PLAY?

Classical theories of play describe the function of play and its reasons, while modern theories “provide an understanding of its essential role in children’s development” (Saracho & Spodek, 2003, p. 6). Play helps children meet both their psychological and physical needs by transforming reality in a way that coincides with their physical and cognitive development. Piaget (1951) viewed play as a biological function beginning in infancy. Infants play through developing their sensory and motor skills to explore their own bodies. Toddlers play by utilizing objects in their environment. Children eventually use social interactions in their play, thereby turning assimilation activities into adaptation activities. It is through play that children interpret their experiences and work through uncomfortable feelings. Negative life occurrences- such as being punished by an adult or going to the doctor- are often played out and then understood from a different perspective: children can replace unpleasant feelings with pleasant ones. In make-believe play, children develop roles for themselves and each other. They master these roles through socio-dramatic play, where they create and follow a script for a particular role. Not only is play enjoyable, but it helps children deal with recent experiences while also preparing them for the future (Burriss & Tsao, 2002).

There are five essential characteristics of play upon which many modern-day social scientists agree. Play must be intrinsically motivated, freely chosen, pleasurable, nonliteral, and be actively engaging. Play also often involves an element of make-believe (Lillard et al., 2013; Pellegrini, 2009). Fergus Hughes (2021) employed those five characteristics, including the

aspect of make-believe, to determine if a child's actions are considered play. First, the player must be engaging in the play for no reason other than to do it. Second, the player must have decided on the activity themselves, as it cannot have been chosen or directed by someone else. Third, the play must have a positive effect on the player, who is enjoying the activity. Fourth, the play must involve some element of make-believe that interests the player. And fifth, the player must be physically and/or psychologically involved in the play; if the player is passive or indifferent, then the activity cannot be classified as play (F. Hughes, 2021).

Play theorist Bob Hughes (2013) pronounced, "There is no doubt that we are passing through a period of setbacks with regard both to our collective understanding of play and our contemporary strategies for utilising that new understanding" (p. xii). Researchers and governments are investing more time and money to understand and increase the quality and quantity of recreation activities for adults and play experiences for children. Although there is a social distinction among these types of activities, they possibly serve the same purpose. Theorists who insist on the distinction stress that the purpose of recreation is to restore one's health, both physical and mental, whereas play prepares children for adult work (Day, 2013).

We know from a century of research that children learn best through play. The National Association for the Education of Young Children (NAEYC) in the United States includes play among its developmentally appropriate practices. Fergus Hughes (2021) explains that when children engage in a task they have defined for themselves, they are more likely to feel successful. In free play, children engage in activities that are important to them, thus empowering children to take control of their lives and learning (Wisneski & Reifel, 2012).

2.4.2 BENEFITS OF PLAY

Numerous studies suggest that play can lead to the development of problem-solving skills, creativity, divergent thinking, social and emotional development (Dore et al., 2015), and language acquisition (Toub et al., 2016). Several theorists (Piaget, 1964; Vygotsky, 1967) have found a specific correlation

between symbolic play and language. Pellegrini (1989) noted that both theorists “saw play as serving an important role in preschoolers’ social-cognitive development” (p. 245). Others (Barnett, 1990; F. Hughes, 2003) have noted that play and creativity appear to be tantamount. This section will discuss the role of play in children’s social, cognitive, and emotional development.

2.4.2.1 SOCIAL DEVELOPMENT

Play and social development are entwined with one another. Multiple studies (Connolly & Doyle, 1985; Pellegrini, 1988; K. H. Rubin & Maioni, 1975) have found positive correlations between active peer interaction and social-cognitive development. Piaget (1951) purported that children engage in social interactions because they are intrinsically motivated to do so. He believed play was how children perfected their newfound social skills. Others proposed that because pretend play, or fantasy play, allows children to consider alternate perspectives and roles, it develops children’s understanding, empathy, and cooperation skills, all essential components of their social development (Barnett, 1990).

Play between parents and their children at very young ages is also crucial to children developing beneficial social skills (Barnett, 1990). Popular children in school, as rated by teachers, are more likely to engage in physical play with parents at home (Carson et al., 1993). Burriss and Tsao (2002) summarize the connection between play and social skills by stating, “The play behaviors of children as they interact with peers at schools are regarded as necessary preparation for the future. By observing children’s play behaviors, teachers can detect those who may need to improve their social integration” (p. 233). Children involved in social play practice build appropriate peer relationships, which facilitates their integration into their peer group (F. Hughes, 2021). As Flannery and Watson (1993) discovered, dramatic play is positively related to peer acceptance and social skills. Sociodramatic play improves children’s cooperation skills, allows them to understand relationships, and facilitates their participation in other social activities (F. Hughes, 2003). Children, girls especially, have been found to collaborate

during block play, for example, no matter their skill level. They work together and communicate with the other children in the space (Sluss & Stremmel, 2004).

2.4.2.2 COGNITIVE DEVELOPMENT, CREATIVITY, AND LANGUAGE ACQUISITION

Jean Piaget (1951) was one of the leading thinkers in play as it relates to child development. As a cognitive theorist, Piaget viewed play as crucial to child's mental and intellectual development. He claimed that development occurs through action upon an object world, otherwise categorized as pretend play (Aubrey & Riley, 2022). Through play children learn about their environment, discover their world, learn about new things, acquire management skills. and develop problem solving skills (Ahmad et al., 2016).

It is widely established that play advances cognitive development (Barnett, 1990; Piaget, 1951; Vygotsky, 1967). Cognitive development includes the thought processes of remembering, problem solving, critical thinking, recalling, and decision making (Ahmad et al., 2016). Play helps children develop their imagination and memory, which are needed to develop the cognitive skill of contemplating the past, present, and future (Klein, Wirth, & Linas, 2003). During play, children improve their cognitive skills when they make decisions and solve problems (Ahmad et al., 2016; Sternberg, 2003). Children practice and repeat behaviours in their play, the sophistication of which changes and adapts as they grow in their cognitive development (Burriss & Tsao, 2002). Vygotsky (1967) believed that play helps children develop self-regulation and obtain higher cognitive functioning skills. The separation between thought and action, such as pretending one object is something else, develops abstract thinking (Burriss & Tsao, 2002).

Additionally, play develops both convergent and divergent thinking (Dansky & Silverman, 2017). Convergent thinking requires an individual to arrive at one specific solution, and divergent thinking allows for possible solutions (Barnett, 1990; F. Hughes, 2003). As Barnett (1990) explained, research concludes that “play provides the individual with a flexible approach to his/her environment, and contributes to the development of a generalized

mode of cognitive approach which the individual utilizes in the problem situation” (p. 141). In other words, children who play with materials are more likely to successfully solve a problem. Play is experimental and flexible in nature, which offers children the opportunity to develop varied problem-solving skills. Play requires children to create multiple solutions to situations when problems or challenges arise. Vygotsky (1967) agreed that play develops divergent thinking, yet he posited that the movement from the concrete to the abstract during play is the aspect that develops children’s divergent thinking abilities.

Divergent thinking ensues creativity, therefore, it follows that play is also the root of creativity in children. Ahmad et al. (2016) indicate that creative problem-solving during play develops cognitive thinking, and therefore creativity. Caplan and Caplan (1973) also noted that creativity and play appear to be synonymous. Through their play, children often echo what they see and hear, creatively reinventing the facts. Children create a new reality that fits their needs (Vygotsky, 2004), and their creativity is bolstered by their play. Boys who use new toys in imaginative ways are more creative than their peers. Highly creative boys were found to be more communicative, humorous, curious, and expressive, whereas girls’ play relates to the interaction of their creativity and their intelligence (Singer & Rummo, 1973). Following their research, Dansky and Silverman (2017) postulated that children who played more often approached testing situations with more curiosity and flexibility, further suggesting that play develops creative and divergent thinking. In an earlier study, Dansky (1980) concluded that children who become extensively involved in make-believe play perform better on divergent problem-solving tasks. Research suggests that these children are highly creative, as they can simultaneously attend to reality and their make-believe scenarios, displaying “intellectual flexibility...a key ingredient in the creative process” (F. Hughes, 2003, p. 26). Multiple studies (Russ & Grossman-McKee, 1990; Russ & Kaugars, 2001; Russ & Wallace, 2013) have proven a link between pretend play and creativity. However, as with play and social development and play and language development, the relationship is interwoven. Pretend play may bolster a child’s divergent thinking and creative abilities, while it may also

provide an opportunity for children to exercise their problem-solving skills (Wyver & Spence, 1999).

At a very young age, language and play share joint functions. Pretend play requires children to communicate with others by sharing play objects or conveying aspects of their play. Being involved in thematic and socio-dramatic play increases a child's vocabulary, as noted by Saltz and Brodie (1982). Through sharing objects with others, experimentation, and symbolic representation, play develops comprehension and production of language (Barnett, 1990). Employing Vygotsky's zone of proximal development theory, Sluss and Stremmel (2004) found that communication skills for girls in particular is influenced by the children with whom they play. When playing together, a girl with greater communication skills can help develop the communication skills of another child.

2.4.2.3 EMOTIONAL DEVELOPMENT

There is evidence that play allows individuals to overcome anxiety and trauma. Freud (1955) believed that if children did not master traumatic events through repetition, then they became 'at risk' for psychopathology in adulthood. Two studies (Barnett, 1984; Barnett & Storm, 1981) discovered that children utilised play to examine their internal conflict, thereby reducing their level of anxiety. In their play episodes, children re-enacted stressful situations, often altering the result. Occasionally they took on an alternate role or created a similar situation that they could control (Barnett, 1990)

2.4.3 TYPES OF PLAY

Children engage in many types of play that are necessary to their development. Bob Hughes (2002) noted that "if children are unable to engage in one or more of them, they will suffer from 'play deprivation' and be damaged and disabled as a result" (p. 5). By reviewing prevailing literature that references play and observing children at play through his work as a playworker, Bob Hughes (2013) created a taxonomy of play types and alleged that each type of play has an evolutionary purpose. However, he cautioned that it is not possible to know all the types of play that occur, and there may be other types of play that are

yet unidentified. Other play theorists have identified war play (Carlsson-Paige & Levin, 1987; Levin, 2003; Shaw, 2010) and digital play (Dixon & Weber, 2007; Dyer-Witthford, 1999; Edwards, 2013), neither of which is included in Hughes's list. However, many of the types of play that Bob Hughes identified relate to both war play and digital play. One type of play, rough and tumble play, is cited by both Hughes and many other theorists (Carlson, 2016; Humphreys & Smith, 1987; Olson et al., 2008; Smith & Lewis, 1985) as an integral part of children's development.

Bob Hughes (2002) claimed that:

without the different types of play, human childhood... would be a cloning period, where identical copies of parents, mirroring their knowledge beliefs, values, emotions and perceptions, would simply move humanity onto a conveyor towards extinction. Quite simply, without play, we wouldn't be here. (p. 96)

Bob Hughes's most current list includes sixteen types of play, in which each type of play is unique in the behaviours exhibited by children while participating in it. Those sixteen play types are as follows: communication play, creative play, deep play, dramatic play, exploratory play, fantasy play, imaginative play, locomotor play, mastery play, object play, recapitulative play, role play, rough and tumble play, social play, socio-dramatic play, and symbolic play (B. Hughes, 2002). The following sections focus on eleven of these sixteen types of play as they relate to video games through the lenses of digital play and war and weapon play.

2.4.3.1 DIGITAL PLAY

The concept of digital play first emerged in the late 20th century (Dyer-Witthford, 1999; Jenkins, 1998). Dixon and Weber (2007) acknowledged that, "until recently, most adults interpreted videogame play as an isolated activity cut off from the rest of childhood play forms and spaces" (p. 17). Some psychologists criticize children's interaction with technology, lamenting that it is not 'real play' (Palmer, 2016). There is concern that children are playing video games instead of 'really' playing, especially when children as young as two are playing video games (D. A. Gentile & Anderson, 2003). Research by Dixon and Weber (2007), however, demonstrated that digital play exists

alongside other types of play and an ambiguity and flow between different types of play, digital play included, occurs. Gray (2012) explained, “In the game, age does not matter, but skill does. In these ways, video games are like all other forms of true play” (para. 13).

Children are expected to want to throw and kick balls, play tag, jump rope, ride bikes, climb trees, and dig in the dirt, as that is what previous generations of children did (Shapiro, 2018). Shapiro (2018) alleged:

Despite being perfectly aware that every generation can and should play in unique ways, grown-ups are easily seduced by the nostalgic fantasy of a childhood that mirrors the one *we* remember. From our kids, we had hoped to see our own youth reflected back. (p. 11)

Adults are nostalgic for a childhood that they think they remember, not one that actually existed, which clouds their perceptions of children’s modern day play and causes a collective panic (Dixon & Weber, 2007). Shapiro argues that rather than dismiss screen time, we should think critically about what intellectual and emotional changes occur within someone when they are playing and interacting with digital devices (Shapiro, 2018). As Bob Hughes (2003) understood, play is a natural and universal part of childhood. It will always exist, though it will change over time, thus children in the 21st century have digital playgrounds, sometimes in lieu of physical ones (Shapiro, 2018).

Among early childhood educators and child development experts, play is agreed upon as a self-chosen activity done purely for enjoyment, and the importance of play for a child’s development, and learning cannot be overstated (Hirsh-Pasek & Golinkoff, 2008). “When [children] are asked what they like about video games, they generally talk about freedom, self-direction, and competence. In the game, they make their own decisions and strive to meet challenges that they themselves have chosen” (Gray, 2012, para. 25). Video games and virtual platforms provide children with spaces where they are free to play autonomously, much like physical play spaces (Jenkins, 1998). Unlike in school and situations where an adult is in charge, with a video game, children are in control of the situation. When children participate in play, they initiate activities with each other. The result is a social life, in which the children relate to each other (Ferguson & Olson, 2013; Gray, 2012; McLeod & Lin, 2010).

As noted by Marsh et al (2016), “contemporary children use technologies in different ways to children growing up in previous decades” (p. 243). Walkerdine (2007), like Vygotsky (2011), insisted that children are in fact active, not passive, makers of meaning. When children play video games, they create their own culture. They are choosing their own avatar, their game, the level, and the other players who play with them. Walkerdine (2007) suggested that video game play is not actually a 2-D experience, as feeling one’s way around a virtual space is an affective experience. Players experience feelings of pleasure in the control they have with the game, as well as frustration and anger when the game doesn’t go as planned. Jarvis (2021) concluded that although online environments are not a good fit for physical human engagement and can be rife with terrible human behaviour (bullying, stalking, depression, violence), they are also places where people connect, form relationships, and improve their cognitive and emotional skills. Jarvis (2021) observed that gaming was perceived as a positive interaction by the adolescents in her study. The children were aware, however, of the potential for bullying and that they should not meet or interact with individuals they do not know.

Gray (2018) discussed how many parents curtail their child's video gaming because they see the intense excitement and emotions, including negative emotions, that the child experiences during and sometimes for a period of time after the gaming. Parents are worried that this is not good for the child, however, research supporting the emotion regulation theory indicates that a major purpose of play is to provide practice at dealing with fear and anger in the relatively safe context of play. This would support a child’s video game play as an activity that helps them to regulate their emotions successfully. In fact, there is evidence that children who have been “protected” from experiencing such emotions in play are subsequently less able to deal with the inevitable fear-and anger-producing situations of real life, outside of play (Gray, 2018).

Some modern play theorists (Edwards, 2011; Marsh et al., 2015) contribute to the field by offering insight into children’s digital play. Marsh et al. (2016) introduced the idea of transgressive play, where children utilize features of digital apps in unintended ways. While observing children play

Alphablocks on an iPad, they witnessed children moving blocks around on a screen to make them bounce, instead of spelling the word. The researchers recognized that this feature of play is not limited to digital devices and suggest the definition, “Play in which children contest, resist and/or transgress expected norms, rules and perceived restrictions in both digital and non-digital contexts” for transgressive play (p. 250).

In her work on digital play, Edwards (2011) argued for a concept of converged play, in which digital-consumerist contexts combine with traditional play to enrich children’s experiences. She examined how a popular children’s television character, Thomas the Tank Engine, connects with children through both physical toys and digital media, television, DVDs, and iPad apps, to expand children’s imagination. Edwards suggested that “the relationship between imagination and reality can be considered in terms of the personal meanings children ascribe to their participation in digital-consumerist contexts” (p. 208). Edwards noted that this idea contradicts the notion that digital play does not provide an opportunity for children to expand their imagination, and rather suggests that children create meaning and interpret culture through their play within these digital-consumerist contexts.

2.4.3.2 TYPES OF PLAY IN A DIGITAL CONTEXT

Marsh et al. (2016) adapted the sixteen play types identified by B. Hughes (2013) to incorporate children’s use of technology in what they termed contemporary play. In their study, the researchers observed fourteen of the sixteen play types while young children aged zero to five played on apps (Marsh et al., 2015). Eleven of these sixteen types of play that are relevant to this research are discussed in this section.

Creative Play

In creative play, children explore materials and colours, often creating new things (B. Hughes, 2013). Creative play is often exhibited through arts and craft activities facilitated by adults. It is most effective when children have access to multiple tools, creative mediums, and lots of time in which to create and get messy. The true value of creative play is in the creation, not the

product (B. Hughes, 2002). Children have great control over their behaviour and environment when involved in creative play. It is fun, challenging, and requires very little obligation (Day, 2013). Children can engage in creative play in a digital context when they create and explore ideas on a digital platform (Marsh et al., 2016). Children were observed creating their own drawings on tablets, demonstrating exploration, engagement, involvement, enjoyment, and persistence, which are part of Robson's (2014) framework for analysing children's creative thinking (Marsh et al., 2016). Marsh et al. (2015) also observed children using apps in creative ways that were originally unintended by the app.

Deep Play

In deep play, children assess risk and engage in potentially life-threatening undertakings. Children set out on a conquest to conquer their fears. They may climb higher than they imagined they could or swing faster than they have before, but it is imperative that these conquests be their own idea. Any challenge presented to a child must be one that they choose on which to embark (B. Hughes, 2002). Through deep play, children analyse mortality and assess risk-taking behaviours as they begin to understand death and dying. Bumps, scrapes, bruises, and accidents will occur in deep play, and children are participating less in deep play as adults become overly concerned with safety. Deep play is necessary for children to comprehend and accept death as a natural part of life. This understanding is imperative for their mental well-being, and when children do not explore this concept, it restricts their "ability to cope with the realities of life" (B. Hughes, 2013, p. 113). Children interface with death and mortality. This type of play is often "frowned upon in many settings, even though it provides a conduit for acquiring and honing many skills that benefit children" (B. Hughes, 2013, p. 102). Children need to test their physical limits in a way that appears dangerous to many adults, yet if adults continuously stop children from this type of play, they cannot learn how to successfully assess risk and navigate the world (B. Hughes, 2013). In a digital context, children may "encounter risky experiences, or feel as though they have to fight for survival" (Marsh et al., 2016, p. 247). Marsh et al. (2016)

discerned that children have more control over their deep play in a digital context as opposed to when they experience the tension and fear associated with deep play in the physical environment, as it is easier for them to turn off an emotional game.

Exploratory Play

Children explore and investigate new spaces when engaged in exploratory play (B. Hughes, 2013). They seek “to explore the environment to gain information and understand it” (Day, 2013, p. 241). Children’s curiosity leads them towards an object or event of which they are uncertain, and they attempt to manipulate the object or space to acquire information about it. When the environment changes, the player’s concentration, attention, and intensity also change (Day, 2013). When engaged in exploratory play, children are trying out new activities that are exciting to them. Children may be cautious or anxious as they explore, assess, and manipulate new objects and environments. In this type of play, children may explore puddles or water features, fire, or dig in the dirt (B. Hughes, 2002). It is possible for children to explore a digital environment through their senses as they touch tablet screens, and Marsh et al. (2016) discovered that well-designed, open-ended apps fostered young children’s autonomy and encouraged exploratory play.

Fantasy Play

In fantasy play, children playfully participate in experiences that have potentially excessive impact, yet they do this in a controlled and gradual manner. In this type of play, children make up imaginary situations and characters that are unrelated to reality. Children may dress up as superheroes, cast spells, and use props in unconventional ways (B. Hughes, 2002). In video games, children can play as many personas, including a superhero, which allows them to engage in fantasy play digitally (Marsh et al., 2016).

Imaginative Play

Imaginative play provides children an escape from reality (Göncü & Vadeboncoeur, 2017). It allows children to access realities where the conventional rules of the world do not apply. Children will place “real” objects in “unreal” situations that are non-existent or ones they have not experienced. Props may be used to represent something else; a tree branch may become a gun, a truck, or a pogo stick. Animals, people, or props may be imaginary and not actually exist. Children may have tea parties without cups or tea pots, pet imaginary dogs, fly imaginary planes or drive imaginary cars. Existing items may become something else; a bench may become a bus (B. Hughes, 2002). Göncü and Vadeboncoeur (2017) note that, “Imaginative play emerges, develops, and is continually negotiated as a cultural activity in relation to other cultural activities that shape the lives of children” (p. 431). When engaged in imaginative play, children may change personas and tone of voice to fit into these imaginary scenarios, to perhaps become a pilot or to serve tea (B. Hughes, 2002). During make-believe (imaginative) play, children learn to transfer their thinking from the concrete to the abstract. In doing this, they develop the cognitive processes of free association and symbolic thinking. These processes are similar to those involved in divergent thinking, whereby a person can create various responses on a divergent thinking task (B. Hughes, 2013). Any digital play in which children pretend that an object is something else can also be considered imaginative play (Marsh et al., 2016). Researchers observed children pretending to care for animals on the screen or imagining that they had come to life and run off the screen (Marsh et al., 2016). Livingstone and Pothong (2022) argued that digital technologies provide a means to expand children’s imagination through free play. Similarly, Edwards (2011, 2013) maintained that because imaginative play can exist in a digital context, it follows that digital play is equal to and can be entwined with traditional, nondigital play.

Mastery Play

In mastery play, children interact with their physical environment. Children try new things in an attempt to master, or control, their natural environment. They learn which aspects of their environment can be controlled and which cannot.

Mastery play allows children to ask questions about their world and engage in engineering and construction tasks. In order to be fully effective, this type of play must take place outside (B. Hughes, 2013). Children use their hands or tools to alter their environment. Examples of mastery play include playing with fire, digging holes, altering streams by creating dams, building outdoor structures, growing plants, or blocking drains. Mastery play “is vital to the development of empowerment and to feelings of confidence and high self-esteem” (B. Hughes, 2002, p. 23). Marsh et al. (2016) witnessed children experiencing mastery play in digital contexts, specifically the Minecraft app, as they attempted to gain control of the environment by creating a virtual world where their avatar then explored.

Recapitulative Play

In recapitulative play, children access early human evolutionary behaviour. This type of play is essential for children’s physical and psychological well-being, as it originates in human genes. Recapitulative play enables children to experience the past in order to understand their contemporary lives. This is play where children participate in rituals, light and use fire, dress up in historic clothing, pretend to be in a war or employ weapons. When children grow things, cook things, and care for and keep animals, these are examples of recapitulative play. As B. Hughes (2002) describes, it involves “Lord of the Flies narratives but less terminal!” (p. 28). In this definition, recapitulative play exists in nature, so Marsh et al. (2016) felt it was not possible to observe this type of play in their study. However, the authors decided “it could be argued that recapitulative play did occur in this study when children were using the *Minecraft* app, as they built dens and created civilisations” (Marsh et al., 2016, p. 250).

Role Play

Children engage in role play “to access information about specific ways of being” (B. Hughes, 2002, p. 29). Role play allows children to explore identity with regard to gender, culture, and race, in ways that also support caricature

and exaggerated traits or different accents. When involved in this type of play, children tend to change their tone of voice, the way in which they typically speak, and use specific catchphrases connected to a character. Children may pretend to be a teacher, a television character, or re-enact something they have either experienced directly or indirectly or imitate someone (B. Hughes, 2002). Children can also experience role play digitally, such as when they employ an avatar or take on another role in a virtual environment (Marsh et al., 2016). Walkerdine (2007) articulated that children create a projective identity when they play a video game; they can pretend to be someone else and play through another's perspective.

Rough and Tumble Play

The categorization of rough and tumble play was originally termed by Harlow (1962) in his work with rhesus monkeys. In this type of play, children are in energetic, physical contact with no violence (B. Hughes, 2013). It permits children to participate in close encounters with others through physical touch in a playful manner. Although it is often misunderstood, it is essential for children's personal and inter-personal discovery and allows them to test their strength, flexibility, and movement (B. Hughes, 2002). As Carlson (2016) acknowledged, "Most children are quite adept at recognizing that play fighting is not real fighting...The movements that young children use in their rough play can also be misleading if not accurately interpreted by the attending adult" (p. 1187). However, in some instances, adults can distinguish between rough and tumble play and aggressive fighting (Smith & Lewis, 1985). However, there is occasionally a disconnect between adults' interpretations of a child's play and child's purpose or intentions in their play. Sluckin (1981) noted that teachers or playground supervisors may misconstrue children's play based on stereotyped judgements of them or of a situation. Reifel and Wisneski (2012) discovered that what appeared to be violent, fighting play was seen by the children as play where they are saving people, explaining:

...mythical play (pretend involving good and evil characters and themes) is an aesthetic experience in which children can explore with adults ethical dimensions of their identities. As such, then, play can become

an ethical pedagogy in which children and adults can co-author their ethical selves in an approach that requires open listening and deep dialogue. (pp. 182-183)

Some research suggests that rough and tumble play promotes frontal lobe development (Panksepp et al., 2003) and can help children regulate impulsive behaviours (Panksepp, 2007).

Marsh et al. (2016) did not include rough and tumble play in their observations because it is a type of play that relies on physical contact. They noted there were imitations of rough and tumble play in a virtual environment, though (Marsh et al., 2016). In fact, “video game play with violent content may serve a function similar to rough and tumble play for young adolescent boys” (Olson et al., 2008, p. 69).

Social Play and Communication Play

Hughes (2002) explained that through social play, children explore, investigate, and employ social rules and protocols. Children watch each other and learn to understand the connections between speech and body language (B. Hughes, 2013). It is imperative that children experiment interacting with others in different ways. In social play, all individuals involved agree on expectations and rules for each situation. Board games, locomotor games with rules, creating a work of art together, cooperating to move or carry something, and playing on a team are all examples of social play (B. Hughes, 2002). Marsh et al. (2016) decided that video games could provide an opportunity for children to play a game in which they follow rules that have been created, either by themselves as players or by an outside source such as a game developer.

Hughes (2002) described communication play as a subset of social play, as it exists between children and between children and adults. Communication play is both verbal and nonverbal. Verbally, it involves children’s use of vocabulary, words with dual meaning, and fun or rude words. Children may call each other names or make jokes. Nonverbally, children assess the impact of these words, sounds, body language, and facial expressions on others. In this type of play, children may use miming, imitation or perform gestures. Singing, debating, writing poetry, charades, pretending

to be on the phone or texting, waving, making silly sounds, and graffiti art are examples of communication play (B. Hughes, 2002). Marsh et al. (2016) included text messages and multimodal communication that employed the use of songs, rhymes, and poetry.

2.4.3.3 WAR AND WEAPON PLAY

When children play in ways that help them understand scary themes such as death and dying, much like in rough and tumble play and deep play (B. Hughes, 2013), war and weapon play are often discouraged or even stopped by adults. A zero-tolerance policy on war play is common in early childhood settings, despite evidence that it does not work in stopping this type of play (P. Holland, 2003). Early childhood practitioners in England felt as though a zero-tolerance policy made sense, as allowing children to play violently seemed to encourage violence, or at least accepting it, which felt antifeminist (P. Holland, 2003).

When children are engaged in war and weapon play, they demonstrate many beneficial aspects of play. Children have been observed participating in all elements of learning, including talking, discussing, explaining, arguing, and creating, during multiple types of play, including Weapon Play, yet only the weapon play was halted by adults (Heikkilä, 2022). Heikkilä (2022) argued that this “can be related to the gendered understanding of children in which context boys displaying war toys and weapon games do not seem to fit” (p. 1839). Teachers were not aware of the preparation that boys undertook before the middle part of the play, therefore when they saw the weapon play, they did not approve and put a stop to it. This did not happen with girls who participated in cookery play (Heikkilä, 2022), which B. Hughes (2002) would categorize as sociodramatic play.

It is considered normal for boys to partake in weapon play, yet it is a type of play that is also typically not permitted, which presents a confusing message to boys (Haywood & Mac an Ghaill, 2013; Heikkilä, 2022). Many associate war toys and war play with young boys, not girls (Heikkilä, 2022), as toy aisles geared towards boys are full of toy soldiers, knives, and guns (Watson, 2007). Many of these toys are linked to television, movies, and video games with violent content (Levin, 2006). Even when toys associated with war are not available, boys will often make them, an activity B. Hughes (2002) defined as

object play. Heikkilä (2022) observed two boys in an early childhood classroom creating guns out of LEGO blocks.

As previously discussed in *2.4.1 What is Play?*, children use play to understand their world, and that includes any violence to which they may be exposed (Levin, 2003). Some children need war play to work out events they have seen or heard about, and banning it deprives those children of the option to understand their experiences through play (Levin, 2006). When adults forbid war play, children receive the message that they cannot talk to adults about things that are confusing or worrisome and they are then forced to work these things out on their own (Levin, 2006). It may also cause them to feel bad or guilty about wanting to engage in this type of play (Levin, 2006).

Often, children include aspects that are graphic or scary in an attempt to make sense of violent events, but war play can also help children feel powerful, as Levin (2003) noted:

From a child's point of view, play with violence is very seductive, especially when connected to the power and invincibility portrayed in entertainment. The children who use war play to help them feel powerful and safe are the children who feel the most powerless and vulnerable. (p. 2)

That feeling of power that children get when participating in war play can help develop their competence and independence (Levin, 2006). War play has other benefits, as well. It can help children gain control of their impulses and separate fantasy from reality (Levin, 2006). Hughes (2002) described fantasy play and role play as important activities, and in war play, children often pretend to be characters who 'fight' each other (Levin, 2006).

Some children do engage in aggressive play, including superhero play or play with weapons, to comprehend a violent experience, while others participate in war play simply to explore violent themes (Hyder, 2004). When children are engaged in violent play, they often view it as good guys versus bad guys and most likely realize it is different from real violence (Levin, 2003). There is a debate, however, as to whether war play is an innately human activity or if it has evolved due to the violence children are experiencing in their world, either through their personal experiences or media exposure (Levin, 2006).

2.4.4 VIDEO GAMES AS PLAY

The previous sections explored the facets of play, benefits of play, and many types of play. Theorists agree that to constitute play, an activity must be freely chosen, intrinsically motivated, and pleasurable. Play aids in children's social, cognitive, and emotional development (Lillard et al., 2013; Pellegrini, 2003). Research by Marsh et al. (2015, 2016) showed that digital play can exhibit all the same aspects as nondigital play, concluding that video games are a valid and beneficial form of play. Furthermore, through this and other work on rough and tumble play (Panksepp, 1993; Wisneski & Reifel, 2012), deep play (B. Hughes, 2013), weapon play (Heikkilä, 2022), and war play (Hyder, 2004; Levin, 2006), it is evident that violent video games are a digital representation of these types of play (Olson, 2010).

2.5 THE IMPACT OF VIDEO GAMES

Whether video games have positive or negative effects on child development has been widely debated (De Pasquale et al., 2021). Early studies in the 1980s and 1990s linked video games to potential negative behaviours including smoking, obesity, and poor academic performance (D. A. Gentile & Anderson, 2003). The results of some recent studies oppose these findings, yet the level of violence in video games continues to be a concern. As Olson (2004) noted in her research, "It seems reasonable to assume that wielding virtual guns and chainsaws must be bad for our children" (p.145). There are various reasons adults worry about children playing violent video games. Studies have looked at some of these concerns and evaluated individual's social skills, creativity, the potential for addiction, aggression, desensitization, the cognitive effects of gaming, and the possibility of games having more impact on neurodiverse individuals than neurotypically developing children.

2.5.1 SOCIAL SKILLS AND ONLINE GAMING

A common misconception is that gaming is an isolating, anti-social experience. However, most gamers play either in person with others or take advantage of the online social interactions endorsed within video games. Although gamers

do play alone sometimes, gaming is a social activity for 76% of teens (Lenhart et al., 2008). Some play with others who are in the same room with them, and some play with those they connect with online. Almost half of teens play online with people they know offline, and others play both with offline friends and family and those they meet online. “Nearly two-thirds of teens who play games report seeing or hearing” (Lenhart et al., 2008, p. 4) anti-social behaviour such as others being unkind or aggressive. Nearly half reported seeing or hearing hateful, racist, or sexist behaviour. “However, among these teens, nearly three-quarters report that another player responded by asking the aggressor to stop” (Lenhart et al., 2008, p. 5). Furthermore, 85% of teens who reported these behaviours also reported seeing generous or helpful behaviour by other players. Interestingly, parental monitoring did not affect teens’ exposure to these experiences (Lenhart et al., 2008).

While there are risks of inappropriate contact when gamers interact online, there are also benefits. UNICEF (2019) noted that multiplayer games are particularly suited “for young people to socialize, relax, play and interact with one another,” (p. 9). After reviewing evidence from existing studies, Kardefelt-Winther (2017) concluded that using digital technology resulted in mostly positive outcomes for children’s social relationships. They use it to communicate with friends or to establish positive relationships online, sometimes that evolve into more than just friendships (Kardefelt-Winther, 2017). A study of kindergarteners in Japan found that those who played video games were more willing to talk to others and had more friends (Shimai et al., 1990).

As one report uncovered, “Research has indicated that children who engage in social interactions during game play are more likely to take an interest in civic participations” (Parliamentary Office of Science and Technology, 2012, p. 3). Lenhart et al. (2008) found that teens who participate in social interactions in an online game, such as discussion boards or making comments on a game’s website, are more civically and politically engaged. These players were more likely to encourage others to vote, raise money for charity, and volunteer in their communities. This finding was also replicated by Granic et al. (2014). The authors concluded that children who engaged socially during video game play were more likely to be civically engaged as adults.

Furthermore, both violent and nonviolent game play predicted this outcome. Americans believed this as well, as 61% agreed that video games help develop leadership skills (Entertainment Software Association, 2022).

Furthermore, Syversten et al. (2011) discovered that despite rhetoric indicating the opposite, youth community service participation has increased over time. The Girl Scouts Research Institute (2009) found that actions such as getting involved in the community and giving to charity have increased among teens in the 20 years prior to their survey study. In 2022, 86% of Americans reported that they believed video games could build teamwork and collaboration skills, and 63% of American believed that video games build communication skills (Entertainment Software Association, 2022).

Yee (2006) discovered that despite the level of violence in (MMO) Massively Multiplayer Online games, players' motivations for online gaming were socially and civically minded. Online gaming culture is dominated by MMO Role-Playing Games (MMORPGs), such as *World of Warcraft*. MMORPGs are even more social than previous video games. Players begin solo, but to advance, they must interact with and work together with other players (Gray, 2012). When children are asked about making friends online, they answer much as if they were making friends offline. Children know that you must be respectful of others and of the rules. If you are rude or mean, these types of behaviours will get you banned from online groups and games (Etchells, 2019). Shoshani and Krauskopf (2021) found that children who played a video game with another player were more likely to engage in prosocial tasks such as assisting the researcher in donating money to charity. Furthermore, they discovered that children who played a violent video game such as Fortnite with another player engaged in more helping and pro-social behaviours than children who co-played a non-violent game together (Shoshani & Krauskopf, 2021).

Studies have found that prosocial behaviour displayed by players in games is transferred to prosocial behaviour offline. When players cooperate on a mission, support each other, or participate in helping behaviours in a video game, they internalised and displayed these behaviours outside of the game (Ewoldsen et al., 2012; D. A. Gentile et al., 2009). This effect was found for both non-violent and violent games. Violent games that encourage

cooperation among players also create players who are more likely to exhibit helpful behaviours (Ferguson & Garza, 2011). Additionally, playing violent video games socially reduces feelings of hostility that may arise during game play (Eastin, 2007). When violent video games are played cooperatively, it has the effect of decreasing players' aggressive cognitions (Schmierbach, 2010; Velez et al., 2014). Cooperative violent video game play has also been shown to increase prosocial, cooperative behaviour outside the context of the game as well (Velez et al., 2014).

2.5.2 COGNITIVE DEVELOPMENT AND CREATIVITY

In a 2022 survey, 88% of Americans reported that they thought video games can build cognitive skills among players (Entertainment Software Association, 2022). Scientists, however, have questioned the potential effects of digital play on a child's brain development. A common concern related to video game play is that screens are changing our brains. In fact, screens *are* changing our brains, as do all our experiences (Etchells, 2019). Reading changes our brains. Painting changes our brains. Taking a walk changes our brains. Therefore, the real concern arises with whether screens and other forms of digital media are changing our brains in a negative way, and a general misconception exists (Alloway & Gilbert, 2003).

Video game players have been shown to have greater performance in all areas of attentional control. Players have enhanced skills with regard to selective attention, divided attention, and sustained attention (Bavelier et al., 2012). Possibly due to the intensive attention to time-sensitive decision-making utilised while playing, action video games appear to improve selective attention skills more than slower-paced video games such as puzzle games (C. S. Green & Bavelier, 2003), strategy games (Ming-Hsien Tsai et al., 2013), or role-playing games (Krishnan et al., 2013). Because video game players exhibit earlier latencies in response to a stimulus, it is predicted that after years of play, they will display quicker response times on visual tasks (Latham et al., 2013). During video game play, players experience increased cognitive workload in the form of demands to their attention, working memory, and decision-making abilities, which increases blood flow in prefrontal areas of the

brain (Izzetoglu et al., 2004). Video games require players to quickly decide upon and implement strategies, manipulate elements on the screen, or to change their course of action (Palau et al., 2017). As the task on screen becomes more difficult, a player's prefrontal brain response increases (Izzetoglu et al., 2004). A few studies have measured cognitive skills in adults before and after playing video games for an extended period of time.

Developmental changes in white and grey matter during childhood and adolescence affect a child's behaviour and cognition (Lenroot & Giedd, 2006). In a study involving over 2500 children, Rodriguez-Ayllon et al. (2020) used neuroimaging to measure the white matter in children's brains and its relation to children's physical activity and their screen time. The researchers confirmed that physical activity was beneficial to children's development because it did, in fact, increase white matter in the brain as previously thought. When the data was adjusted for the amount of screen time a child experienced each week, the results remained the same. There was no correlation between screen time and white matter microstructure in a child's brain. The study concluded that physical activity may be a protective factor in children's brain health, and "the benefits of physical activity may not be negatively influenced by playing computer games and watching television" (Rodriguez-Ayllon et al., 2020, p. 7). The researchers acknowledge that advances in technology, such hand-held devices and social media, have changed the way people interact with screens, and each type of screen time could influence the brain differently (Rodriguez-Ayllon et al., 2020). Some research has concluded that certain types of screen time have positive effects on children's development. "Correlational studies have consistently revealed that young people who play video games extensively have, on average, higher IQs and perform better on a wide variety of cognitive tests of perceptual and mental ability than do non-gamers" (Gray, 2018).

In their study of 3195 European children ages 6-11, Kovess-Masfety et al. (2016) found screen time to have positive benefits. The researchers asked mothers to report on the amount of screen time their children had at home. The children's teachers reported on their behaviour at school. The children also self-reported using the Dominic Interactive. The results concluded that high screen time usage was not associated with suicidal thoughts or conduct

disorders. They also showed that high screen time usage led to greater academic achievement and intellectual functioning, as well as fewer peer relationship problems and mental health difficulties. This contradicts the belief that screen time negatively affects mental and social well-being. However, their study used screen time in its broadest sense and did not specifically look at violent video game usage.

Interestingly, Green and Bavelier (2012) found that the most robust effects on cognitive performance came from gamers who played shooter games, rather than puzzle or role-playing games. Those who played shooter games showed faster and more accurate attention allocation, higher spatial reasoning skills, and increased mental rotation abilities. The players' improvements were equal to those who took a formal course aimed to increase these skills (C. S. Green & Bavelier, 2012).

Many parents and educators are concerned that the more time children spend with screens, the less time they spend engaged in creative play (Campaign for a Commercial-Free Childhood 2012). Some, however, suggest that video games are a creative medium. Video game players are an intensely curious group, often capable of coming up with their own creative methods of playing a game that might not be anticipated or even appreciated by those who originate them. Game developers must adjust and re-code a game when its players find a loophole and/or create their own methods of playing (Etchells, 2019). In their 2022 survey, the ESA discovered that video game players were more likely to participate in creative hobbies than non-players, with a difference of 33% to 22% between the two groups. Additionally, 86% of Americans believe that video games help develop creative skills (Entertainment Software Association, 2022). In one study, adolescent boys reported that role-playing video games encouraged and motivated them to solve problems creatively (Olson et al., 2008).

The fear that “because changes on a screen happen so quickly ...children can become passive, content to let the technologies set the parameters, rather than exercising their own skills and curiosity” (Facing, 2012) is one that has been addressed by researchers. There are also those who have considered the alternative: that video games can be beneficial for a person's creativity. Even games with violent aspects such as Minecraft,

Roblox, or Fortnite can be played in “creative mode” where gamers can design their own worlds. One study found that either creative children are drawn to video gaming, video gaming increases creativity, or both (Chory & Goodboy, 2011).

Ott and Pozzi (2012) conducted a study that sought to answer whether digital games could potentially increase a child’s capacity for creativity. In this study, forty-five mainstream mind games/ brainteasers/puzzles were played by the students. These students were then followed for three years. The researchers found that creativity was only inherent in 25% of the children. They also discovered that as they had more practice, children did get better at figuring out solutions. They realized that children’s personal attitudes and abilities played a major role in developing creativity. There was no control group, so this study just provides a working hypothesis, and the authors note that more research is needed, but using appropriate educational actions seem to help develop creativity (Ott & Pozzi, 2012).

Another study (Moffat & Shabalina, 2016) assessed young adults using the Torrance Tests for creativity. Researchers had participants play either a shooter game, a problem-solving game, or a sandbox game. They tested the subjects right before and right after 30 minutes of gaming. Their results showed that a person’s creativity- at least short-term- was increased even after just a short period of gaming, regardless of the type of game. Those who played the problem-solving game showed higher creativity skills, specifically that of flexibility, but all participants demonstrated increased creative capacity after playing a video game (Moffat & Shabalina, 2016).

2.5.3 ADDICTION

In their research on video game addiction, Stockdale and Coyne (2018) note how “parents of adolescents and young adults frequently joke that their children are ‘addicted’ to video games, but this is hyperbole for most youth” (p.265). Playing video games does increase dopamine levels in the brain, however, dopamine levels produced by gaming cannot be compared to those of an addictive drug. The dopamine levels produced by playing video games

are approximately the same as eating a slice of pepperoni pizza or dish of ice cream (Markey & Ferguson, 2017a).

There are rare cases where people do become addicted to gaming, but the number is much smaller than media headlines such as “It’s Digital Heroin: How Screens Turn Kids into Psychotic Junkies” (Kardaras, 2016) would have people believe. An American study of adolescents ages eight to eighteen found that 8% of gamers exhibited addiction (D. Gentile, 2009), whereas a study in Norway concluded that just 0.6% of gamers met the criteria for video game addiction (Mentzoni et al., 2011). Individuals with a suspected addiction to video game play have been shown to elicit an elevated craving response to gaming cues when compared with individuals who do not have a suspected video game addiction. The amount of time an individual spends playing video games is not related to the neurological differences exhibited by potentially addicted players, as they do not display the same neural patterns as expert and professional players (Han et al., 2012; Palaus et al., 2017).

The first mention of video game addiction in the literature was in 1983 (Soper & Miller, 1983), and the early studies were mostly anecdotal, observational, and primarily case studies of teenage males playing games in arcades. One of these early studies examined participants who self-described as being “hooked” on video games. In this study, Shotton (1989) realized that the “addicts” in her study were in fact simply misunderstood people, who were otherwise very intelligent, motivated, and high achieving. Studies in the 1990s were also self-report surveys on a small scale. Charlton (2002) later criticized these studies, declaring that they measured a participant’s preoccupation with playing video games, not an addiction.

Griffiths et al. (2012) examined research literature about video game addiction. They found a discrepancy among researchers as to whether “addiction” was an appropriate term to use when discussing problematic video game playing behaviour. Many of these studies fail to assess prior problems, and therefore do not take these issues into account when determining if a participant is an addict. Griffiths et al. (2012) determined that despite discrepancies in the existing research, it did appear as though video game playing can have damaging effects in extreme cases.

The field of study regarding video game addiction is unclear. In addition to sampling biases, it has been “hindered by the use of inconsistent and non-standardized criteria to assess and identify problematic and/or addictive video game use” (Griffiths et al., 2012, p. 7). Studies in the 1990s assessed video game addiction using adapted versions of the DSM criteria for pathological gaming. Much of the research through 2010 was conducted on adolescents and children using adapted versions of adult screening instruments; this led to more concerns over the validity of results from these studies. Since very few studies have explored the potential links between video games and other risk behaviours, it is unclear if video game addiction or preoccupation can be linked to other problematic behaviours such as gambling, drug or alcohol use, delinquency, or sexual activity (Griffiths et al., 2012).

In its most recent update, the DSM-5 (American Psychiatric Association, 2013) listed Internet Gaming Disorder (IGD) in the Emerging Measures section, as a disorder that required further research. The diagnostic criteria for IGD were adapted from those used for pathological gambling (Palau et al., 2017). In May 2019, the World Health Organization (WHO) formally recognised and defined what they termed Gaming Disorder (GD). An individual diagnosed with GD must have all three of the following symptoms present: 1. Impaired control over gaming, 2. Gaming takes priority over other daily activities and interests, and 3. Gaming continues or escalates despite negative consequences. These symptoms must be present for at least twelve months or more, unless symptoms are severe, in which case a diagnosis may be made earlier (World Health Organization, 2019). Bean et al. (2017), however, noticed the WHO acknowledged that the push for a GD label could potentially be the result of pressure from Asian countries.

While it is generally agreed upon that pathological gaming exists, the validity of GD being a separate disorder is debated by scholars. While some support its actuality, others perceive GD as a modern-day moral panic. Those sceptical scientists are not convinced that GD exists independently, rather that it is a symptom of another mental disorder. Given the symptoms of GD, and the proposed almost identical symptoms of IGD, it is difficult to distinguish whether an individual has GD or other psychological problems. Ferguson (2007b, 2020; Ferguson & Olson, 2013; Markey & Ferguson, 2017a)

conducted many studies and meta-analyses on the potential effects of violent video games. He found no negative link between video games and their detriment to players. He disagreed with the American Psychological Association (APA) and the World Health Organization (WHO) creating a category for a mental health disorder based on gaming. When discussing the potential harm and WHO's category of GD, Ferguson (Ferguson, 2020, p. 244) explained:

The bad news is that decades of stigmatization of video games and other digital technology is undoubtedly causing hesitancy among parents at the moment when digital technology may be most useful. The WHO's decision to create a mental health disorder, despite the absence of a consensus among scholars or clear evidence suggesting the diagnosis was useful is particularly unfortunate in hindsight. Fears of "addiction" with attendant pseudoscientific talking points about dopamine and comparing games to cocaine are likely to cause irrational hostility among some older adults, cutting off youth from opportunities to use games positively. (p. 244)

2.5.4 DESENSITIZATION

Some fear children may become desensitized to violence from viewing and participating in digital acts of violence. Desensitization is "the absence of an expected response" (Brockmyer, 2015, p. 65). It also refers to the "automatic and unconscious phenomenon" that people experience every day (Brockmyer, 2015, p. 66). Desensitization helps humans handle stressful situations by not experiencing them at the same level every time they recall the incident. However, maladaptive desensitization can occur, for example, in children who experience violence daily. These children "may view violence as an ordinary part of life and may act accordingly" (Brockmyer, 2015, p. 67). Some studies have concluded that media violence may have the same effect, and violent video games are one potential source of violent media (Brockmyer, 2015).

Because violence is presented as both fun and necessary to win in violent video games, the impact to this type of active exposure may be greater than the impact to passive media violence. Violent acts in a video game rarely

generate realistic consequences (Funk & Buchman, 1996), and first-person shooter games in particular “require players to actively identify with the aggressor” (Brockmyer, 2015, p. 67). Researchers found that participants who played a violent video game were less likely to acknowledge a simulated altercation and took longer to assist an injured victim (Brockmyer, 2015).

Conversely, there is reason to believe that violent video games provide a safe expression for violent emotions and could be a cathartic experience for users (Walkerdine, 2007). Gamers often talk about how video play helps them to deal better with the stress and frustrations of their non-play life (Granic et al., 2014). Olson (2010) discovered that some players repeatedly play survival and horror games to help them process fear. Concern is not completely assuaged with regard to very young children, however. The frontal lobes of a person’s brain help to reason and evaluate the world. Young children have less developed frontal lobes, which could make them more susceptible to negative and scary content in visual media. This also means that young children cannot effectively distinguish between fantasy and reality (Parliamentary Office of Science and Technology, 2012). There is still concern that violent gaming can negatively affect children whose brains are much less developed.

2.5.5 MENTAL HEALTH AND NEURODIVERSITY

Debate is ongoing about whether violent video gaming leads to real-life violent behaviour. Questions remain specifically regarding neurodiverse youth and those with mental health conditions. There is also concern that video game play is damaging to a person’s mental health, though again, previous research is conflicting. Olson (2004) cautioned that we know almost nothing about violent video game effects on anxious children or those with attention deficit-hyperactivity disorder. Studies in the US and Norway connected high media usage to an increase in suicidal thoughts and depression, yet other countries could not replicate this link. In Canada, a study not only showed media use to be non-significant, but also concluded there was an inverse association between video game use and binge drinking or depression (Olson, 2004).

2.5.5.1 ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

The amount of research specifically examining attention deficit hyperactivity disorder (ADHD) and video games, especially violent video games, is limited. In addition, studies that have been done have mixed results. Chan and Rabinowitz (2006) completed a cross-sectional analysis of video games and ADHD in adolescents. They determined that adolescents who play video games for an hour or more per day may have more intense ADHD symptoms. The authors note, however, that it is unclear if adolescents with ADHD symptoms play more video games or if the video game play leads to increased ADHD symptoms. One study (Mazurek & Engelhardt, 2013b) specifically compared boys with ADHD or autism spectrum disorder (ASD) to those with typical development. The researchers discovered that compared with typically developing boys, both those with ADHD and those with ASD developed greater problematic video game use (Mazurek & Engelhardt, 2013b).

Ferguson and Olson (2014) found that adolescents with clinically elevated attention deficit symptoms had increased levels of stress and trait aggression, which can be predictive of delinquent criminality. Exposure to violence in video games, even when combined with aggressive traits, did not lead to delinquent outcomes in these children. In Kovess-Masfety et al.'s (2016) study of 3000 European children aged 6-11, after controlling for many other demographical factors, researchers concluded that video game usage was not significantly associated with emotional difficulties, ADHD, social conduct, or peer relationship difficulties. In contrast, they found that high video game usage was associated with fewer peer relationship difficulties. Research is currently being conducted to evaluate the potential use of video games in mitigating ADHD symptoms. In June 2020, the United States Food and Drug Administration approved a video game to be used as treatment for ADHD (FDA: U.S. Food and Drug Administration, 2020).

2.5.5.2 AUTISM SPECTRUM DISORDER (ASD)

As defined in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), autism spectrum disorder (ASD) is a pervasive developmental disorder with “persistent deficits in social communication and

social interaction” (American Psychiatric Association, 2013, p. 50). Individuals with ASD may also exhibit repetitive movements, use of objects, or speech, insist on strict routines, display an abnormal fixated interest on one topic, and over- or under-react to sensory input. These symptoms cause substantial difficulties in an individual’s ability to function socially. Individuals diagnosed with ASD are often diagnosed with other conditions, including ADHD, and psychiatric conditions such as anxiety and depression.

Murray et al. (2022) reviewed twenty-one studies that examined the relationship between individuals with autism, problematic internet usage (PIU), and gaming disorder, including five that assessed a potential association between ASD and GD only. All of these studies found a positive relationship between the two criteria. In two studies (MacMullin et al., 2016; Mazurek & Engelhardt, 2013a), the correlation between GD and youth with ASD was significantly higher than that of their typically developing peers. Mazurek & Engelhardt (2013b) also found that youth with ASD were more likely than typically developing youth to exhibit symptoms of problematic video gaming. The researchers speculate that because children with autism are also subject to repetitive behaviours, it may be difficult for them to disengage from video games. Gaming could be considered a restricted interest, a common trait of individuals with ASD (Mazurek & Engelhardt, 2013a). Likewise, Benford and Standen (2009) hypothesized that gaming presents a safe space with less social pressure for individuals with ASD. The effects do not appear to dissipate after adolescence, as one study (Engelhardt et al., 2017) revealed that adults diagnosed with ASD presented more symptoms of pathological game use than typically developing adults.

Two studies in this review (Mazurek & Engelhardt, 2013b; Paulus et al., 2020) also found that boys with ASD spent more time playing video games than boys who were typically developing and were more likely to display symptoms of GD than their typically developing peers. Additionally, Mazurek & Engelhardt (2013a) concluded that role-playing games may be a unique risk factor for children with ASD, as preferences for these games predicted more problematic video game use for those boys. Other studies (Akin & İSkender, 2011; Lai et al., 2019; Mannion et al., 2013; Matson & Nebel-Schwalm, 2007; Simonoff et al., 2008; Wang et al., 2017; Yen et al., 2017) have also found that

rates of gaming disorder are higher among individuals with depression, anxiety, and ADHD, all of which are common comorbidities of ASD.

Individuals with ASD have difficulty with the social skills that enable them to successfully navigate their social environments (American Psychiatric Association, 2013). These are skills that children develop through play, as discussed in *2.4.2: Benefits of Play*. Those with ASD have difficulty understanding others' perspectives, initiating social interactions, negotiating with others, and adapting their behaviour when necessary in social situations (Macintosh & Dissanayake, 2006). Ke and Moon (2018) conducted research in which children aged ten to fourteen with high functioning autism (HFA) participated in virtual reality (VR) games intended to develop their social skills. VR games allow players to interact with others and practise social skills in a safe environment before applying these skills in the real world (Schmidt & Schmidt, 2008). Ke and Moon (2018) created a 3D world that both mimicked real-world locations such as a school, parks, and restaurants while also containing fantasy locations underwater or a historical western town. Before playing the VR games, participants were observed in three to five non-gaming situations to determine a baseline for their social interaction skills. Then the children participated in competition games, role-playing games, and architecture design games. The games adapted to each learner's preferences, progress, and needs, along with two adult facilitators who scaffolded their learning. To evaluate how learners progressed through the VR program, their performance on social tasks was then assessed by independent coders via screen-recording and on-site observations. This study concluded that "VR-based collaborative gaming enhanced social interaction practice and performance by high-functioning autistic children" (p. 738). Therefore, although individuals with ASD may be at risk for GD, video games may also successfully increase their ability to succeed in social interactions.

Research connecting ASD and violent video games is scarce, especially with regards to children with ASD. One study that evaluated whether violent video games affected adults with ASD differently than typically developing adults discovered no association. In fact, their results suggest that violent video games do not affect adults with ASD at all (Engelhardt et al., 2015). Although this cannot necessarily be applied to children with ASD, it is

an interesting finding when considering the effects of violent video games on children.

2.5.5.3 ANXIETY AND DEPRESSION

In a study of adolescents with clinically elevated depressive symptoms, exposure to violence in video games was not predictive of delinquent criminality (Ferguson & Olson, 2014). Researchers did find that depressive symptoms led to stress and trait aggression, though the interaction of trait aggression with violent video game play was not significant (Ferguson & Olson, 2014). Studies by Russoniello et al (2009) and Ryan et al (2006) have shown that playing a preferred video game can improve a player's mood and result in an increase in positive emotion. Russoniello also found that completing puzzle games can decrease anxiety symptoms.

Kühn et al (2019) conducted a study where they assigned adults to play either violent or nonviolent video games for two months. The researchers observed those adults for two additional months, following the initial two months of video game play. Using surveys and interactions with participants during this time, the researchers found no changes in depression or anxiety symptoms in any of the participants. There were no changes from the baseline or the follow-up at the end of four months, regardless of which video games they played. Another study (Pallavicini et al., 2021) concluded that video games, including action games, action-adventure games, and augmented reality games, reduced stress and anxiety levels in players. The effect was discovered for both short and longer sessions of play as well as just one single play session.

Some studies have concluded that anxiety can cause excessive videogame usage and vice versa (González-Bueso et al., 2018). De Pasquale et al. (2021) discovered that anxiety in children was a risk factor for problematic videogame usage. To prevent problematic videogame usage, the researchers recommended monitoring anxiety symptoms in children. Conversely, some studies have shown that video games can be used to treat anxiety (Peracchia et al., 2019; Vannucci et al., 2017).

2.6 DO VIOLENT VIDEO GAMES CAUSE VIOLENCE?

Perhaps one of the most pressing concerns is that players involved in violent video game play will transfer gaming aggression to real-life situations. Researchers, parents, and child advocacy groups are most troubled about games where killing other characters is common. We know from research on violent television that people who identify with an aggressor are more likely to imitate the aggressive actions. This increases concern that first-person shooter games in particular could lead to violent behaviours (D. A. Gentile & Anderson, 2003). As Cote (2021) summarized, “An individual’s likelihood to engage in violence is multidetermined, and research results on the effects of exposure to media are split; many studies find evidence of a connection between violent media and aggression (e.g., Anderson et al., 2010), whereas others find no link or argue that connections are better explained by factors like parenting or family background (e.g., Elson & Ferguson, 2014)” (p. 2).

2.6.1 MORAL PANIC THEORY

In April of 1999, a horrific scene unfolded at a school in the US. Two male students, armed with shotguns, a handgun, and a rifle, entered Columbine High School. They killed a teacher and twelve students before killing themselves. Newspapers around the world printed explanations, assumptions, and predictions. The world was attempting to make sense of a senseless act of violence. What ensued was a number of presumed factors that caused panic around school violence involving bullying and shootouts (S. Cohen, 2011).

Olson (2010) noted that “electronic games are now an everyday part of childhood and adolescence” (p. 1). The lines between using technology for entertainment, work, school, and social interaction have become blurred. Parents, teachers, researchers, clinicians, and policy makers have expressed concern not only about the time children spend playing games, but also about the possible link between lawlessness and violence in video games (Alloway & Gilbert, 2003). They are apprehensive that video and computer game violence could cause children to exhibit aggressive behaviour, think aggressive thoughts, be less empathetic, or be desensitized to violence in the

real world (Funk, 2005). As Etchells (2019) explained, if you didn't grow up playing video games, watching your children play can be worrisome; it appears isolating and consuming. Despite children's views of video games as being a social activity and important for casual conversation with peers, there are many adults who view video game play as an isolating experience (Olson, 2004).

It is natural for people to be afraid of the unknown, especially when it relates to parenting their children. While being afraid of new ideas and experiences is not a new concept, technology is a current "folk devil" whereby people blame the newest thing as being responsible for the ills in society. This phenomenon is known as *Moral Panic Theory* (S. Cohen, 2011; Etchells, 2019; Ferguson, 2010). In an attempt to ban or limit the new thing, whatever it may be at the time, society feels as if it has control over the supposed crisis (Etchells, 2019; Ferguson, 2010). In a moral panic, members of society impose their moral beliefs on the greater society through the tactic of fear. This is typically done to maintain the status quo and reign in youth's independence. Members, often elders, politicians, scientists, religious figures, or advocacy groups, may use moral panics to distract society from concerns that are "intractable, complex or embarrassing to established authority, replacing them with 'folk devils' which can deflect blame for societal problems" (S. Cohen, 2011; Ferguson, 2010, p. 70).

Phenomena become moral panics when they contain five elements: concern, hostility, consensus, disproportionality, and volatility (S. Cohen, 2011). There must be concern, as opposed to fear, about the imagined threat. There must be a moral outrage towards the folk devils that cause the problem and the agencies who are perceived to be responsible. There must be a widespread agreement, shared by influential groups such as the media, that the threat is real, serious, and that a solution must be found. An exaggeration of the number of incidents, the damage that ensued, the degree of morally offensive behaviour, and potential risk, must be present. Finally, moral panics are volatile; they erupt and dissipate quickly (S. Cohen, 2011).

Moral panics have existed for millennia, with perhaps the earliest recorded example being Plato and his fear of the written word. In fact, he advocated for banning poetry and plays in *The Republic*, fearing their harmful effects on the youth population. When printed novels became available to the

masses, many warned that these would lead the young, especially girls and young women, to moral degeneracy. Socrates considered the alphabet to possibly be harmful, that writing encourages complacency. In his book *Phaedrus* (Plato, 2001), Plato wrote Socrates's words, "It will implant forgetfulness in their souls. They will cease to exercise memory because they rely on that which is written, calling things to remembrance no longer from within themselves, but by means of external marks" (274b-277a). Socrates's works were written, ironically, in the 400s BC. Over two thousand years later, in the 18th and 19th centuries AD, concerns of elder community members and authority figures focused on youth, women, and immigrants' exposure to books. Early in the film era, specific concerns about media violence emerged, entwined with moral issues surrounding sexuality, immigration, and cultural values (Trend, 2007). These same arguments are being used now, in reference to modern technology.

Other folk devils from the late 20th century include picture shows, rock music, comic books, death metal music, horror movies, board games, and television shows. In the 1920s, going to see the moving picture show became a popular activity for teenagers. Parents lamented that going to the moving picture shows was causing their children to be disrespectful and violent. In 1954, Wertham wrote a book that claimed comic books were the root cause of juvenile delinquency (Etchells, 2019). *Dungeons and Dragons*, a medieval fantasy role-playing game, hit the market in 1974. Other science-fiction role-playing games, *Runequest* and *Traveller*, joined the market in 1976 and 1977, respectively. By the late 1970s:

there was widespread concern about the hobby of role-playing, as the news media connected cases of youth suicide or criminal behavior to role-playing games. The public did not always appreciate a pastime that encouraged young people to sit in their living rooms and discuss the finer points of medieval weaponry and slaughtering monsters, all with a passion that struck more than a few parents as morbid and unhealthy...role-playing games were lamented for being blasphemous. Not surprisingly, video games have become embroiled in nearly identical controversies. (Egenfeldt-Nielsen et al., 2012, p. 56)

News headlines linked *Dungeons and Dragons* to suicide, ritual satanic abuse, and murder. In the 1990s, the cartoon tv show *The Simpsons* was blamed for declining moral compass and high divorce rates (Etchells, 2019).

Of course, none of these folk devils of the 20th century were the root cause of the perceived problems. Despite concerns, children and teens who have had a variety of healthy childhood experiences do not seem to be negatively affected by video games at all. Kardefelt-Winther's (2017) paper for the United Nations Children's Fund (UNICEF) concluded that there was little evidence to suggest playing video games for extensive periods of time was inherently harmful to childhood well-being. Media narratives have been spun and policy decisions have been made using studies with small effect sizes (Ferguson, 2020). Ferguson (2008) criticized media reports citing poor research studies that connected violent video games to school shootings, despite the finding that only 12% of perpetrators in school shootings had interest in violent video games (United States Secret Service & United States Department of Education, 2002). Ferguson explained the phenomenon using the diagram below in **Figure 2.1**.

Figure 2.1

The Moral Panic Wheel

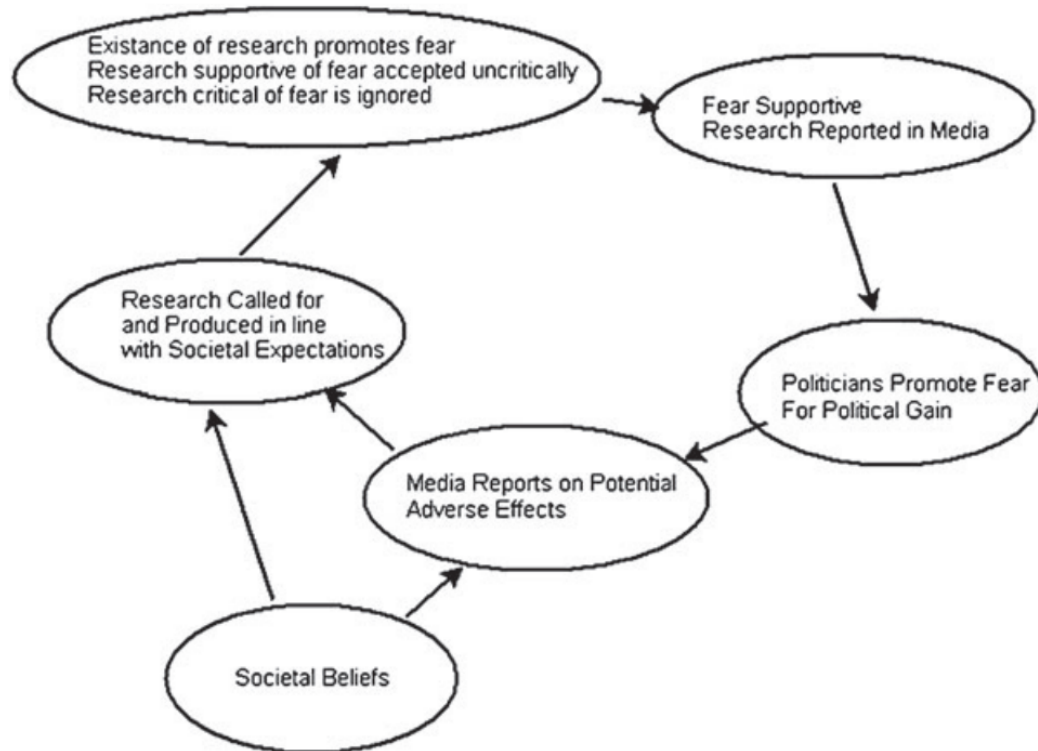


Figure 2.1. The moral panic wheel. From “The School Shooting/Violent Video Game Link: Causal Relationship or Moral Panic?” by Christopher J. Ferguson, 2008, *Journal of Investigative Psychology and Offender Profiling*, 5, p. 31. Copyright 2008 by John Wiley & Sons, Ltd.

Despite multiple open letters to the American Psychological Association protesting the organization’s stance that violent video games are linked to aggressive behaviour due to a poor-quality meta-analysis of studies (Adachi et al., 2013; Society of Media Psychology and Technology, Division 46, 2020), the APA repeated its stance in its subsequent 2020 policy statement. Vandewater (2013) argued that rather than perpetuate this moral panic, there exists a moral imperative to study the relationship between media and children’s development. Through explorations of this connection, researchers concluded that no one method can accurately measure this connection (Vandewater & Lee, 2009). Moreover, Vandewater and Denis (2011), assert that a generational discomfort and an “ambivalence about the usefulness of such media” (p. 8) has prevented a thorough investigation of the role of media in children’s lives.

2.6.2 RESEARCH SAYS YES

A portion of the research in this field has concluded that violent games increase aggression. To summarize some previous studies, “A preference for violent video games has been linked with hostile attribution biases, increased arguments with teachers, lower self-perceptions of behavioral conduct, and increased physical fights” (D. A. Gentile & Anderson, 2003, p. 133). Nushman and Anderson (2002), Anderson et al. (2008), Krahé et al. (2012), Hasan et al. (2012), and Hollingdale and Greitemeyer (2014) are a few of the researchers whose studies concluded that violent video games incited violent behaviour.

In a study at Iowa State University, researchers concluded that violent video games increased players’ aggression in thoughts, feelings, and behaviours. Participants played either a violent or a non-violent game for 20 minutes. Then they were asked to complete a story stem, hypothesizing what a fictional character would do next in a situation. The researchers state that their findings support the idea that violent video game content can temporarily create a hostile expectation bias (Bushman & Anderson, 2002).

A few studies cooperated with schools to evaluate children in multiple settings. A dual-country, year-long study found a correlation between playing violent video games and physical aggressiveness in adolescents. Anderson et al. (2008) conducted a study specifically looking at the effects of violent video games on long-term aggression. Adolescents in the United States and Japan were evaluated twice over the course of one school year. After accounting for gender, previous aggressive tendencies, and culture, it was determined that playing violent video games increased physical aggressiveness of nine- to eighteen-year-olds. Interestingly, the negative longitudinal effect was larger in the younger samples of children (Anderson et al., 2008). A study of German adolescents used self-reports and teacher reports of aggressive behaviours. It also utilised various scales for participants to report empathy, acceptance of aggression, parental monitoring, and academic achievement. The authors concluded that “violent media use is a unique predictor of later aggression, even when considered in conjunction with a range of other established sociodemographic correlates and psychological risk factors” (Krahé et al., 2012, p. 159).

Some studies examined an individual's inclination to cause discomfort to another player through sound or food after playing a violent video game. Hasan et al (2013) had participants play violent and non-violent video games, then measured their cardiac response and willingness to blast an opponent with a loud sound through headphones. The researchers found an increase in cardiac coherence for participants who played the violent video games. They concluded that violent video games made people stressed, and therefore were more aggressive and irritable (Hasan et al., 2013). Another study utilised players' eagerness to create spicy foods for unwilling participants to gauge a player's level of aggression after playing a video game. Hollingdale and Greitemeyer (2014) randomly assigned 101 UK college students to play either a neutral game online or offline, or a violent game online or offline. The researchers were looking to see if the effects of online games differed from those of playing games offline. They concluded that online violent games produced the most aggression, as those players created the hottest version of chili sauce for the imaginary person, who they were told did not like chili sauce, to taste (Hollingdale & Greitemeyer, 2014).

A meta-analysis (Anderson, 2003) examined many studies that investigated violent video games and confirmed a causal link between the two. The results of these studies that affirm a relationship between violent video games and aggressive behaviour, however, are disputed by many other studies that criticize the methods used and disprove any such causation. A few of those studies are discussed in the next two sections.

2.6.3 RESEARCH SAYS NO

Despite claims that violent video game play leads to school shootings and other violent behaviours, violent behaviour (aggravated assault, rape, robbery) by youth has steadily decreased in the United States from 1993-2019 (United Nations Children's Fund, 2019). In 1993, there were 1,108,000 violent crimes involving youth ages twelve to seventeen. That number was cut by more than half in 2000, with 412,000 violent crimes involving youth. By 2019, there were 146,000 violent crimes involving youth. The number of youth violent crimes in

2019 is only 13.2% of the number of crimes in 1993 (Federal Interagency Forum on Child and Family Statistics, 2020).

Ybarra et al. (2008) discovered that when they controlled for other variables, exposure to violent media did not predict violence. Baldaro et al (2004) measured the blood pressure, heartrate, anxiety, and hostility of young adult males before, during, and after playing a video game. Participants were randomly assigned a violent or nonviolent game. The researchers found a range of effects on arterial pressure and anxiety on all subjects, no matter which game they played. However, there was no difference in hostility measurements pre- or post- game play for any of the subjects. All subjects had a decrease in diastolic blood pressure after playing a video game. They acknowledge their small sample size, while also noting that these results do not align with results showing violent games increasing hostility (Baldaro et al., 2004).

Very few studies look at the potential long-term effect of violent video games on players. In a recent experiment, Kuhn et al. (2019) assigned adults a violent or a nonviolent video game with instructions to play it for at least 30 minutes each day. Their control group was not instructed to play any video game for the next two months. Participants answered mental health questionnaires before playing, immediately after the two-month period, and again two months later. Their findings did not reveal any negative effects of playing a violent video game. Only three of the 208 responses showed any significant change, which is even less than the 10 they expected to find by chance. The researchers explained, "...an extensive game intervention over the course of 2 months did not reveal any specific changes in aggression, empathy, interpersonal competencies, impulsivity-related constructs, depressivity [sic], anxiety or executive control function; neither in comparison to an active control group that played a non-violent video game nor to a passive control group" (p. 1232).

Lobel et al (2017) conducted a longitudinal study that followed 194 children for one year. The researchers considered the frequency that children played games, if they played violent games, and if they played cooperatively or competitively. Parents also reported on psychosocial health indicators for their children. This study concluded that "violent gaming was not associated

with psychosocial changes” (Lobel et al., 2017, p. 1). It did, however, find that competitive gaming decreased prosocial behaviour for children who played frequently (Lobel et al., 2017) .

Some studies found that playing violent video games reduced aggression, rather than caused it. Dorman (1997) concluded that not only might video games not lead to aggressive behaviour, that they may aid children in expressing aggression. Colwell and Kato (2003) conducted a study of Japanese adolescents. Their results showed that adolescents who preferred aggressive games scored lower on real-world aggression measures. The researchers suggested that evidence to the contrary was correlational and not causal. They say this evidence “supports a catharsis mechanism, that playing aggressive computer games may lead to lowered aggression” (Colwell & Kato, 2003, p. 157).

Results of a study by Ferguson et al. (2008) also contradict studies that claim violent video game players are likely to execute violent crimes. The researchers found that when they controlled for exposure to family violence, there was no direct correlation between exposure to violent video games and violent criminal behaviour. They did find that violent video game exposure predicted violent criminal behaviour in individuals with an aggressive personality. Those individuals appear to be seeking examples of violence, whether it be through video games or violent criminal behaviour. The studies concluded that “no link, either causal or correlational, was found between violent-video-game playing and aggressive or violent acts” (p. 330).

Many violent action games also have a prosocial focus; often players must cooperate to achieve a goal. Gentile et al. (2009) found that violent content in games is correlated with prosocial game play. Although they caution against making sweeping causation conclusions from their findings, Ferguson and Garza (2011) determined that violence in action games was related to an increase in prosocial behaviours. Furthermore, they discovered that when parents were involved in their child’s video game experiences, it appeared to increase their civic engagement. In their research, Lenhart et al. (2008) found that although teens were often exposed to violent media and entertainment, their civic involvement and volunteering rates are at an all-time high. These findings contradict research that suggests violent media decreases these

activities. Ferguson and Garza (2011) suggest that “the categories of ‘violent’ and ‘prosocial’ video games may just not be mutually exclusive but, in fact, may tend to go hand in hand” (p. 774).

Many researchers (Ferguson, 2007b, 2007a, 2010; Savage & Yancey, 2008; Sherry, 2001) have conducted meta-analyses to examine previous studies. Savage and Yancey (2008) found that the effect media violence was trivial in its relationship to criminal aggression. Sherry’s (2001) meta-analysis investigated concerns that violent video games were more harmful than violent television. His research revealed that the effect of video games on violent behaviours was much weaker than had been found with television. He questioned why some researchers continue to push the narrative that violent games are harmful despite evidence that says otherwise. Ferguson’s (Ferguson, 2007b, 2007a) meta-analyses determined that in addition to publication bias affecting the reporting of data, the “misuse of unstandardized unreliable measures of aggression... allowed researchers too much latitude in picking results that supported their hypotheses” (Ferguson, 2010).

In a study looking at a potential correlation between video game play and ADHD, the researchers found no relationship between oppositional or aggressive behaviour and video game usage (Chan & Rabinowitz, 2006). As Ferguson (2010) said, “Video games may be effective in communicating raw data or information, but they aren’t effective in transmitting moral beliefs, personality traits, and so forth. Information transfers but personality traits such as aggressiveness do not” (p. 76). Some researchers have theorized that video games, including violent ones, have potential positive effects on adolescents (Olson, 2010). In violent video games, adolescents can explore rules and consequences, emotions, and traditionally unacceptable roles (Jansz, 2005; Scarlett et al., 2004). It has also been proposed that violent video games provide a safe, acceptable outlet for expressing anger (Griffiths, 1999).

2.6.4 CRITICISMS OF PREVIOUS STUDIES

Sherry (2001) noted that conclusions cannot be made from existing literature on the effects of video games due to the varied methods and populations used

in the studies. D.A. Gentile and Anderson (2003) identified six criticisms of research that they considered legitimate. The first criticism is that studies through 2003 had small sample sizes. Second, not all studies used games that differed significantly in violent and nonviolent content. Third, in some studies, the control game was boring, annoying, or more frustrating than the violent game used in their experiments. Fourth, sufficient results were not reported from studies and therefore could not be generalized. Fifth, the dependent variables used in some studies were not true aggressive behaviours. Sixth, at the time of writing their report in 2003, there were no longitudinal studies (D. A. Gentile & Anderson, 2003).

Most studies that evaluated violent versus non-violent game effects “have failed to equate these games in terms of competitiveness, difficulty, and pace of action” (Adachi & Willoughby, 2011, p. 56). It’s possible that the violent games used in these studies were more competitive, fast-paced, and difficult than the non-violent games used. It is unclear whether or not it was the violent content or the other game attributes that caused aggressive behaviour (Adachi & Willoughby, 2011).

As with the study of video game addiction, there is inconsistency in the field regarding the study of video game violence. The research community does not have set parameters on what constitutes a violent video game. The term “violent” varies depending on who classifies the game (D. A. Gentile & Anderson, 2003). The words “aggression” and “violence” are sometimes used interchangeably in research studies, implying that they are the same concept. In his review of current literature surrounding violent video games and aggressive or violent behaviours, Anderson found that aggressive thoughts, feelings, and behaviours were occasionally regarded as equivalent to real-life violence (Anderson, 2003). Furthermore, others have noted that in many studies, aggressive play after exposure to violent games or cartoons is not distinguished from aggressive behaviour with intent to harm (Irwin & Gross, 1995; Olson, 2004; Silvern & Williamson, 1987).

In addition, the general public does not always view aggression and violence in the same way as researchers. The public may define violent media and video games as those depicting graphic images of blood and gore, whereas researchers also include intentional harm from one character to

another. For research purposes, violence does not need to include vivid bloody images. Researchers typically define aggression as an act intended to harm another person, not just the emotion, thought or intention of an aggressive act, which differs from the general view of aggression (Anderson et al., 2008). This is notable, because what parents consider violent or aggressive in a video game may not match research designed to measure violence or aggression.

Anderson et al (2008) attributed violent video game exposure as the cause for an increase in physical aggression. The authors acknowledge that the measures and time lags were not identical across samples, so it is not clear if that contributed to the results among different ages. Others have argued that the social component is an integral part of online gaming. The participants who played online in the study conducted by Hollingdale and Greitemeyer (2014) were not allowed to interact with other players. This is problematic to the study, as interacting with other players is one of the main components of online games. This study also did not measure any long-term effects of the games on level of aggression, just one instance of preparing hot chili. The researchers did note that other research has shown competitive games increase aggression, which they did not account for in their study; this study only accounted for violent content, not competitive content. The differences in aggression may have been attributed to the competitive nature of the games played, not to the violence within them.

Many studies linking violent video games to increased aggression have been conducted with college students in a laboratory setting. The research community is still debating the validity of these studies, as the measures of aggression utilised are relatively mild. There is no clear connection between these mildly aggressive behaviours and the aggressive or violent behaviours in which parents or policy makers are interested. Markey conducted several studies that suggested violent video games may exacerbate pre-existing anger symptoms in some college students, but he cautioned against applying these findings to children (Markey & Markey, 2010). In addition, these studies produced mixed results and have been criticized for methodological issues (Ferguson, 2013; Krahé et al., 2012).

In the study measuring cardiac output, the researchers concluded that violent video games increased a player's cardiac response. However, an

increased cardiac response is not necessarily a negative outcome or due to violence, as blasting a loud noise is not exactly an aggressive behaviour. In addition, this study only measured short-term aggression; the participants were not followed to see if the games had any long-term consequences (Hasan et al., 2013). These studies could possibly make a case for connecting violent video games to competitiveness or mild aggressive acts, but not to societal violence. Very few of these studies examining violent video games and children have been conducted outside laboratory settings (Ferguson & Olson, 2014). Researchers who have found no link between violent video game play and violent or aggressive behaviour caution against laboratory aggression as a measure to predict societal violence.

The majority of studies exploring the effects of media violence focused on aggressive behaviours, not on criminal or violent behaviours. Studies that measure acts of minor aggression, (giving non-harmful noise bursts, completing words or story scripts with aggressive words) relate these laboratory actions to real-world violence (Ferguson & Dyck, 2012). In some studies, participants were asked to administer shocks to another person. Others have criticized this method as an inaccurate way to understand real-life violence and aggression. As explained by Savage and Yancey (2008):

There are several reasons why scholars interested in criminal violence might be skeptical of the generalizability of findings from these studies. First, subjects are directed to commit the aggressive act...this is generally untrue of criminal aggression. Second, there is a major psychological and behavioral difference between pressing a button and hitting, stabbing, or shooting someone. Third, there is no rule or law against participating in a laboratory experiment and following the experimenter's instructions. We can imagine that many ordinary people who would not be willing to violate the law or harm others under normal conditions might be willing to administer pain or harm in a setting where it is legal and expected and where retaliation is unlikely to occur. (p.773)

Bushman and Anderson (2002) claimed that playing violent video games desensitized participants. This was based on college students in a laboratory setting using improbably scripted scenarios. The students hear a "fight" outside the doorway, and those who played violent video games were less

likely to intervene. The authors attribute the violent media as the reason those students did not intervene. In actuality, it was likely that the college students were aware of tricks used in experiments on campus, so they did not believe the fight was real (Ferguson & Dyck, 2012).

There are those who feel as though the General Aggression Model should be retired. Citing newer evidence, these researchers explain that the GAM is not sufficient in explaining aggressive phenomena. The idea that individuals who witness aggression, whether in real life or media, will imitate the aggressive behaviours and be more prone to them dates back to the ancient Greeks (Ferguson & Dyck, 2012). Ferguson and Dyck (2012) point out five reasons they believe the GAM is an ineffective theory for measuring and determining aggression. The first criticism is that the GAM assumes aggression is always negative. They believe this is a moralistic, rather than an empirical view, of aggression, and point out that other scholars believe aggression should be measured along a continuum. Some forms of aggression are adaptive, whereas others are maladaptive. Their second issue with the GAM is that it does not distinguish between real-world violence, such as child abuse, and fictional violence, as in media. It assumes that exposure to all types of violence is maladaptive and has negative consequences to all people, with no exceptions. Third, the GAM views aggressive behaviour as a learned behaviour. It is unclear if learning from it is the most significant way in which a person is influenced by their environment. Fourth, aggression is viewed in the GAM as a largely cognitive process. Research shows that exposure to violence readies aggression related thoughts, words related to the aggressive situation, rather than aggressive intents. Experiments applying the GAM misinterpret this research, assuming for example, that participants who create violent words in a puzzle have violent intentions. Again, this relates to the GAM ignoring the idea aggression existing along a spectrum. And lastly, the GAM explains aggression as a passive, automatic process. This ignores the fact that many aggressive behaviours (bullying, murder) require much thought before the act occurs (Ferguson & Dyck, 2012). The GAM combines social learning, social cognitive theories, and other related approaches with the intent of being a comprehensive model of aggression. However, the result is fundamentally a social cognitive script theory (Bushman & Anderson, 2002).

In an Illinois court case in which the Entertainment Software Association and other associations sued the state of Illinois over violent video game legislation, the court expressed concerns about politicians cherry-picking data to fit their anti-game legislation. The justices were not compelled by evidence presented by researchers supporting the defendants. The court record states, “Indeed, defendants have failed to present substantial evidence showing that playing violent video games causes minors to have aggressive feelings or engage in aggressive behavior” (*Entm’t Software Ass’n v. Blagojevich*, 2005, p. 20). In addition to this, the court ultimately decided that the definition of violent content in video games was too vague, and therefore, the proposed legislation banning the sale of certain games was unconstitutional.

2.7 PARENTAL DECISIONS ABOUT VIOLENT VIDEO GAMES

Cote et al. (2021) explained, “Games are becoming omnipresent in our entertainment environment, and many parents are looking for effective strategies to mediate their children’s play habits” (p. 2). This section explains the three forms of parental mediation and their implications when investigating parental decisions about violent video game play. This section also explains the video game rating systems in the United States and the United Kingdom. It concludes by highlighting court cases and policy statements that might affect the public’s perception of violent video games.

2.7.1 PARENTAL MEDIATION

Odgers and Jensen (2020) stated, “many of the same principles that guide healthy development and inform effective parenting will apply when supporting youth in their online activities and experiences” (p. 16). Parental mediation is the manner in which parents mitigate what they believe to be harmful effects of media on their children, a concept that began with research on television viewing (Clark, 2011). Studies that explored parental decisions about their children’s media usage (An & Lee, 2010; Clark, 2011; Nathanson & Yang, 2003; Valkenburg et al., 1999) have categorized the types of parental intervention into three categories: restrictive mediation, active mediation, and co-viewing. These strategies can co-exist or exist separately (Valkenburg et

al., 1999). Nikken and Jansz (2006) found that parents employed the same three strategies for mediating their child's video game play as they did for their child's television viewing, with co-viewing becoming co-playing.

Restrictive mediation is demonstrated by setting rules for media usage, which may include prohibiting certain content (Valkenburg et al., 1999), and imposing consequences when screen-time rules are not followed. A few studies (Nathanson, 1999, 2002) found that despite parents' best intentions, media restriction can occasionally backfire, causing increased aggressive outcomes, particularly for adolescents. Wondering why media restriction appeared to be effective in mediating real-life fighting behaviours for some children but not others, Cote et al. (2021) explored the potential relationship between parenting style and restriction of violent video game use. After surveying the parents of thirteen- and fourteen-year-olds over a three-month time period, the researchers determined that when parents increased the level of restriction on mature-rated video game play, an adolescent's fighting behaviours decreased (Cote et al., 2021). Regarding parenting style, the study revealed that when parents who exhibited neglectful or permissive parenting styles that were less demanding, restriction of mature video game play had no effect on their child's fighting behaviours (Cote et al., 2021). Conversely, the study revealed that parents who exhibited authoritarian or authoritative parenting styles that were more demanding, restriction of mature video game play did lead to fewer fighting behaviours.

Active mediation refers to parents discussing viewing content with their children (Clark, 2011), explaining the good, bad, and unrealistic things they are seeing on screen (Valkenburg et al., 1999). Many parents who responded to the most recent survey by the Entertainment Software Association (2022) engaged in active mediation strategies with regard to video games. In the US, 92% of parents reported that their children were required to obtain permission before making a video game purchase. Similarly, 82% of American parents reported that their children needed their permission before playing a new game, notwithstanding cost, and 76% reported that their children needed permission to communicate online with others. Furthermore, Nathanson and Yang (2003) found that mediation statements were effective with young children when they were exposed to television violence, whereas mediation

questions, rather than statements, were most effective with older children and children who were experienced with media violence. When adults made judgement statements about media to older children, discussing its factual reality or social appropriateness, it did not dissuade children from being interested in the violent content (Nathanson & Yang, 2003). Miller and Presley (1989) explained that when young children are asked questions, it caused the children to focus on irrelevant content because they did not have enough prior knowledge from which to pull.

Co-playing involves parents watching or participating in media with their children without discussing the media with them, as co-viewing is a type of nonverbal communication (Clark, 2011; Valkenburg et al., 1999). In 2022, 77% of American parents reported playing video games with their children (Entertainment Software Association, 2022). The four main reasons parents listed for playing with their children were: 1. Playing video games was fun for everyone (66%). 2. Video games are great family time activity (59%). 3. Playing video games was a good way to socialize with their child (56%). 4. Their child asked them to play (55%). In some families, playing video games together is a tradition. One respondent explained, “My mom started playing Atari in the 80s with us kids and we’ve been playing ever since” (Entertainment Software Association, 2022, p. 15).

2.7.2 RATING SYSTEMS

Following a Senate inquiry regarding the release of *Mortal Kombat*, the video game industry found itself in court (Robinson, 2012). The game had “photo-realistic” graphics and “violent finishing moves” which concerned citizens (Robinson, 2012, p. 415). In the 1990s, youth violence in the United States was perceived to be at an all-time high, with recent school shootings (Ferguson, 2013). Violent video games were being blamed for “training children to become murderers” (Ferguson, 2013, p. 58). This led to the creation of the Entertainment Software Ratings Board (ESRB) in 1994 (Egenfeldt-Nielsen et al., 2012; Entertainment Software Association, 2023b; Ferguson, 2013; Stanton, 2015). The ESRB is a division of the Entertainment Software Association that provides a voluntary rating system to which

companies submit footage of their game to be rated. Games are categorised into the appropriate age level, and ratings included content descriptors for violence, language, sex, or other offensive content. At inception of the ESRB, there were five categories into which games were classified: Early Childhood, Kids to Adults, Teen, Mature, and Adults Only. There were also seventeen possible content descriptors to further describe each game (Entertainment Software Association, 2023b). The first M for Mature rating was given to *Mortal Kombat* (Hansen, 2016).

The Online Rating Notice was established in 1997. It would warn consumers of user-generated content on websites and in online-enabled games. In 1998, the Kids to Adults category was changed to E for Everyone. Companies who did not comply with ESRB rules and guidelines were subject to the enforcement system created in 2000. The ESRB could then impose sanctions on companies in the form of points, fines, and corrective actions. The following year, the ESRB introduced new target marketing guidelines for Mature-rated games. In 2005, the ESRB added the E10+ rating category for games suitable for children ages 10 and older. In accordance with ESRB regulations, video game companies were required to disclose any content pertinent to its rating. In 2006, the fine for not disclosing any of this content was increased to one million dollars. That same year, the ESRB launched a public service campaign about the ratings on national radio and TV. In 2008, the Federal Trade Commission (FTC) found that ESRB guidelines were mostly working in retail stores; eight out of ten underage buyers were stopped from buying Mature-rated games. To educate parents, the ESRB also released the “Parents [sic] Guide to Video Games, Parental Controls and Online Safety” and provided rating summaries on their new mobile website. In their sixth follow-up Report to Congress in 2009, the FTC confirmed that retailers have maintained their 80% compliance rate (Entertainment Software Association, 2023b).

The ESRB expanded their focus to include internet-based video games in 2010. The ESRB Website Council was established to “ensure that game enthusiast sites post complete rating information and employ age-gates on trailers and videos for M- and AO-rated games.” The ESRB created an automated, streamlined system that would assign ratings to downloadable

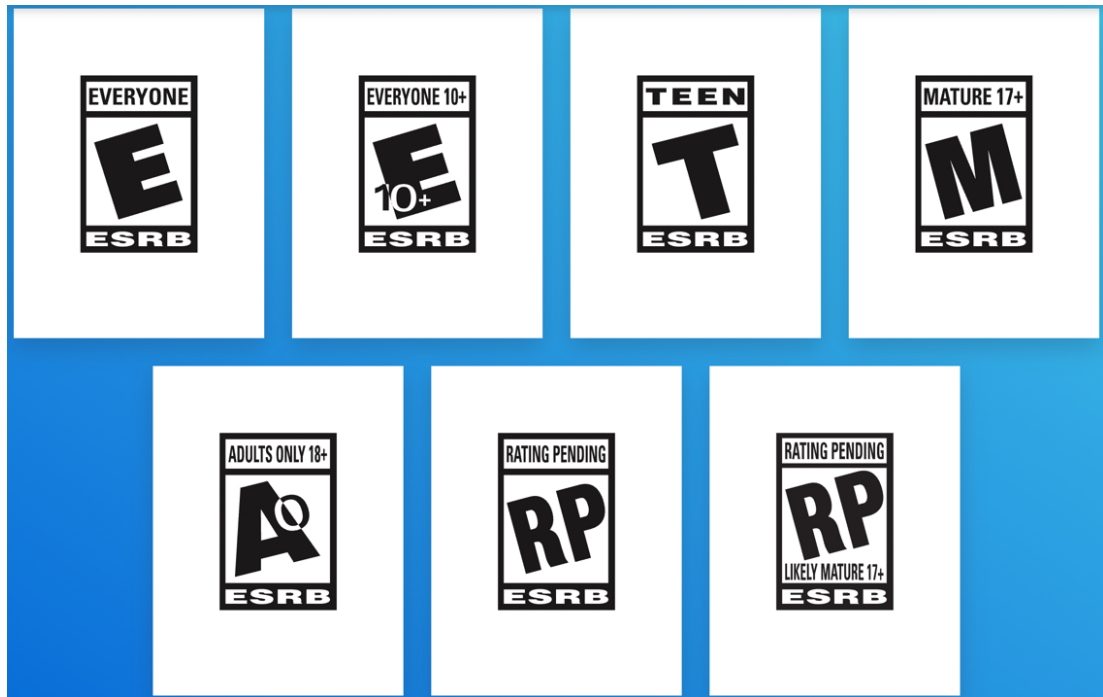
games for consoles. In 2011, the ESRB was commissioned to develop and administer a rating system for mobile apps. That same year, the U.S. Supreme Court ruled that the sale of violent video games may not be restricted by law under First Amendment protection. The ESRB included a new feature they named Interactive Elements, in 2012. This was added to digital games and apps, highlighting online features “that may be of interest or concern but do not influence the rating assignment of a product.” Interactive features may include the ability to interact with other players online, share location, or mention if unrestricted internet access is provided in an app. Interactive Elements was later added to boxed games in 2018 and updated in 2020 to include in-game purchases. The digital rating service provided by the ESRB was created free-of-charge for all digital games (Entertainment Software Association, 2023b).

Currently, in 2023, there are seven rating categories used by the ESRB. The ESRB defines each rating category on their website. E (Everyone) games are generally suitable for all ages and may contain mild violence or language and/or minimal cartoon violence. E10+ (Everyone 10+) games are generally suitable for players aged 10 and older. They may also contain mild violence, language, or minimal cartoon violence or minimal suggestive themes. T (Teen) games are generally suitable for players aged 13 and older. These games may contain violence, suggestive themes, crude humour, minimal blood, simulated gambling and/or infrequent use of strong language. M (Mature) games are generally suitable for players aged 17 and older. They may contain intense violence, blood and gore, sexual content and/or strong language. A (Adult) games contain content only suitable for players aged 18 and older. These games may include prolonged scenes of intense violence, graphic sexual content and/or gambling with real currency. Two rating categories, RP and RP Likely Mature 17+, are used for games that are not yet assigned an ESRB rating. RP may appear on a game in advertising, marketing, or promotional material that will eventually carry an ESRB rating. RP Likely Mature 17+ may appear on a game in its advertising, marketing, or promotional material if it is likely to carry a Mature rating. Once games have been official rating by the ESRB, the RP and RP Likely Mature 17+ labels will be replaced by their official rating category (Entertainment Software Association, 2023b).

Figure 2.2 below is an image of the rating symbols as shown on the ESRB website.

Figure 2.2

ESRB Ratings



Note: From “Ratings Guide,” by ESRB: Entertainment Software Ratings Board, 2024, <https://www.esrb.org/ratings-guide/>, Copyright 2024 by Entertainment Software Association.

A 2022 survey by the Entertainment Software Association found that 84% of parents are aware of the ESRB ratings, and 75% reported using those ratings regularly when deciding upon video games for their children. In 2021, the ESRB assigned 4,839 ratings to physical and downloadable video games. Of those games, 50% received an E rating, 16% received an E+ rating, 22% received a T rating, and 12% received an M rating (Entertainment Software Association, 2022).

At the time the ESRB was created in the United States, the United Kingdom was also under pressure to create a more comprehensive rating system for video games. In response, the UK created its own system termed the Entertainment and Leisure Software Publishers’ Association (ELSPA). The ELSPA was replaced by the Pan European Game Information (PEGI) system in 2003 (Robinson 2012). The PEGI has two parts: an age

rating and a content descriptor. On the front cover of the game, consumers can see the age ratings of 3, 7, 12, 16, or 18. On the back cover of the game, there may also be one or more content descriptors. There are content descriptors for bad language, discrimination, drugs, fear, gambling, nudity, online, and violence. **Figure 2.3** and **Figure 2.4** are images of the PEGI age ratings and content descriptors found on video games in the UK.

Figure 2.3

PEGI Age Ratings



Note: From “PEGI Ratings,” by The Games Rating Authority, <https://gamesratingauthority.org.uk/RatingBoard/ratings>, Copyright 2024 by The Video Standards Council.

Figure 2.4

PEGI Content Descriptors



Note: From “PEGI Ratings,” by The Games Rating Authority, <https://gamesratingauthority.org.uk/RatingBoard/ratings>, Copyright 2024 by The Video Standards Council.

Two other branches of the PEGI exist to help consumers. PEGI Express rates games on Windows 7 mobile platforms, and PEGI Online rates gaming websites. As Blum-Ross and Livingstone (2016) note, however:

The organisations with the closest links between evidence and recommendations are those that commission their own research.

Common Sense Media (CSM) in the US and Parent Zone in the UK have each commissioned studies of parents that directly link to the advice they offer (with industry sponsorship). In the UK, some evidence-based organisations (e.g. the UK Council for Child Internet Safety, UKCCIS) do offer advice to parents, but their reach is unknown. (p. 15)

ESRB Privacy Online launched the E.U. Privacy Seal Certification program in 2009. In 2013, the International Age Rating Coalition was incorporated. By 2014, the IARC began assigning rating to games and apps provided by Mozilla's Firefox Marketplace. Google Play began utilizing this system in 2015, which resulted in all apps available in North America now having ESRB ratings. The IARC rating system was adopted by the Windows Store in 2016 and the Oculus Store in 2017. The Australian Classification Board (ACB) became an IARC rating authority in 2015. The Republic of Korea joined the IARC rating system in 2017 with their Game Rating and Administration Committee (GRAC).

2.7.3 PUBLIC POLICY

Moral panic about video games began during the Video Game Crash in the early 1980s. In 1983, the U.S. Surgeon General claimed that video games were a leading cause of family violence, and attempts were made to limit the sale of video games (Ferguson, 2013). Nearly three decades later, in 2011, the U.S. Supreme Court ruled that laws restricting the sale or rental of violent video games to minors was an infringement on First Amendment rights (APA Task Force on Violent Media, 2015; Ferguson, 2013). In this ruling, the Supreme Court noted that research surrounding violent video games was “unpersuasive” and contained many methodological flaws (Ferguson, 2013).

The American Medical Association and the American Psychological Association released a policy statement regarding violent video games on June 22, 2017. The statement specified that there was very little evidence that playing violent video games caused violent behaviour or led to criminal activity (Wang, 2020). In 2020, the American Psychological Association (APA) reaffirmed its stance that one cannot conclusively say violent video games cause violent behaviour. They reiterated that violence is a very complex issue stemming from a multitude of factors and cautioned against oversimplifying the

issue. The APA acknowledged the small base of research that supports the idea of violent games causing short-term aggressive behaviour, but they recognized there's no evidence linking this to long-term violent outcomes (APA 2020).

2.8 MEDIA NARRATIVE

The public's understanding of crime is shaped largely by the news media (Benekos & Merlo, 2014). Ultimately, news agencies determine which stories to publish. Journalists choose to report news in a way that will generate more public response to their story, as this is financially beneficial for the news outlet (Campbell et al., 2012). For example, there is likely to be more response to a story claiming violent video games negatively affect players or increase crime than a story claiming violent video games either have no effect or are beneficial for players. Consistent with this information, Copenhaver et al. (2017) found that a study is more likely to be cited in news media if it concludes that violent video games have a negative effect on children. The quality of a study, however, did not ultimately affect if its results get noticed and shared in news media or in other academic publications. The result is greater awareness of studies with negative outcomes, even if those studies are not scientifically sound (Copenhaver et al., 2017).

Other researchers have found similar results. Olson (2004) noted, "Contrary to media headlines and public perceptions, there is little evidence of a substantial link between exposure to violent interactive games and serious real-life violence or crime" (p. 144). While it appears as though violent events such as school shootings have amplified over the years, this is not accurate. Greater access to news media about these incidents causes a greater awareness and gives "the impression that youthful crime is increasing" (Olson, 2004, pp. 144-145). Likewise, Markey et al. (2015) criticize and caution against sensationalism when connecting real-world violent acts to violent media. The researchers examined youth homicide arrests and gun mortality rates, and they found that both of those have decreased while violent media has increased, thus disproving sensational claims that they are linked.

In his study, McKernan (2013) evaluated The New York Times' portrayal of video games. He found that in the 1980s, video games were portrayed as a singular threat, whereas in the 1990s they were combined with other "forms of harmful entertainment." Yet in the 2000s, he noticed that "an alternative narrative appears...that characterizes video games as a valuable artistic form." Overall, he found that in The New York Times, video games were predominantly described as harmful (p. 308).

In the past three decades, the United States has seen an increase in media reports about mass shootings. Local and national television news reports of crime lead to an increase in viewers' perception of the risk of violence, regardless of the actual danger (Romer et al., 2003). Violent video games were implicated in many of these notorious violent acts, many of which occurred at community schools and on college campuses. Events such as the Columbine Massacre in 1999, the Virginia Tech shooting in 2007, and the Sandy Hook tragedy in 2012 shocked and outraged citizens. Anecdotal reports that link "violent video games to highly publicized violent crimes... often neglect other known contributors to violence" (Olson et al., 2008, p. 57). These many risk factors for aggressive behaviours are well-documented and established. Individuals who commit violent crimes often have neurological damage, insecure attachment, parental abuse or neglect, poverty, neighbourhood violence, and other social problems (Office of the Surgeon General (US) et al., 2001).

In 2007, Adam Lanza shot and killed his mother, then proceeded to Sandy Hook Elementary where he killed twenty children, six teachers, and eventually himself (Markey, Markey, et al., 2015). Lanza had illegal access to a firearm and documented mental health issues. When it was reported that he was an avid video game player, people incorrectly assumed that he played violent games, and media reports proclaimed that he played Call of Duty (Smeltz, 2012). An extensive look into Lanza's life revealed there was not one factor that caused his horrific violent actions, rather it was an amalgamation of his deteriorating mental health, his preoccupation with violence, and his access to deadly assault weapons (Office of the Child Advocate, State of Connecticut, 2014).

Despite media coverage leaving the impression that crime among youths is increasing, “there is no evidence that targeted violence has increased in America’s schools” (Olson, 2004, p. 145). These events remain incredibly rare, and the chance that a child will be murdered at school is less than one in a million. There is no conclusive evidence that violent media caused mass murders in our schools. A Secret Service review of school shooters revealed that only “one in eight perpetrators showed some interest in violent video games” (Olson, 2004, p. 146). No obvious pattern was found to connect school shooters and create a generic school shooter profile. The only discovery from the review was that perpetrators were mostly males who have had suicidal thoughts or previous suicide attempts (Olson, 2004). Markey et al. (2015) examined incidents of crime committed by youth and found that although violent media is increasing, youth crime is decreasing.

As Etchells (2019) pointed out, since 1978, murders and assaults have declined yet sales of video games have risen. As Olson (2004) summarized, “Contrary to media headlines and public perceptions, there is little evidence of a substantial link between exposure to violent interactive games and serious real-life violence or crime” (p.144). Despite a narrative often portrayed in the media, there is almost no evidence that media violence is related to serious or criminal violence (Ferguson, 2007a; Ferguson & Dyck, 2012). While it appears as though violent events such as school shootings have amplified over the years, this is not accurate. Greater access to news media about these incidents causes a greater awareness and gives “the impression that youthful crime is increasing” (Olson, 2004, p. 145).

In a resolution on violent video games, the American Psychological Association (APA) (2020) reminded readers that,

News commentators often turn to violent video game use as a potential causal contributor to acts of mass homicide. The media point to perpetrators’ gaming habits as either a reason that they have chosen to commit their crimes, or as a method of training. (p. 1)

The APA continued by citing examples of this occurring in 1999 after the Columbine massacre, the Aurora, Colorado shootings and the Sandy Hook massacre in 2012, and the Washington Navy Yard massacre in 2013. In reaction to this coverage, the APA explained, policies have been enacted to

limit the sale to and use of violent video games by children, and attempts have been made to educate parents better. The media has played an integral role in spurring public discussion about violent video games.

The narrative surrounding violent video games appears to be changing, however. In one study, McKernan (2013) evaluated The New York Times' portrayal of video games. He found that in the 1980s, video games were portrayed as a singular threat, whereas in the 1990s they were combined with other "forms of harmful entertainment." Yet in the 2000s, he noticed that "an alternative narrative appears...that characterizes video games as a valuable artistic form" (p. 308). Overall, he found that in this newspaper, video games were predominantly described as harmful, particularly before the shift in narrative in the 21st century (McKernan, 2013).

2.9 COVID-19 AND ITS IMPACT ON VIDEO GAME PLAY

Video games became a significant aspect of life during the COVID-19 global pandemic. Jarvis (2021) noted, "From March 2020, social distancing and lockdown in response to the Covid-19 pandemic situation has increased the time that many children spend online associating with each other in artificial, programmed environments" (p. 170). The 2021 ESA report revealed that 55% of players in the United States reported playing video games more during the COVID-19 pandemic than before the pandemic began. Players cited stress relief and distraction as reasons to play video games in 2020. In 2022, 92% of players reported playing video games either as much or more than they did during the peak of the COVID-19 pandemic. Of these players, 61% plan to maintain these playing habits, and 19% plan to spend more time playing video games in 2023. One player remarked that online video games were a way to continue Friday game nights while remaining safe at home during the pandemic. The US saw an increase in the percentage of its citizens who played video games one year into the COVID-19 pandemic, which then decreased the following year. In 2020, 64% of adults reported playing video games, which changed to 67% and 65% in 2021 and 2022 respectively. In 2020, 70% of children played video games, which changed to 76% and 71%

in 2021 and 2022 respectively (Entertainment Software Association, 2020, 2021, 2022).

While the numbers of adults and children in the US who played video games weekly stayed relatively stable from 2020-2022, what continued to increase significantly was the number of adults who played video games online with others and the parents who reported playing video games with their children. The number of gamers who played with others, either online or in person, increased from 65% in 2020 to 77% in 2021 and 83% in 2022. Parents played video games with their children more often after the COVID-19 pandemic began, with an increase from 55% of parents in 2020 to 74% of parents in 2021 and 77% in 2022. In 2021, 71% of parents agreed that video games provided their child a much-needed break during the pandemic. A year later, with the pandemic still lingering, that percentage increased to 73% of parents. In 2021, 70% of parents reported that they allowed their children to play more video games during the pandemic than previously, and 66% of also agreed that playing video games made the transition to distance learning easier for their child (Entertainment Software Association, 2021, 2022).

In March of 2020, shortly after most of the world enacted lockdown procedures, the games industry united to support social distancing recommendations from the WHO (Business Wire, 2020). The industry collectively launched the hashtag #PlayApartTogether, which was tweeted by the US ambassador to the WHO, Ray Chambers. Several companies also added new features, extra rewards, and made some content free for players (WIFR, 2020). Ferguson (2020) believed that it was crucial for youth to use digital technology to socialize with friends and family since they could not do so in face-to-face environments during COVID-19 lockdown periods.

From April to July of 2020, Ribner et al. (2021) surveyed parents of three- to seven-year-old children in six countries. They assessed children's screen time usage during the COVID-19 pandemic and compared it to their pre-pandemic screen time. Overall, the researchers found that young children used screens approximately 54 minutes more each day during the pandemic than before lockdown measures were put in place. Parents of children from lower socioeconomic status (SES) households reported greater increases in screen time averages during the pandemic than parents of children from higher

SES households. Ribner et al. (2021) hypothesized that children in higher SES households may have had more opportunities for non-screen-based play activities, though there was no decrease in non-screen-based play activities for children from lower SES households. Children in lower SES households may have been more likely to have parents who were categorized as essential workers, and therefore they had more time where parents could not watch or engage with them. In contrast, children from higher SES households were more likely to have parents working from home and therefore more supervision. This study also revealed that although the amount of time children spent on educational apps and for entertainment purposes increased during the pandemic, there was no change in the time spent using media for socialization. They did, however, discover that young children's use of video games increased significantly during the first few months of the pandemic. When asked how much time their children spent playing video games, 1.5% of parents reported that their child played video games more than two hours a day before the pandemic, whereas 7.0% of parents reported that their child played video games for more than two hours a day during the pandemic. It is important to note that video game time was counted separately from socialization time, despite the potential for overlap between these two activities (Ribner et al, 2021).

During the period of quarantine and lockdown due to the COVID-19 pandemic, children were engaged in more indoor activities than normal, including online gaming. Online gaming may be one way that adolescents coped with anxiety, depression, and stress, particularly during the first few months of the COVID-19 outbreak. A positive correlation was found between Internet gaming disorder (IGD) and insomnia, stress, depression, and anxiety in adolescents aged 13-18. As insomnia, stress, depression, or anxiety increased or decreased, so did the possibility of IGD. Adolescents also reported a lower quality of life when they reported symptoms of IGD, insomnia, stress, depression, or anxiety, and vice versa (Fazeli et al., 2020).

However, online interactions through video games facilitated connection with others and alleviated stress during COVID-19. Ferguson (2020) recognized that people felt a loss of control due to COVID-19 restrictions. He noted that video games "can be particularly effective in giving

youth a sense of autonomy and control” during a time when their daily activities, movement, work, and school were disrupted (Ferguson, 2020, p. 245). Similarly, Krittanawong et al. (2022) analysed Twitter for tweets about the video game *Animal Crossing: New Horizons*. The researchers recognised that social gaming can be beneficial with regards to mental health, especially during periods of social isolation, and they surmised that players were able to find a healthy escape from the realities of the COVID-19 through game play. Krittanawong et al. (2022) explained that *Animal Crossing: New Horizons* allowed players to create their own worlds in which to play, which could be considered “an example of active coping, a known factor in promoting resilience” (p. 255). These studies reveal that video games were a positive influence on mental health in these particularly isolating circumstances.

There are not many studies during the quarantine period of the COVID-19 pandemic that specifically include children. One study of adults who averaged 30.5 years old, though, had results that are worth considering in the context of this study. The study found that during COVID-19 restriction periods, participants’ physical activity was reduced from an average of 7.5 hours per week to 6.5 hours per week. At the same time, the amount of time that participants spent playing video games increased from 16.38 hours to 20.82 hours per week. In this study, over half (52.4%) of the participants self-reported poor mental health scores, and over three-quarters (77.2%) of the participants felt that playing video games was beneficial to their mental health during COVID-19 quarantine periods. The researchers concluded that during COVID-19 quarantine, players used video games “for emotional coping and to lower stress, relax, and alleviate mental health conditions” (Ellis et al., 2020, p. 2). Based on the studies that have been conducted concerning the COVID-19 pandemic, it is clear that video games helped improve people’s mental well-being.

2.10 GAP IN THE LITERATURE

Research on violent video games and their potential effect on children is contradictory. Some researchers claim that violent games contribute to behavioural aggression (Fraser et al., 2012; Anderson & Bushman, 2001; D.

Gentile, 2009; Krahé et al., 2012; Hasan et al., 2013; Hollingdale & Greitemeyer, 2014). Others argue that violent games not only increase aggression but also cause societal violence (Anderson, 2003; Strasburger, 2007). On the contrary, other researchers assert that violent video games have an insignificant effect on aggression (Ferguson, 2008; Puri & Pugliese, 2012). Several studies conclude that playing violent video games may even reduce aggression (Colwell & Kato, 2003; Olson et al., 2008). However, the results of these studies are not necessarily applicable to children, since “there is a dearth of studies that have examined these effects in children younger than age 10 or that have attempted to examine the developmental course of the effects” (APA Task Force on Violent Media, 2015, p. 20). The APA Task Force (2015) continued by noting that, “No single risk factor consistently leads a person to act aggressively or violently. Rather, it is the accumulation of risk factors...” (p. 20). Therefore, it can be argued that there is a gap in knowledge related to younger children and whether violence in video games affects their development and behaviour. This study sought answers to this question through parents’ observations of their own children.

After asking parents about violent video games, Kutner et al. (2008) concluded, “it is up to parents to control their children’s exposure to inappropriate game content. Little is known about parents’ specific concerns about video games in general and violent or sexual game content in particular or how parents are attempting to address these concerns” (p. 78). This study fills that information gap by including parents in the conversation about video game violence. It focused on parents as decision-makers regarding their child’s access to violent video games. It aimed to uncover what concerns and perceptions parents hold about violent video games, where they acquire their knowledge about violent video games, and what effect their beliefs and information have on their rules for violent video game play in their homes.

The COVID-19 pandemic and subsequent phases of quarantine presented an additional challenge for parents as they determined which video games their child was permitted to play at home. Research published since March 2020 revealed that children spent more hours playing video games during periods of lockdown than prior to the COVID-19 pandemic (De Pasquale et al., 2021; Entertainment Software Association, 2021, 2022; Krittanawong et

al., 2022). However, little is known about what decisions parents made regarding the content of those games. This study sought to understand if the COVID-19 pandemic and subsequent quarantine period of 2020 affected parents' opinions on violent video games or rules for their own child.

Media reports on research and current events are unreliable. Research by Copenhaver (2017) and Campbell (2012) demonstrated that studies with shocking conclusions make media headlines, even if they are not sound research. These shocking conclusions often exaggerate the effect of violent video games on societal violence. Therefore, "Exactly what impact such debate has on the perceptions of individual news consumers or parents is unclear" (Ferguson, 2010, p. 70). As this study examined parents' perceptions of violent video games, it also examined media headlines from September 2020 to October 2021 that study participants may have read, to ascertain if news media was an influential source of information for parents. This study sought to discover what, if any, affect the media holds in affecting parents' perceptions of violent video game play and their decisions regarding violent video game play in their home.

3. RESEARCH MAPPING

3.1 INTRODUCTION

This chapter explains how the research questions were created based on the research aims of the study. This study was designed to explore parents' opinions and decision-making criteria regarding violent video games. There were five questions that emerged and are addressed with this research. The methods used to examine them are discussed further in *Chapter 5: Methodology and Methods*. This chapter discusses the purpose of each question and how the methods addressed each one.

3.2 RESEARCH AIMS

The purpose of this study was to understand what parents think about violent video games, what decisions they make regarding violent video game play in their homes, and how they make those decisions. This study also investigated the effect of the COVID-19 global pandemic and the media's role in parents' perceptions of violent video games.

3.3 HOW THE RESEARCH QUESTIONS WERE FORMULATED AND HOW THEY ADDRESS GAPS IN THE LITERATURE

There is ample research examining the effect of violent video games on adolescents, with recent research pushing back on studies that claim a link between violent video game play and real-life aggressive or violent behaviour. There are fewer research studies that have been conducted examining the effect of violent video games on young children. Further discussion of this was reviewed in *Chapter 2: Review of the Literature*. Additionally, research about parental perceptions and decisions surrounding violent video games is absent in the literature. This study was designed to discover how and why parents make decisions regarding violent video game play for their children. It attempted to answer the following questions:

1. What attributes of video games do parents consider violent?
2. What are parents' perceptions of the impact of violent video games on children?
3. How do parents make decisions regarding their children's access to violent video games and what are their concerns?
4. Has the COVID-19 global pandemic altered parents' perceptions of or decisions about violent video game play?
5. What narrative do media headlines mentioning violent video games portray and what are parents' perceptions of media reports?

Figure 3.1 shows how each research question was investigated through one or more of the research methods used for this study: survey, interviews, and media content analysis. These methods are explained in detail in *Chapter 5: Methodology and Methods*.

Figure 3.1

Research Questions and Methods

	Survey	Interviews	Media Content Analysis
Research Question 1: What attributes of video games do parents consider violent?	x	x	
Research Question 2: What are parents' perceptions of the impact of violent video games on children?	x	x	
Research Question 3: How do parents make decisions regarding their children's access to violent video games and what are their concerns?	x	x	
Research Question 4: Has the COVID-19 global pandemic altered parents' perceptions of or decisions about violent video game play?	x	x	
Research Question 5: What narrative do media headlines mentioning violent video games portray and what are parents' perceptions of media reports?		x	x

3.3.1 RESEARCH QUESTION 1: WHAT ATTRIBUTES OF VIDEO GAMES DO PARENTS CONSIDER VIOLENT?

The first research question for this study explored what parents considered violent content in a video game. One criticism of research on violent video games is that there is not just one definition of the word violence. Gentile and Anderson (2003) point out that some studies use violence and aggression interchangeably, and others have no clear definition of what they are recording as violent or aggressive behaviour. This is the case when researchers are evaluating both what is on screen and what occurs off screen. This study recognized the inconsistency in existing research and decided that parents' definitions of violent content could affect their opinions and decisions about violent video games. To address this gap, this research uncovered from the parents' perspective what they define as violent, and the research methods employed in this study began with asking parents about their personal definition of violent content in video games.

3.3.2 RESEARCH QUESTION 2: WHAT ARE PARENTS' PERCEPTIONS OF THE IMPACT OF VIOLENT VIDEO GAMES ON CHILDREN?

The second research question sought to understand why parents make decisions about violent video games for their children by asking their opinions on violent video games. This study recognized that parents' perceptions about violent video games and whether they incite violent behaviour or influence children in any way may affect the decisions they make for their children about their access to video games with violent content. There are few existing studies that explore parents' thoughts on violent video game content. One study (Kutner et al., 2008) found that parents were concerned about violent content in video games, though there was not an agreement on how this content might affect children. Parents' opinions on the impact of violent video games frame the discussion for further exploration of their decisions, explored by research question three.

3.3.3 RESEARCH QUESTION 3: HOW DO PARENTS MAKE DECISIONS REGARDING THEIR CHILDREN'S ACCESS TO VIOLENT VIDEO GAMES AND WHAT ARE THEIR CONCERNS?

Research question three questioned if violent content in games is one of parents' concerns, and if not, what concerns they did have about video games. This study also examined which sources parents used for information regarding violent video game access for their children. In 2011, the United States Supreme Court affirmed that states may not impose a ban on the sale of violent video games to minors (*Brown v. Entm't Merchs. Ass'n*, 2011). Those who spoke out against the original sanction did so citing an infringement on parents' rights to make decisions for their children (DeCamp, 2019). This decision established that parents in the US have the inalienable right to make decisions for their children, under protection of the First Amendment. Given that parents are the sole decision makers for their children's access, the third research question investigated what parents do when faced with decisions about their children's access to video games.

3.3.4 RESEARCH QUESTION 4: HAS THE COVID-19 GLOBAL PANDEMIC ALTERED PARENTS' PERCEPTIONS OF OR DECISIONS ABOUT VIOLENT VIDEO GAMES?

The fourth research question explores the potential effect of the COVID-19 pandemic on parents' perceptions and decisions about violent video game play for their children. Parents were under excess duress during periods of lockdown, as both parents and children were isolated from others. Other studies that were conducted during the same time period as this one found that children spent more time online during periods of lockdown than they had before the COVID-19 pandemic (Ferguson, 2020; Jarvis, 2021; Ribner et al., 2021). The results of these studies, however, were not known when this study began in 2019. Additionally, to the researcher's knowledge, no other studies specifically explored parents' decisions about violent video game play during periods of COVID-19 lockdown. This study fills that gap by investigating if the stress and isolation of the COVID-19 pandemic affected parents' decisions about their children's access to violent video game content.

3.3.5 RESEARCH QUESTION 5: WHAT NARRATIVE DO MEDIA HEADLINES MENTIONING VIOLENT VIDEO GAMES PORTRAY AND WHAT ARE PARENTS' PERCEPTIONS OF MEDIA REPORTS?

As mentioned in *2.8 Media Narrative*, previous research has discovered that studies with alarming conclusions about violent video games are often reported in the media, regardless of their integrity (Copenhaver et al., 2017). Considering this and other research about violent video games in the media (McKernan, 2013), understanding what role, if any, the media played in parents' perceptions of media reports on violent video games or if it affected their decisions.

3.4 SUMMARY OF CHAPTER

Due to unforeseen circumstances of COVID-19, the research questions for this study evolved and expanded. With no agreement among current literature on whether violent video games are harmful for children, this study focused on parents' perceptions and decisions. It wondered what was occurring in homes regarding violent video game play and why. RQ1 questioned what parents considered violent in a video game. RQ2 examined what parents thought about violent video games. RQ3 investigated aspects of parents' decision-making about violent video game play for their children. RQ4 considered the potential impact of the COVID-19 pandemic on parents' decisions or perceptions of violent video game play. The last question, RQ5, explored the potential influence of media reports on parents' perceptions of or decisions about violent video games. A survey and interviews focused on answering the first four questions, and a media content analysis addressed the fifth question.

4. THEORETICAL FRAMEWORK: BEGINNING WITH ECOLOGICAL SYSTEMS THEORY

4.1 INTRODUCTION

This chapter explores the ecological systems theory (Bronfenbrenner, 1979) and several of its subsequent adaptations that may aid our understanding of parental decisions about their child's access to violent video games. Ecological systems theory proposes that a child's development takes place within contexts, labelled as specific systems. Flynn and Mathias (2023) adapted the original ecological systems theory to contextualize and understand the effect of different forms of violence on an individual's development. Ecological systems theory also generated the bioecological theory (Bronfenbrenner & Ceci, 1994), as the author realized the need to emphasize the individual child's role in their own development. Bioecological theory led to the development of the Person-Process-Context-Time (PPCT) model (Bronfenbrenner & Morris, 2006), which incorporated the processes through which the micro-, meso-, exo-, and macrosystems interact with each other and with the child. It also explained proximal processes as "the engines of development" (Bronfenbrenner & Evans, 2000, p. 118). Neo-ecological theory (Navarro & Tudge, 2022), a technological adaptation of bioecological theory, discusses how the four concepts of Process, Person, Context, and Time affect a person's development in a technological society. Although not one of these theories thoroughly explains the effects of violent video game play on a child or how parents perceive and make decisions about violent video game play for their children, looking at them together provides a comprehensive understanding of how violent video games affect a developing individual.

4.2 ECOLOGICAL SYSTEMS THEORY

Bronfenbrenner (1977) argued that understanding human development required examining systems of interaction and the environment encompassing the child. He defined the ecology of human development as:

the scientific study of the progressive, mutual accommodation, throughout the life span, between a growing human organism and the changing immediate environments in which it lives, as this process is affected by relations obtaining within and between these immediate settings, as well as the larger social contexts, both formal and informal, in which the settings are embedded. (p. 514)

This ecological theory of human development placed the child in the centre of a set of concentric circles, with dynamic systems placed in varying proximity to the child. It explained the ecological environment “as a set of nested structures, each inside the next, like a set of Russian dolls” (Bronfenbrenner, 1979, p. 3). A child participates in dynamic, reciprocal relationships within and between numerous aspects of their environment. These aspects include, but are not limited to, their immediate and extended family members, their neighbourhood, religious institution, school, and peers. This also includes community members, parental interactions at work, local and national political events, as well as generational and cultural associations (Bronfenbrenner, 1979; Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 1998, 2006).

In his initial depiction of ecological systems theory, Bronfenbrenner (1979) focused on the descriptions and effects of each context: the microsystem, mesosystem, exosystem, and macrosystem. These levels are based on Brim’s (1975) explanation and terminology for the influences on a developing child. Brim explained that the micro-structural level of influence consists of those who care for children. Included in this level are the effect of parental differences and teacher-pupil interactions on the child’s development. He named the next level the mesostructural level, consisting of the establishments that serve children, such as their school or day care, but also extended familial networks who may care for children. The third and final level was termed the macro-structure. The macro-structural forces are those influences on the family and systems around a child. There are economic, historic, cultural, sociological, and political factors in this level. Brim (1975) noted that it was prudent to include adults’ child-rearing beliefs and knowledge of child development, government’s policies regulating income and income

redistribution, discrimination based on race, social stratification, and the influence of mass media in the macro-structure level.

4.2.1 MICROSYSTEM

Closest to the child is a set of microsystems, or settings in which the child spends time interacting directly with others: the family/home, neighbourhood, school, and childcare centre. Bronfenbrenner (1977) defined a microsystem as “the complex of relations between the developing person and environment in an immediate setting containing that person...a place with particular physical features in which the participants engage in particular activities in particular roles (e.g. daughter, parent, teacher employee, etc.) for particular periods of time” (p. 514). It is within these microsystems that the child closely interacts with others through everyday experiences and activities. In these immediate settings, the child converses and plays games with their parents, siblings, and peers. They talk to other children on the playground at school, in their childcare setting, in their neighbourhood, and at the park. They also converse with people at any religious institution they attend regularly (Onwuegbuzie et al., 2013).

4.2.2 MESOSYSTEM

Bronfenbrenner (1977) describes a mesosystem as “a system of microsystems” (p. 515). Among other potential relationships, the mesosystem connects “two or more settings in which the developing person actively participates” (Bronfenbrenner, 1979, p. 25). Experiences in one microsystem, such as school or the neighbourhood, can affect experiences in another microsystem. The mesosystem can also account for the interaction between an event in the exosystem with an element in the microsystem.

4.2.3 EXOSYSTEM

The exosystem explains the greater contexts in which parental decisions are made for the developing child. This “refers to one or more settings that do not involve the developing person as an active participant, but in which events occur that affect, or are affected by, what happens in the setting containing the

developing person” (Bronfenbrenner, 1979, p. 25). For a young child, this can include the parent’s workplace or friends, a sibling’s peers, and decisions made by the local school board.

4.2.4 MACROSYSTEM

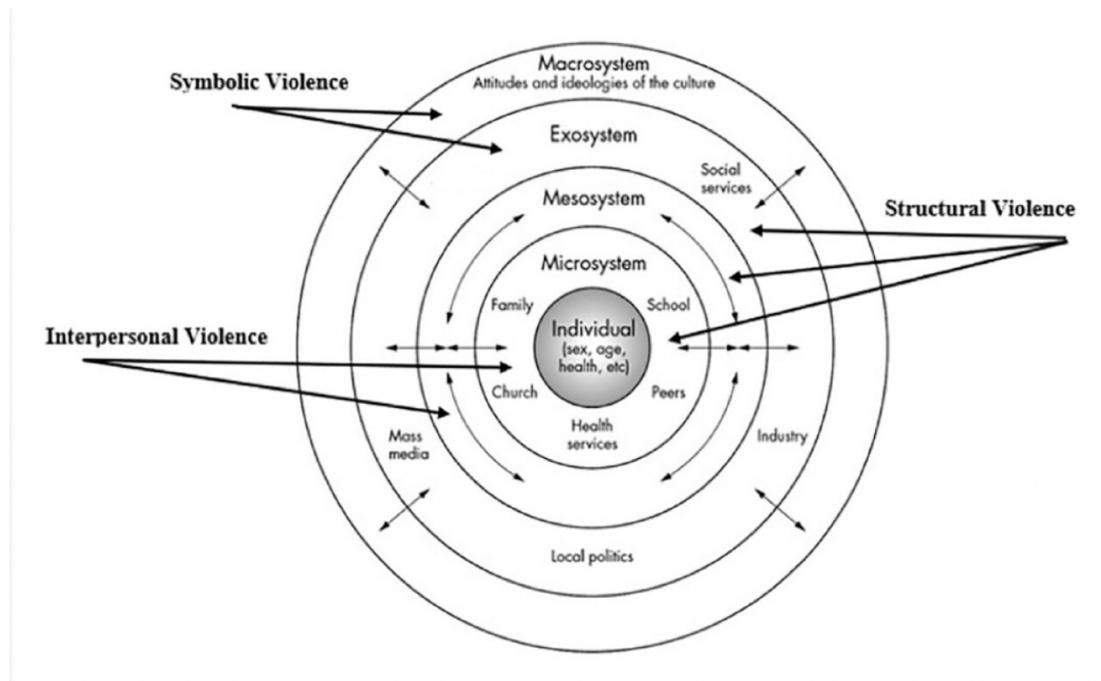
The fourth and outermost circle of Bronfenbrenner’s framework is the macrosystem. Bronfenbrenner (1979) explained that the macrosystem encompasses consistent micro-, meso-, and exosystems that “exist at the level of the subculture or the culture as a whole, along with any belief systems or ideology underlying such consistencies” (p. 26). Therefore, it describes the “larger cultural context...surrounding the person that includes societal belief systems, cultural norms, ideologies, policies, or laws” (Onwuegbuzie et al., 2013, p. 5).

4.3 ADAPTING THE ECOLOGICAL SYSTEMS THEORY TO UNDERSTAND THE IMPACT OF VIOLENCE

Flynn and Mathias (2023) focused on three types of violence: interpersonal, structural, and symbolic. Not one type of violence occurs in isolation, as one is always a precursor to another, causing interpersonal, structural, and symbolic violence to be entwined with one another (Flynn & Mathias, 2023). The authors place each type within the micro, meso, exo, and macrosystemic levels of ecological systems theory and explore their impact. Flynn and Mathias (2023) argue that to obtain a comprehensive understanding of violence on a person’s development, it is necessary to study the three types in conjunction with one another. **Figure 4.1** is the diagram the authors created to include the impact of violence at each level of Bronfenbrenner’s ecological systems theory.

Figure 4.1

Revised Bronfenbrenner's Ecological Systems Theory



Note: This revised version of Bronfenbrenner's ecological systems theory diagram was created by Flynn and Mathias (2023) to include the impact of violence. From "How Am I Supposed to Act?": Adapting Bronfenbrenner's Ecological Systems Theory to Understand the Developmental Impacts of Multiple Forms of Violence," by K. Flynn and B. Mathias, 2023, *Journal of Adolescent Research*, 1(34), p.3. Copyright 2023 by the authors.

4.3.1 INTERPERSONAL VIOLENCE IN THE MICRO- AND MESOSYSTEM

The term interpersonal violence describes an act of violence on an individual level. This includes physical altercations, sexual abuse or harassment, neglect, and emotional abuse. Acts of interpersonal violence lead to harm of an individual at the microsystemic and mesosystemic levels, as they can occur within a microsystem or between microsystems (Flynn & Mathias, 2023). If a person is a victim of physical violence, that is interpersonal violence in the microsystem. When a person witnesses a violent interaction between friends or family members, that is interpersonal violence in the mesosystem. The authors cite research by Voisin (2007), who found when adolescents are exposed to interpersonal violence, they exhibit more mental health issues such as depression and anxiety, as well as aggressive and antisocial behaviour.

They have an increased likelihood of engaging in risky behaviour such as drug use and unsafe sex (Voisin, 2007), more likely to skip and drop out of school, and less likely to have high grades (Fry et al., 2018; Voisin, 2007).

4.3.2 STRUCTURAL VIOLENCE IN THE MICRO-, MESO-, AND EXOSYSTEM

Unlike interpersonal violence, structural violence is not directly visible on a person's body. This systemic form of violence "is experienced collectively through forces such as racism, poverty, and socioeconomic inequality" (Flynn & Mathias, 2023, p. 4). However, structural violence can cause frustrations that manifest as acts of interpersonal violence. It increases instances of interpersonal violence due to oppressive institutional conditions (James et al., 2003). Flynn and Mathias (2023) argue that structural violence can be just as harmful on an individual level. In the microsystem, external stressors experienced by a parent, such as those at work where the child does not directly engage, may lead to parenting difficulties (2023) and an increased risk of child abuse (Voisin, 2007). Structural violence can be present in the mesosystem when an individual is fearful or experiences violence in their neighbourhood, or through "a lack of essential neighborhood resources such as grocery stores, recreation centers, or gainful places for employment" (Flynn & Mathias, 2023, p. 9). At the exosystemic level, local polices, media messaging, economic status, and culture can all contribute to structural and symbolic violence (Flynn & Mathias, 2023).

4.3.3 SYMBOLIC VIOLENCE IN THE EXO- AND MACROSYSTEM

Symbolic violence is not an overtly forceful type of violence. It occurs when there are power differences between social groups, resulting in the oppressed group assuming the role of subordinates and internalizing the blame for their situation (Wiegmann, 2017). Symbolic violence "has been described as a subtle culture domination" (Flynn & Mathias, 2023, p. 7) wherein the subjugated group assumes cultural norms and expectations of the dominant class. They also experience less mobility and increased levels of frustration

as their agency is reduced due to policies and laws enacted by the dominant class (Montesanti & Thurston, 2015).

4.4 BIOECOLOGICAL AND NEO-ECOLOGICAL THEORY

Bronfenbrenner's final version of his ecological systems theory shifted to include conceptualizing the environment and clarifying how a person's individual characteristics played a role in child development (Rosa & Tudge, 2013). Bronfenbrenner began considering biological factors of development (Rosa & Tudge, 2013) and introduced the idea of proximal processes (Bronfenbrenner & Ceci, 1994), resulting in the version known as *bioecological theory* (Bronfenbrenner & Morris, 1998; Rosa & Tudge, 2013). This evolution saw the emergence of the Process-Person-Context-Time (PPCT) model (Rosa & Tudge, 2013) and included the changes that occur over time and their effects on a child (Bronfenbrenner & Morris, 1998). Neo-ecological theory builds upon bioecological theory (Bronfenbrenner & Ceci, 1994) with a few minor modifications and one addition. Neo-ecological theory divides the microsystem level into two types, physical and virtual, that exist as a result of technology's increasing role in an individual's life. It also explores previous work around culture and sub-cultures in virtual environments and how they affect an individual's development (Navarro & Tudge, 2022). This section explores *neo-ecological theory* as a useful framework for contextualizing this research.

Bioecological theory "extends and redefines several of the key assumptions underlying the classical paradigm of behavioral genetics" (Bronfenbrenner & Ceci, 1994, p. 568). The PPCT model considered the settings in which a child spends time, the relationships between a child and others in those settings, the personal characteristics of all individuals, the historical context of a child's existence, and the proximal processes that drive development (Rosa & Tudge, 2013). The closer the influencer to the child in proximity and time, the greater the influence on the child's development. There is a reason the child is placed in the centre. Their dispositions, bioecological resources, and demand characteristics serve as influencers on how people relate to them, thus realizing the child is not a passive recipient of effect, but rather an active influence on environmental aspects of their development.

Bronfenbrenner and Morris (1998) termed this concept the Process-Person-Context-Time model, or PPCT.

Neo-ecological theory examines the contexts in which children learn and play with others. The authors stated that although their focus “is primarily on youth, the influence of technology on human development spans the life course” (Navarro & Tudge, 2022, p. 19338). This is a key distinction between neo-ecological theory and bioecological theory, as it includes not just children, but also adults as decision-makers, influencers, and products of technological advances. To justify the need for integrating technology into Bronfenbrenner, the authors referenced Uzelac (2008) and Plowman (2019), who illuminated how virtual and physical boundaries have blurred with computer chips in our everyday appliances and products whose algorithms provide individualized information to users. They observed that an individual’s modern interactions with technology are complex and bidirectional.

Navarro and Tudge (2022) also perceived the importance of including cultures and sub-cultures, thus accentuating the importance of the macrosystem to understand human development. In addition to drawing upon bioecological theory, neo-ecological theory references work by researchers who examined adolescents in digital spaces (Granic et al., 2020; McFarland & Ployhart, 2015; Nesi et al., 2018; Subrahmanyam & Šmahel, 2011). Neo-ecological theory considers an individual’s role in creating culture in a virtual environment, as Subrahmanyam and Šmahel (2011) explicated that online culture is invariable and constantly changing depending on the users. Nesi et al (2018) argued that online environments can transform, rather than mimic, offline experiences. McFarland and Ployhart (2015) identified a continuum of social interactions in the digital age. At the non-digital end of the continuum are physical face-to-face interactions. They described ‘Web 1.0’ interactions as communicating through email and text messages, where one interacts through a digital medium. ‘Web 2.0’ interactions are those that exist solely virtual and are more interactive, such as social media platforms. Navarro and Tudge (2022) deemed multiplayer online games to be in the ‘Web 2.0’ end of the continuum, as players interact with each other completely virtually. As individuals interact online, whether it be through games, social media or other digital spaces, Granic et al. (2020) recommended that researchers move past examining the amount of

time an individual spends online and focus on how those digital interactions affect an individual's identity development.

In summation, neo-ecological theory proposes four modifications to Bronfenbrenner and Morris's (1998, 2006) bioecological theory and PPCT model. The authors state those changes as follows:

1. There are two types of microsystems, virtual and physical...
2. The developing individual can exist in more than one microsystem at once...
3. The opening and closing of virtual microsystems are defined by the interactions and activities in which the developing individual engages (Navarro & Tudge, 2022, p. 19341).
4. Proximal process can take three forms: symbolic, relational, and complex (Navarro & Tudge, 2022, p. 19349).

The concepts of Person, Context, and Time cannot be studied in isolation. Utilizing neo-ecological theory requires a longitudinal approach that investigates people, the environments in which they live, and the interactions within those environments. The proximal processes that occur in these environments affect and in turn are affected by the Person characteristics, context in which they occur, and the amount of time elapsed (Navarro & Tudge, 2022).

4.4.1 PROCESS

The first component of the PPCT model is Process. Bronfenbrenner and Morris (1998) labelled activities in which the child engages as *proximal processes*, explaining that "human development takes place through processes of progressively more complex reciprocal interaction between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate external environment" (p. 996). Proximal processes encompass every interaction between a developing person and another person or object in their environment. They are the primary mechanisms that propel human development. Bronfenbrenner and Evans (2000) clarified a proximal process as the following:

a transfer of energy between the developing human being and the persons, objects, and symbols in the immediate environment. The transfer may be in either direction or both; that is, from the developing

person to features of the environment, from features of the environment to the developing person, or in both directions, separately or simultaneously. (p. 118)

Proximal processes can produce two outcomes: competence or dysfunction. The former leads the developing individual to acquire knowledge and skills to control their behaviour. The latter causes the developing individual to experience difficulty controlling their behaviour. The extent of contact between the developing person and the proximal processes can be measured in terms of exposure: duration, frequency, interruption, timing, and intensity. The length of time the proximal process takes, how often a proximal process occurs, whether it is predictable or interrupted, the immediateness of the interaction, and the strength of the interaction all affect whether a proximal process leads to competence or dysfunction. Proximal processes that are longer, more frequent, predictable, immediate, and intense are more likely to produce developmentally competent outcomes. When proximal processes are brief, infrequent, and erratic, they are more likely to produce developmentally disruptive outcomes (Bronfenbrenner & Evans, 2000). Bronfenbrenner and Morris (2007) further elucidated that when considering developmental outcomes related to proximal processes, it is imperative to consider both the developing person's and the other person's focus of attention on each other.

Although proximal processes often refer to personal interactions, such as a parent-child interaction, those are not the only proximal processes of importance. The bioecological systems model "emphasizes the distinctive contribution to development of proximal processes involving interaction not with people but with objects and symbols" (Bronfenbrenner & Morris, 1998, p. 995). Solo activities that provide a "progressively more complex reciprocal interaction" (Bronfenbrenner & Morris, 1998, p. 1013) are more influential on a child's development than those that do not offer a challenge or elicit sustained attention. Proximal processes that can be carried on in the absence of others are influenced far more by Person characteristics (discussed in the next section). It is pertinent to note that a person's age, gender, and ethnicity are uniquely posited to affect their development, as these factors place the person in a specific societal niche outside of their control (Bronfenbrenner & Morris, 2006).

Neo-ecological Theory modifies this categorization of proximal processes and proposes a third. The first form of proximal processes in neo-ecological theory is *symbolic*, the second is *relational*, and the third is *complex*. Navarro and Tudge (2022) defined the three as follows:

- a. *Symbolic* processes are “reciprocal, increasingly complex interactions between the developing individual and *objects and/or symbols* within a microsystem over extended periods on a regular basis.
- b. *Relational* proximal processes are reciprocal, increasingly complex interactions between the developing individual and *persons* within a microsystem over extended periods on a regular basis.
- c. *Complex* proximal processes are reciprocal, increasingly complex interactions between the developing individual and *both persons and objects and/or symbols* within a microsystem over extended periods on a regular basis (p. 19349).

All three types of proximal processes exist in a physical microsystem, though only relational and complex proximal processes occur in a virtual microsystem. Unlike many adults' views of technology, children do not view interacting with digital tools as a separate type of play, neo-ecological theory considers a study by Arnott (2016), who concluded that children interacted with tablets as they do any other object in their physical environment. For this reason, the symbolic proximal processes exist in the physical microsystem, not the virtual one since the physical tablet itself is the object. The effects of solo video game play on a person's development can be related to bioecological theory using this neo-ecological perspective. A child playing a video game such as Minecraft that allows them to create mimics the physical activity of playing with Legos. Neither activity requires interaction with others, but both allow for investigation and imagination (Navarro & Tudge, 2022), components of symbolic proximal processes (Bronfenbrenner & Morris, 1998, 2006).

Proximal processes are typically referred to as positive interactions that generate development (Navarro & Tudge, 2022). Research by Granic et al. (2020) proved that adolescents find and create community in virtual

microsystems as they connect with peers and others through online gaming and social media platforms. Many games provide opportunities to develop coping strategies, and social media allows for individuals to cultivate and share a narrative identity. The outcome of these interactions depends on an individual's inherent characteristics and the environment of the online platform. When positive, these interactions can propel an adolescent's agency, foster their self-esteem, develop their social skills, and improve their mental health (Granic et al., 2020). Virtual microsystems can be especially beneficial for marginalized individuals, such as LGBTQ youth or people of colour who feel isolated in their physical microsystems, as they can connect virtually with others in similar situations for support (Odgers & Jensen, 2020). Neo-ecological theory recognises these positive proximal processes experienced in virtual microsystems and their importance to a developing individual (Navarro & Tudge, 2022).

Neo-ecological theory also includes a term by Merçon-Vargas et al. (2020): *inverse proximal processes*. These processes are regularly occurring, increasingly complex interactions in a microsystem that are detrimental to development. Navarro and Tudge (2022) decided that inverse proximal processes were a necessary addition to accurately comprehend the interactions in a virtual microsystem. They acknowledged, however, that determining whether a process was dysfunctional or competent was bound by cultural norms. Cyberbullying is one inverse proximal process that may occur in a virtual microsystem. Nesi et al. (2018) revealed that cue absence, availability, and publicness in a virtual microsystem lead to unique opportunities for individuals to engage in bullying behaviours. In a digital space, bullying is not bound by a time or space as it is in a physical microsystem, leaving no safe space for victims. Victims may also experience a cyberbullying incident over and over in a virtual microsystem because of the ease of sharing content indefinitely. Additionally, the decreased visibility of virtual spaces leads to a macrosystem-level moral panic over technology, which may cause "some parents to respond harshly or punitively to cyber victimization, and consequently, some youth may be less likely to report being cyber victimized" (Navarro & Tudge, 2022, p. 19350). This creates a new dynamic at the mesosystemic level, between the physical and virtual

microsystem, that may have harmful effects on the individuals involved. Another inverse proximal process in virtual microsystems is social comparison. On social media platforms, adolescents can easily access a plethora of images that have been carefully curated to look perfect, based on macrosystemic influences about appearance and beauty (Navarro & Tudge, 2022). The authors mentioned a study by Holland and Tiggemann (2016) that showed the damaging effects of social comparison, particularly through social media, whereby adolescents turn to disordered eating, develop poor body image, struggle with feelings of insecurity, and increased anxiety.

Navarro and Tudge (2022) realised that not all activities in virtual and physical microsystems are proximal processes. When one opens an app to check the weather or shops online, for example, those are not typically reciprocal interactions and do not increase in complexity. In a physical microsystem, one may drive a car or eat a meal alone, activities which may not elicit proximal processes. The physical microsystem exists regardless of the repeated occurrence of proximal processes. The virtual microsystem is sustained only by recurring digital interactions by the developing individual. Thus, proximal processes are not the only events that occur in each level of Neo-ecological Theory.

4.4.2 PERSON

Bronfenbrenner and Morris (1998) suggested that genetics can be influenced by and can influence the environment. Every developing individual has innate personality traits and qualities. They called these Person characteristics, originally categorized as *dispositions*, *resources*, and *demand* characteristics. Dispositions were later re-labelled *forces* to account for different types, as these behavioural dispositions can be developmentally generative or developmentally disruptive (Bronfenbrenner & Morris, 2006). Differences in disposition, resources, and demand “can further account for differences in the direction and power of resultant proximal processes and their developmental effects” (Bronfenbrenner & Morris, 1998, p. 995). Thereby, Person characteristics can both produce development and be a product of development (Bronfenbrenner & Morris, 2006).

Person attributes manifest to elicit responses and create changes in their environment in a developmentally generative or a developmentally disruptive manner. Developmentally generative characteristics are Person attributes such as “curiosity, a tendency to initiate and engage in activity alone or with others, responsiveness to initiatives with others, and readiness to defer immediate gratification to pursue long-term goals” (Bronfenbrenner & Morris, 2006, p. 810). Characteristics that are developmentally disruptive are those that cause an individual to struggle to maintain control of their emotions and behaviour. These include “impulsiveness, explosiveness, distractibility, inability to defer gratification...apathy, inattentiveness, unresponsiveness, lack of interest in the surroundings, feelings of insecurity, shyness, or a general tendency to avoid or withdraw from activity,” and the tendency to resort to aggressiveness or violence (Bronfenbrenner & Morris, 2006, p. 810). Effects of an individual’s developmentally disruptive characteristics mirror the effects of developmentally generative characteristics in reverse. Developmentally disruptive characteristics decrease proximal processes that further development.

The first Person characteristic in the model is dispositions, or *forces*. An individual’s behavioural dispositions can determine whether proximal processes are set in motion. Developmentally generative force characteristics initiate proximal processes, whereas developmentally disruptive force characteristics do not. Bronfenbrenner and Morris (2007) also note that, “In proximal processes involving interpersonal interaction, the personal characteristics that influence the power of the process and its effects are the same for all parties involved” (p. 812). The authors concluded that parents, as well as children, are affected by these force factors.

The second Person characteristic is *resources*, which include a person’s abilities, experiences, knowledge, and skills that affect their executive functioning (Bronfenbrenner & Morris, 1998). Resources were later categorized into those that “extend the domains in which proximal processes can do their constructive work,” and those which “limit or disrupt the functional integrity of the organism” (Bronfenbrenner & Morris, 2006, p. 812). Biopsychological assets are those original resource characteristics which develop in ways that improve and increase proximal processes.

Biopsychological liabilities include physical or genetic defects, handicaps, or damage that interfere with proximal processes.

Demand characteristics are the final Person characteristic in the PPCT model. A person's particular demand characteristics either "invite or discourage reactions from the social environment" and can either foster or interfere with proximal processes (Bronfenbrenner & Morris, 1998, p. 118). Physical attractiveness, disposition, and ability to cooperate are examples of demand characteristics. Bronfenbrenner and Morris (1998, 2006) explain how demand characteristics can affect psychological growth either positively or negatively. They refer to a study that followed children of the Great Depression (Elder, Van Nguyen, & Caspi, 1985) and found that the stress of economic hardship caused fathers to reject their daughters, but not their sons, in a manner that was inversely related to their daughter's physical attractiveness. The authors use this example to illustrate the "power of a PPCT model in revealing the complex interactions between organism and environment that drive the process of development" (Bronfenbrenner & Morris, 2006, p. 813).

Neo-ecological theory understands the effect of a person's dispositions on their use of digital platforms. Navarro and Tudge (2022) cited research by Best et al. (2014) that uncovered the tendency of extroverted individuals to utilize platforms and exist in virtual microsystems without anonymity. It also considers the concept of digital literacy to be a resource characteristic (Navarro & Tudge, 2022), as youth are often more capable in virtual spaces than adults (Nesi et al., 2018). Adolescents may gain skills in virtual microsystems that they employ in their physical microsystems when interacting with others. Not all developing individuals have equal access to digital technology, however, creating a digital divide that increases this skillset for some and impairs it for others (Navarro & Tudge, 2022).

Neo-ecological theory considers demand characteristics to be more impacted by digital media than force or resource characteristics. Individuals can alter their demand characteristics in a virtual microsystem through the tools, time, and space available to them digitally. Digital spaces allow individuals greater control over how they are perceived online than in a physical space. The theory considers work by Marwick and Boyd (2011), who

described how individuals can carefully curate their online presence based on the digital platform and the audience to whom they are appealing.

4.4.3 CONTEXT

Like Bronfenbrenner's (1979) original ecological systems theory, bioecological, and thereby neo-ecological theory posit that all development takes place within four main systems that are defined by their relative proximity to the individual, the microsystem, mesosystem, exosystem, and macrosystem.

4.4.3.1 MICROSYSTEM

Bioecological theory recognizes that the previously discussed Person characteristics are not limited to the developing individual, as the Person characteristics of others within a child's microsystem affect the proximal processes at this level (Bronfenbrenner & Morris, 2006). Features of the microsystem can be generative or disruptive. Bronfenbrenner and Morris (2006) note that, "Not only do developmentally generative features of the surroundings have greater impact in more stable settings, but they also function as a buffer against the disruptive influences of disorganizing environments" (p. 815). Potential negative effects of violent video game play may be neutralised by a stable home environment in which proximal processes occur more often. Moreover, siblings can affect the way a child views or interprets media, as a study on sibling television co-viewing suggested that although older siblings did not help younger siblings interpret essential events in a program, some teaching did take place during co-viewing events (Haefner & Wartella, 1987).

To account for video games and other online interactions, neo-ecological theory proposes three modifications to the microsystem. First, there exists both virtual and physical microsystems rather than just the one in Bronfenbrenner's models. This first change describes a virtual microsystem as one that includes activities, social roles, and interpersonal relations experienced on a digital platform, whereas a physical microsystem exists only in face-to-face environments. One caveat, however, is that physical microsystems exist all the

time, whereas virtual microsystems only exist when an individual engages in digital interactions and activities (Navarro & Tudge, 2022).

A second modification proposed by neo-ecological theory is that the developing individual can exist in multiple microsystems at the same time. The second change allows for a context in which to understand that when individuals are online, they are simultaneously in a physical and virtual microsystem. It also provides a context for when individuals use multiple media at once, such as when an individual attends an online meeting while also scrolling through social media.

Third, the existence of virtual microsystems is determined by the interactions and activities of the developing individual. The third change discusses how an individual enters, interacts, and exits virtual microsystems. A virtual microsystem only exists because of digital interactions, such opening and closing an app or turning a game on or off (Navarro & Tudge, 2022).

There are several unique features to the virtual microsystem, which exist on a continuum. The following features are recommended by Navarro and Tudge (2022) as an initial list:

Synchronicity and Asynchronicity: Interactions within a virtual microsystem can be synchronous (e.g. online gaming) or asynchronous (e.g. email), a feature more common in virtual environments than physical ones. Individuals are able to choose when and how they interact in asynchronous virtual environments.

Availability: Virtual environments give individuals who may be unavailable to each other in a physical environment an opportunity to connect (Nesi et al., 2018). It is vitally important for an individual to connect with those experiencing similar challenges or who have parallel interests. This was especially evident during the COVID-19 pandemic as children attended virtual school, adults joined virtual work meetings, and individuals partook in virtual doctor visits.

Publicness: As virtual environments are not limited by a physical location, they can encompass a large number of people at once and expand an individual's audience (Nesi et al., 2018). This feature has been noted by

scholars who examined civic engagement among youth (Ferguson & Garza, 2011; Granic et al., 2020; Lenhart et al., 2008).

Permanence: Virtual environments provide a space where an individual's content can be accessed indefinitely, even on platforms that abjure permanence, through the potential of another user taking a screenshot. This prevents opportunities but also risks for individuals, as "their digital past is omnipresent" (Navarro & Tudge, 2022, p. 19342).

Cue Absence: Virtual environments may be limited in interpersonal cues, as non-verbal cues do not exist like they do in a physical environment. Some digital platforms allow for video chatting, which enables participants to read visual cues, but platforms that are solely for messaging do not provide this opportunity for cues. There is also the potential for anonymity in a virtual environment (Nesi et al., 2018).

Another feature of virtual microsystems that the authors recommend considering is the ability for content to be exactly copied and instantly shared extensively (Nesi et al., 2018), but not necessarily attributed to the original source. This is unlike physical microsystems, where content must be deciphered, remembered, or written down before being passed on to others. And lastly, they urge researchers to consider the algorithms that alter virtual environments and create dynamic microsystems. In this way, exosystems and macrosystems interact with and influence virtual microsystems in ways adults around the child are not aware (Navarro & Tudge, 2022).

4.4.3.2 MESOSYSTEM

If a child's peers are present in more than one microsystem, such as church and school, that will increase the amount of time the children spend together. Because of this, these individuals will have a greater influence a child's behaviour and thoughts. Interactions that occur on a regular basis are more influential on the child's development, an example of the principal component of *time* included in the PPCT model (Bronfenbrenner & Morris, 1998).

Neo-ecological theory makes no changes to the concept of the mesosystem (Navarro & Tudge, 2022). The inclusion of technology reiterates the importance and prevalence of microsystems interacting, as physical, social, and digital worlds consistently intertwine (Subrahmanyam & Šmahel, 2011). Social groups from different physical microsystems may also converge in the same virtual microsystem. Children may play a video game together while in their own homes. Furthermore, individuals from separate virtual microsystems may unite in another virtual microsystem, such as those on one social media platform finding the developing individual on another social media platform (Navarro & Tudge, 2022).

4.4.3.3 EXOSYSTEM

In bioecological theory, the exosystem “comprises the linkages and processes taking place between two or more settings, at least one of which does not contain the developing person, but in which events occur that indirectly influence processes within the immediate setting in which the developing person lives” (Bronfenbrenner, 1994, p. 40). Parents’ co-workers, their connections on social media, and local politics may all influence their perceptions about violent video games. Parents will discuss their own discernments and beliefs with peers. They will talk with other adults in their homes, neighbourhood, and extended family. Parents may discuss and hear opinions from members of their religious group. The child is not present in these situations, yet they are affected by the impact these sources have on their parents. Also included in the exosystem is the media. Mass media outlets are optimally positioned to affect the thoughts and beliefs of a community. Although journalists are ethically bound to report factual information, partially factual information is common. News articles with sensational words attract more attention, and therefore more readers (Campbell et al., 2012; Copenhaver et al., 2017). Headlines that state “Too Much Screen Time Damages the Brain” (Dunckley, 2014) or “Screen Time Linked to Lower Brain Development” (LaMotte, 2019) may alarm parents. The media may also include advertisements that children see on television and the internet. When characters in their favourite television show are playing or talking about a

violent video game, the child may now be aware of and curious about that game.

Parents oversee their child's interactions with video games, television, YouTube or other video or streaming services on the television or computer. As discussed in *2.7.1 Parental Mediation*, there are various ways parents choose to make decisions regarding their children's access to media. With few or no parental limitations, children may encounter images and videos inappropriate for their age or play violent video games without their parents' knowledge. This also increases the potential for children to meet, talk, and play with others in a virtual environment, as children can chat with others using the comment feature on YouTube or within video game platforms. Parental mediation factors also affect a child's awareness of video games and whether they exist in their microsystems. When a child watches a YouTuber play a particular violent video game on their channel, the child may then desire to play that same game.

Extended family members are part of the exosystem surrounding a child (Bronfenbrenner, 1979). Aunts, uncles, and grandparents' opinions of video game play, especially violent video games, may differ significantly from those of a child's parents. These generational differences can also be explained by Bronfenbrenner and Morris's (1998) mention of time and its influence on a child's development.

Neo-ecological theory accepts bioecological theory's definition of the exosystem with one small alteration, changing "settings" to "microsystems" and "lives" to "engages" to "reflect the duality of virtual microsystems and physical" (Navarro & Tudge, 2022, p. 19344). In Bronfenbrenner's model, the exosystem indirectly influenced the developing child through microsystems. However, the exosystem can directly influence individuals in a virtual microsystem. For example, pricing and access decisions made by software developers affect an individuals' ability to interact in virtual microsystems (Navarro & Tudge, 2022).

4.4.3.4 MACROSYSTEM

Neo-ecological theory questions Bronfenbrenner's original intent for the macrosystem blueprint. Navarro and Tudge (2022) speculate that Bronfenbrenner viewed societal changes through his own biased lens on social policy, rendering him unable to accept cultural changes, such as shifting gender norms, as normative for a new time and rather viewing them as societal problems. This idea is evident in his bioecological and PPCT models, where the macrosystem is not largely discussed. Conversely, neo-ecological theory recognizes the significance of the macrosystem and encourages thorough examination of "the diverse cultures and subcultures within which [today's young people] live, play, and grow" to ensure the relevance of developmental and societal research (Navarro & Tudge, 2022, p. 19345).

Events in the macrosystem extend into both physical and virtual microsystems. Technology is an integral part of 21st century life, and it affects adolescents differently depending on their location and the society in which they live. The disparity between high and low-economic areas' internet access and the availability of digital devices occurs at the macrosystem level (Navarro & Tudge, 2022). The authors noted George et. al (2020) discovered that lack of access for those individuals in a lower economic physical microsystem affects a developing individual's ability to participate in virtual microsystems. Navarro and Tudge (2022) also examine government censorship, such as that in China, as a factor that impedes on an individual's access to virtual microsystems. Censorship can decrease digital anonymity and restrict available digital content and resources.

4.4.4 TIME

Bioecological theory (Bronfenbrenner & Morris, 1998) introduced *time* as an important factor in development. The authors proposed that for an interaction to be effective in affecting developmental outcomes, it must occur regularly. The frequency and intensity of proximal processes are fundamental to an individual's development. Bronfenbrenner and Morris (2007) describe the relevance of time in as micro, meso, and macrochronological systems. If an environment in the microsystem is unstable, proximal processes cannot occur.

Unstable microsystems “tend to reinforce each other,” therefore affecting development at the mesosystem level (Bronfenbrenner & Morris, 2006, p. 820). Changes in child-rearing practices and patterns over time affect parent-child interactions and parental decisions, thus demonstrating the importance of recognizing time at the macrosystem level. This concept of time assesses and parallels work by Elder and Shanahan (2006), concluding that transformations over time are both products and producers of change.

Bioecological theory defines *microtime* as “continuity versus discontinuity in ongoing episodes of proximal process” (Bronfenbrenner & Morris, 2006, p. 796). In Neo-ecological theory, microtime is realised as an individual’s ability to remain present during a proximal process. Navarro and Tudge (2022) declare that microtime is “an incredibly important component of neo-ecological theory...[as] the ability of youth to stay present and engaged in proximal processes may be interrupted frequently” (p.11). This is because digital platforms attempt to constantly engage individuals with messages and notifications.

Mesotime is “the periodicity of these episodes across broader time intervals, such as days and weeks” (Bronfenbrenner & Morris, 2006, p. 796), or put simply in Neo-ecological Theory, the consistency of proximal processes. For an interaction to be an effective agent of change in the developing individual, it must occur frequently.

Macrotime highlights “the changing expectations and events in the larger society, both within and across generations, as they affect and are affected by, processes and outcomes of human development over the life course” (Bronfenbrenner & Morris, 2006, p. 796). It explains the changes over time within society and across generations. Neo-ecological theory understands that the internet is a culture as well as part of culture. Digital platforms enable the creation of digital cohorts in the virtual microsystem, which may have effects on development over time (Navarro & Tudge, 2022).

In accordance with bioecological theory and the PPCT model, time is discussed in Neo-ecological theory in three measurements: microtime, mesotime, and macrotime. Each type explains how time affects the proximal processes throughout the model. Neo-ecological theory recommends examining “how digital technology may both encourage and disrupt

engagement in proximal processes on a regular basis” (Navarro & Tudge, 2022, p. 19347). The authors note that virtual microsystems potentially increase the frequency of proximal processes, as a child may interact more often with extended family members or teachers and peers due to the ability to do so virtually. The increased occurrence of interactions in the virtual microsystem can be either detrimental or beneficial, depending on the circumstances. An individual may replace proximal processes in the physical microsystem with those in the virtual microsystem, such as when playing e-sports games instead of trying a physical sport. Conversely, the authors refer to a study by Twenge et al. (2017) that showed adolescents participate in fewer risk-taking behaviours in the physical microsystem. The author’s final observation about mesotime refers to screen time, the amount of time an individual uses a digital platform and exists in a virtual microsystem. Neo-ecological Theory encourages considering the time spent on proximal processes that occur in virtual microsystems rather than merely the amount of time spent in that virtual microsystem.

4.5 SUMMARY OF CHAPTER

Throughout his life, Bronfenbrenner (Bronfenbrenner, 1977, 1979, 1994; Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Evans, 2000; Bronfenbrenner & Morris, 1998, 2006) modified his theory of human development many times. It progressed from *ecological systems theory* to *bioecological theory* that included person traits and considered generational and historical context (Navarro & Tudge, 2022; Rosa & Tudge, 2013). Others have adapted this theory to further explain the effect of violence (Flynn & Mathias, 2023) and the role of technology (Navarro & Tudge, 2022) on an individual’s development. Ecological systems theory provides the basis for understanding how violent video games affect children and why parents make the decisions they do about violent video game play. However, the original ecological systems theory is not sufficient to contextualize the complexity of those experiences. It is necessary to also look at how violence affects individuals at each systemic level (Flynn & Mathias, 2023), the role of biological factors (Bronfenbrenner &

Ceci, 1994; Bronfenbrenner & Morris, 1998, 2006), and technology (Navarro & Tudge, 2022).

5. METHODOLOGY AND METHODS

5.1 INTRODUCTION

This first part of this chapter (*5.2 Research Methodology*) investigates the philosophical and theoretical rationale for a mixed methods research design to best address the research questions. Section 5.2 outlines the research methodology, including the research paradigm, strategies of inquiry and research design, and the data collection methods chosen for this study. It then discusses the limitations of the study and deliberations made because of the COVID-19 global pandemic.

Further detail is provided in sections 5.3, 5.4, and 5.5 around the processes of data collection for each method: the survey, interviews, and media analysis. Each section outlines the methods of data collection, the participants, the sampling and recruitment procedures, and the analysis methods used for each method respectively. This chapter concludes by discussing ethical considerations within this research. Materials included in the Appendices that supported this research study are as follows: Survey Consent, Survey Questions, Interview Consent, Interview Questions, and Content Analysis Searches (see *Appendices 9.1, 9.2, 9.4, 9.5 and 9.7*).

5.2 RESEARCH METHODOLOGY

Creswell (2009) explains that when designing a research study, the researcher must consider three factors. The first component of research design is the philosophical worldview (Creswell, 2009), also referred to as the research paradigm (L. Cohen et al., 2017; Tashakkori & Teddlie, 1998). Cohen et al. (2017) describe a paradigm as “a way of looking at or researching phenomena...and how we can understand or know about it” (p. 8). Secondly, research design employs one or more strategy of inquiry (Creswell, 2009) that are utilised in the design of a research study. The specific research methods compose the third and final component of research design (Creswell, 2009). The following sections detail the research paradigm, strategies of inquiry and research design and justification for the chosen methods.

5.2.1 RESEARCH PARADIGM

This study employs a *social constructivist* paradigm, whereby the goal is to rely on people's views and interpret their meanings (Creswell, 2009). Social constructivism analyses the joint knowledge that individuals collectively create and understand (Amineh & Asl, 2015). It posits that "the aim of learning is to become aware of the realities of others and their relationship with and to one's own" (Adams, 2006, p. 246). This study aimed to uncover what parents' perceptions were about violent video games, why they held those beliefs, and if their perceptions affected their decisions about violent video game play for their families. Social constructivist views seek understanding of others' views, realizing that the complexity of their meanings is subjective and based on the specific contexts in which they live and work (Creswell, 2009). This study considered both internal and external influences on a person, including online media articles and other adults with whom the parent interacted.

Since people construct meaning about the world through their interaction with others, this view often relies on open-ended questions to allow participants' freedom to explain their thoughts (Creswell, 2009; H. J. Rubin & Rubin, 2011; Tashakkori & Teddlie, 1998). This strategy was utilised in both a survey and interviews throughout this study. This study examined parents' initial perspectives or decisions about violent video games, but also whether those were altered during the COVID-19 global pandemic. Through interviews, this research study sought to understand the lived experiences of people experiencing a particular phenomenon (Creswell, 2009). Interviews provided an appropriate method through which to conduct this phenomenological research (Creswell, 1998), providing "a powerful way to gain insight into...important social issues through understanding the experience of the individuals whose lives reflect those issues" (Seidman, 2006, p. 14).

5.2.2 STRATEGIES OF INQUIRY AND RESEARCH DESIGN

This study follows a mixed methods strategy, employing both qualitative and quantitative means of inquiry in tandem to strengthen a study (Creswell & Plano Clark, 2007). Utilising both qualitative and quantitative methods in one study balances the strengths and weaknesses of each method. In a mixed

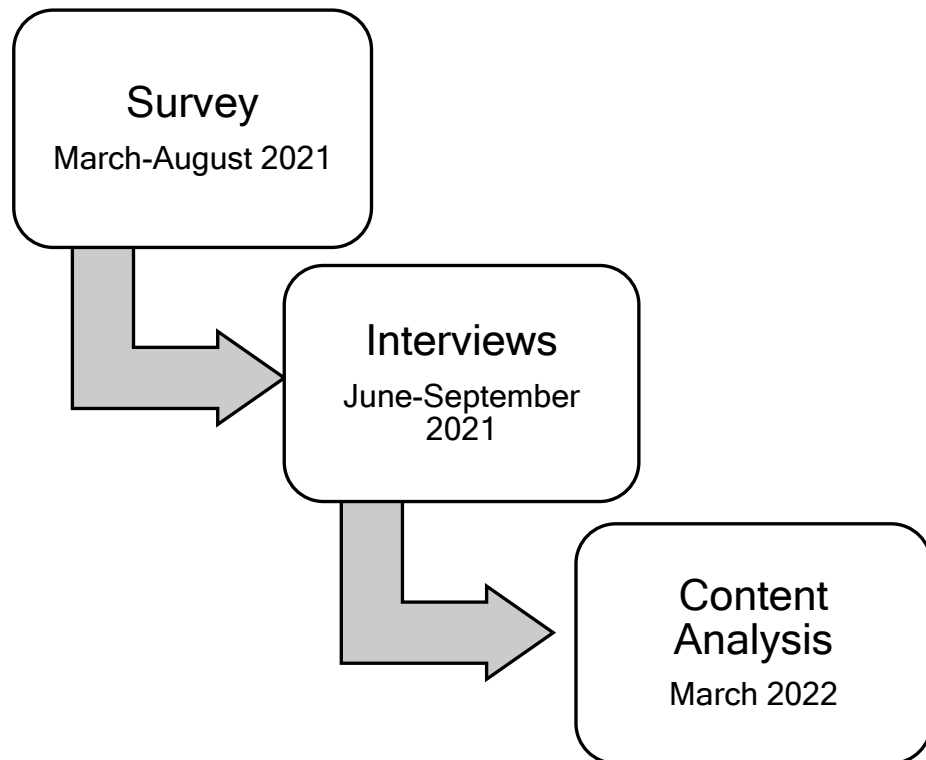
methods design, results of each method can reinforce each other (Creswell & Plano Clark, 2007), and it also allows for any “biases inherent in any single method [to] neutralize or cancel the biases of the other methods” (Creswell, 2009, p. 14). The quantitative and qualitative methods of data collection utilised in this study are survey, interviews, and a content analysis.

Specifically, this study uses a *sequential mixed methods* strategy to combine quantitative and qualitative data collection and analysis. Using this technique, results from one method helped identify participants to study or questions to ask for the other method (Tashakkori & Teddlie, 1998). The structure for this study follows an *explanatory sequential mixed methods* strategy (see Figure 5.1), whereby quantitative data collection method occurs first, followed by a qualitative method of data collection (Fetters et al., 2013; Ivankova et al., 2006). This study has an additional third method, a content analysis. The initial research strategy employed in this study was a survey used to collect responses from a broad audience. Following this were interviews with participants who were acquired through the survey. Interviews sought to allow participants to expand upon their answers to survey questions, specifically those regarding violent video game play during COVID-19 lockdown periods. During the interview, participants were also asked about their perceptions of violent video games in news media, and their responses prompted further investigation. This led to a third research method, a content analysis of media articles about violent video games that were published online during the time of the survey and interviews.

As all three methods of data collection occurred within a specific point in time, one calendar year from March 2021-2022, this is a *cross sectional* research study. **Figure 5.1** shows the sequence and time frame of this study.

Figure 5.1

Explanatory Sequential Mixed Methods Timeline



5.2.3 JUSTIFICATION OF RESEARCH METHODS

As discussed in the prior section, this study relied on three modes of data collection: a survey, interviews, and a content analysis. Through a link posted and shared online, a survey collected initial quantitative data about participants' perceptions of and decisions about violent video games. Interviews were conducted for a greater understanding of the participants' surrounding lived experiences. A content analysis of media headlines and stories was conducted to help frame and explain parents' perceptions. The first four research questions were addressed through the survey and interviews. Additionally, the interviews expanded upon research question four, exploring the effect of COVID-19 on their perceptions and decisions about violent video game play in their homes. The content analysis of media emerged from parents' interview responses about their perception of media.

This addressed the final research question, concerning how media headlines framed violent video games.

To begin this research, it was necessary to amass information from a large selection of people in the hopes of seeing general trends in responses and attitudes regarding violent video games. Since a survey systematically gathers information a sample of the population intended to be studied (Groves et al., 2011), a survey was best suited to collect this information. DeVaus (2002) explained that “survey research seeks an understanding of what may cause some phenomenon...by looking at variation in that variable across cases and looking for other characteristics which are systematically linked with it. As such it aims to draw causal inferences” (p. 4). This study explored potential correlations between a parent’s demographics, experiences, and their perceptions of violent video games or their decisions about violent video game play for their children. Surveys allow for statistical inferences to be made about a population based on a subset of that population who responded to the survey (Schonlau et al., 2002). Because surveys can be done independently, on the participants’ own personal time without the need to contact or interact with the researcher, the use of a survey helped ensure voluntary participation and anonymity to the respondents, as they were not required to provide their name or email address (Driscoll, 2010). This was an additional reason that a survey was a useful and appropriate way to collect data for this study.

The survey was designed to gain insight into parents’ perceptions of violent video games and parents’ decisions about violent video game play in their homes. It asked parents if they believed violent video game content led to violent behaviour, whether they placed restrictions on violent video game play for their children, and where they sought information on this topic. On its own, however, the survey would not provide a full account of parents’ experiences with violent video games. Since a researcher’s role “is to gather narratives, descriptions, and interpretations” from multiple participants and combine them to describe or explain an event (Rubin & Rubin, 2011, p. 7), it was necessary to collect as much information from participants and as many viewpoints as needed to address the research questions. To accomplish this goal, after the survey was closed, interviews were conducted to further delve into parents’ perceptions and decisions of violent video games. Interviews are

a method of qualitative research used to discover patterns of experience in an individual's life (Dilley, 2000), and they facilitate examination of multiple perspectives of an issue, thereby leading to attentive and nuanced deductions (H. J. Rubin & Rubin, 2011).

The third and final mode of data collection involved a content analysis of media published during the time of this study. Knowing parents were searching the internet for information about violent video games, it was beneficial to conduct a content analysis of media headlines during the year encompassing the survey and interviews in this study. Content analysis is "a technique which is systematically and objectively used to describe the apparent content of communication as well as draw inferences" (Ogbodo et al., 2020, p. 259) by creating content categories through the use of coding (Stemler, 2001). Qualitative content analysis increases knowledge and develops an understanding of the phenomenon (Assarroudi et al., 2018). Bioecological systems theory (Bronfenbrenner & Ceci, 1994) includes mass media as part of an individual's exosystem, having influence on their thoughts and behaviours. It can therefore be implied that media plays an important role in this topic. In the survey, respondents were asked how they perceived the media's view of violent video games. In the follow-up interviews, those questions were expanded upon by asking what, if anything, parents had seen online or in the media regarding violent video games and if they actively searched online for advice and information. To understand parents' opinions of violent video games, it was essential to examine sources from which they may have received information about violent video games, including what they read in online news articles. This analysis of media content was therefore necessary "to theorize the sociocultural contexts, and structural conditions, that enable the individual accounts" (Braun & Clarke, 2006, p. 85) and recognise their influence on survey respondents' and interview participants' perceptions and decisions regarding violent video games. Conclusions from previously mentioned work that evaluated the media's influence, particularly with regard to publishing information about violent video games (Benekos & Merlo, 2014; Campbell et al., 2012; Copenhaver et al., 2017; McKernan, 2013; Olson, 2004), justify the need for an analysis of media that was published at the time of the survey and interviews for this study.

5.2.4 THE IMPACT OF COVID-19

The idea for this study was conceived in 2019. It was originally envisioned as a cross-cultural study of attitudes concerning violent video games in the United States and the United Kingdom. The original plans included contacting families through their child's school, requesting both their participation and permission for their child's participation. Procedures were comprised of leading focus groups of young children to discuss video game play. The children would be asked questions about the games they liked to play and why they enjoyed playing them. Data would also have been collected around the differentiation between fantasy and reality in video games and how children interacted with what they saw on the screen when playing games. Additionally, the study had planned to include focus groups with parents to discuss and share ideas regarding violent video game play in their homes. Parents would respond to questions about their childhood experiences playing video games and what their perceptions were of video games that children like to play today. They would also examine the issue of violence in video games, whether they thought violence in games was an issue, what aspects of games they considered violent, and how they handled violent video game play with their children. This research plan would require travel from Oklahoma to Wales to meet with children and parents in person for focus groups and interviews.

In March 2020, COVID-19 erupted into a global pandemic, with profound disruption to education across all settings and contexts (Marchant et al., 2021; Watermeyer et al., 2021; World Health Organization, 2024), thus adjustments were needed to be made to the study. Schools in both the US and the UK began virtual or distance-learning models where the children were not attending school in-person with their peers. Travel between the two countries was also not a possibility, as both countries limited flights and increased quarantine for travellers. It would be neither safe, legal, nor ethical to conduct focus groups with children or parents until the global pandemic response allowed for decreased social-distancing measures. The entirety of the research would need to be completed from the state of Oklahoma, in the United States. At this point, the research turned to focusing solely on parents.

Due to the global pandemic, conducting interviews in a manner that did not involve travel was imperative for this study. Since interviews could not be

conducted in person, Zoom was chosen as an interview platform. This alleviated the issue of traveling during a pandemic. It also helped ensure safe social distancing measures. An additional advantage of using Zoom was that interviews could occur between the researcher in Oklahoma and participants who lived anywhere in the world without risking their health by traveling. As Wilson (2012) noted, another advantage of using a computer software program such as Zoom is that it is cost effective. One can participate in a Zoom call without paying for the service. The only costs incurred are a device that can access the internet, as an interview participant could also utilise a free public Wi-Fi network for the Zoom call (V. Wilson, 2012).

5.3 SURVEY

The following sections outline how the survey was created, how it was distributed and to whom, and how the results were analysed. The steps required for survey research are to identify the objectives, determine the population sample, create and test the survey, contact respondents, and collect and analyse the survey data (Schonlau et al., 2002). Those steps are explained in the way they were relevant to this study.

5.3.1 SURVEY OBJECTIVES

The objectives of the survey were to establish which attributes of video games parents considered violent, parents' perceptions of the impact of violent video games, and how parents made decisions about violent video game play for their families. These objectives were derived from the research questions for this study. To reach as broad of an audience as possible, the survey was not limited to participants from any specific location. This is discussed in more detail in the following section, *5.3.2 Sampling Method and Survey Participants*. The survey was created and tested with a pilot group of parents. The survey questions were then revised based on feedback from the pilot group. The final version of the survey was distributed online, allowing for respondents to access it regardless of their geographical location. Survey data were analysed using SPSS, and this analysis is discussed in *6.2: Survey Findings*.

5.3.2 SAMPLING METHOD AND SURVEY PARTICIPANTS

The target participant group for the survey were parents or legal guardians of one or more children. Parents are also consumers of violent video games, as they are the ones who ultimately make the decisions to purchase them and permit their children to play them. Several parents in the sample also reported playing violent video games themselves. Therefore, parents' opinions are an important aspect of children's violent video game play. Participants were recruited for this study through opportunity and snowball sampling (Baltar & Brunet, 2012; Handcock & Gile, 2011). With opportunity sampling, participants volunteer or are randomly selected from an accessible sample population (Teddlie & Yu, 2007) and are not chosen by the researcher (Leech & Donovan, 2023). In snowball sampling, participants who have already been recruited for the study ask others to also participate in the study (Onwuegbuzie & Leech, 2007). As defined by Handcock and Gile (2011), snowball sampling is where "a few identified members of a rare population are asked to identify other members of the population, those so identified are asked to identify others, and so on" (p. 183). The survey was distributed online via emails and multiple social media sites, with both methods requesting potential participants share the survey with other potential participants. Baltar and Brunet (2012) rationalise that snowball sampling is useful in qualitative research, which was conducted via interviews in this study after the initial quantitative survey data was collected.

5.3.3 SURVEY DESIGN

Due to practical reasons as outlined in this section, an online survey was utilised. Schonlau et al. (2002) articulated that surveys conducted on the internet are less time consuming than other methods (mail or face-to face) without sacrificing quality. They are also cheaper, with no costs such as those incurred with mailing paper surveys, and easier to implement (Schonlau et al., 2002). The survey was created with Qualtrics XM (www.qualtrics.com) using a license from the University of Central Oklahoma. Because the survey was created and distributed digitally, it was a straightforward process to export the survey data directly into SPSS for statistical analysis.

5.3.3.1 SURVEY CONTENT

The online survey was designed to gather information about the violent video game playing habits of young school-age children, for whom violent video games are not always recommended as per the ESRB rating system. The survey began with a consent form stating that the research was exploring parents' perspectives on violent video games, considering the possible impact of COVID-19 pandemic and quarantine, and comparing media headlines on the topic (see *Appendix 9.1: Survey Consent*). Survey respondents were required to click the yes button, consenting to the study, before being able to view any other survey questions.

After the initial question requiring the participant to consent to the survey, the survey was separated into three sections. These three sections contained a total of 30 questions (see *Appendix 9.2: Survey Questions*). There were 26 multiple-choice questions, two of which contained an optional "other" short-answer response, two questions with Likert scales, and one final open-ended question where the respondent could add any additional information they felt applicable to the study. The open-ended response questions allowed respondents to explain answers in their own words, rather than using pre-determined ideas (Jackson & Trochim, 2002). The first section of the survey was titled "Demographic Information," the second section was titled "Digital Literacy," and the final third section was titled "Video Games in Your Home." Although the main interest of this study was violent video games, it also asked survey questions about video games in general. This was vital because it would help determine if parents viewed violent video games differently than other video games. The survey asked two questions about violent video game play during the COVID-19 pandemic and two regarding parent's view of the perception of violent video games in the media. These questions led to discussion questions in interviews.

The "Demographic Information" section contained six questions about the respondents themselves. Participants provided demographic information including their age, gender, location, educational background, number of children in their household, their relationship to those children, and those children's ages. These questions were the only ones on the survey that were compulsory and required a response. To properly analyse the data, it was

essential to include and understand the demographic information of survey respondents. This knowledge also helped determine if a diverse sample was used. If a respondent who was not a parent or legal guardian began the survey, they would not have been able to answer questions about their children, beginning with question five (see *8.4.2: Limitations* for more discussion of this).

The second section, “Digital Literacy,” asked five questions about participants’ perceived knowledge and experience relating to video games and gaming systems. Questions used the term “video games,” with a qualifying statement that “‘video game’ refers to any game on a digital platform, including but not limited to an app on a tablet or phone, or a game on a gaming system such as Nintendo, PlayStation, or Xbox.” Participants were asked to answer questions about their childhood habits of playing video games, their current comfort level with operating gaming systems, and perceived knowledge of the impact of violent video games on children. Survey questions that asked about violent video games allowed the participant to choose their personal definition of violence. This was an essential part of this survey. While creating the survey and discussing procedure and question selection, it became apparent that one person’s definition of violence is not the same as another. What a person considers violent might depend on their geographical location, cultural surroundings, and childhood, among other factors. In the pilot survey, five potential definitions of violence were included. Feedback received indicated that some participants’ definitions didn’t quite align with the given definition. In the final survey, a sixth option was added in which a participant could type their own definition of a violent video game in the open-answer box.

The third section of the survey was the largest, with 19 questions. This section was titled “Video Games in Your Home” and focused on video game play in the participant’s home. It inquired about their perceptions of violence in video games, the types of information they have received about violent video games, and how they manage violent video game play in their homes. For valid information, it was necessary for a survey respondent to answer all questions regarding the same child in their household. Therefore, participants with multiple children were asked to answer the remaining questions based on their youngest school-age child between the ages of five and eighteen. This

age range was chosen based on the literature review, as the research conducted on violent video games has focused predominately on adolescents and young adults. In contrast, this study sought to understand how parents of young children were handling violent video games in their households. The first four questions in this section collected potentially relevant information about the child's age, gender, position in the family (oldest, youngest), and the participants' relationship to the child. The next two questions related to the COVID-19 pandemic and quarantine, asking how many days the child went to school or childcare each week. If the child's school or childcare was closed, the child would have spent more time at home than normal. The next question asked how often the child played video games, with the answers of daily, weekly, monthly, and yearly. Depending on which answer they chose, the subsequent question prompted the participant to type in the number of hours either daily, weekly, monthly, or yearly. Four questions then asked if participants were aware of age ratings on games, knew the ratings of their child's games, bought games above their child's age rating, and requested that participants describe the level of violence in the games that their child plays. If respondents answered "never" to question 18, they were directed directly to question 27.

The third section not only investigated the choices parents made but also questioned why they made them. DeVaus (2002) clarified that in a survey, it is prudent to ask respondents "why they act or think as they do" (p.14). Four questions in this section asked if participants placed limits on video game play or violent video game play in their homes. If a participant answered yes to either inquiry, they received a prompt inquiring how they made those decisions. The choices included information from friends, family, media, paediatricians, and internet. Participants could choose as many options as needed, and they were also invited to provide their own source in the open-answer box. The last two questions in the third section used Likert Scales asking participants to respond to various statements about violent video games and assessing participants' perceptions about how violent video games were portrayed by social media, the news, adults without children, other parents, and their child's paediatrician, teacher, and grandparents. The question specifically asked

about grandparents and adults without children to see if other generations or adults had opinions that differed from parents.

After the third section, there was an open-ended box where participants were invited to type anything else they wished to tell the researcher about their child or violent video games. The final question of the survey asked if the participant would be interested in a follow-up survey with the researcher. If they answered yes, they were prompted to type their email address in the box. If they answered no, they were directed to the end of survey message thanking them for participating. Throughout the survey, participants were able to go back and alter answers from preceding questions if they desired. This was important because after reading a question, it may have clarified or changed their response to a previous question. To get the most accurate information from this survey, participants needed to be confident of their answers. Utilizing the back option provided this opportunity.

5.3.3.2 PILOT SURVEY

The survey was initially piloted with fifteen parents in February 2021. Parents who participated in the pilot survey answered all questions and had the option to write feedback in an additional final question. The pilot survey revealed that this survey took approximately seven minutes to complete. Minor changes were made to four of the questions in accordance with feedback obtained from the pilot survey. **Figure 5.2** details the changes made to four of the questions.

Figure 5.2

Changes Made After Pilot Survey

Question number	Question Text	Changes after Pilot Survey
Q54 (beginning of Digital Literacy block, between Questions 8 and 9)	Following are some possible definitions of violence as it pertains to video games. Chose the one that best aligns with your opinion, and use that for the remainder of the survey when questions refer to violent video games	Added a text option to write in their own definition of a violent video game
Question 12	For the remainder of this survey, please answer the following questions with regard to your youngest school-aged child (between the ages of 5 and 18). For example, if you have three children ages 3, 6, and 8, please answer the following questions about your 6-year old.	Changed the youngest possible “school-age child” to 5 instead of 4
Question 19	Do you know about the rating systems used for violent video games?	Added “not sure” as an option
Question 28	In your experience, how are violent video games portrayed or viewed...	Changed “by grandparents” to “by your grandparents” and “by child’s grandparents”

5.3.4 SURVEY DISTRIBUTION

The first participants to see the survey were those who either personally knew the primary researcher or were in similar social circles. As Baltar and Brunet (2012) noted, “initial seeds in snowball sampling are in theory randomly chosen, it is difficult to carry out in practice and they are selected via a convenience sampling method” (p. 60). The intent was for the survey to then be shared more widely among those initial participants’ friends and networks.

Parents who lived anywhere around the world were able to participate. The survey was published on 4 March 2021 and ended 5 August 2021.

The survey was distributed through email to those associated with the University of Central Oklahoma and via multiple social media platforms, thereby increasing the potential for additional responses. A public link to the survey was also posted on *Twitter*, *Instagram*, *LinkedIn*, and *Facebook* with a request to take the survey and share the link. Local, national, and international parenting groups such as Deer Creek Parents - The Original, Eastern HS Momfidence, The Mommy Forum (TMF), Deer Creek MOMS, PARENTING GROUP, Parenting, STILL “Homeschooling” Parents of Middle Schoolers Support Group, and Parenting in a Digital World. The survey was also posted in another non-parenting group, The Ridge Neighbors, that had members who are parents. This multiple pronged approach alleviated the issue of potential respondents not checking a particular email account or, for this study, not participating in social media, which can decrease the response rate of a survey (McPeake et al., 2014).

5.3.5 SURVEY ANALYSIS

The survey results were exported from Qualtrics into SPSS. The results of the analysis are discussed in *6.2: Survey Findings*. Nominal and ordinal variables from the survey results were first analysed using relative frequency, comparing the number of responses for each category to all of the responses in that question and reported as percentages (Kaur et al., 2018). Then a chi-square test was used to determine if there was a significant relationship between two variables, such as demographic factors, experiences, personal beliefs, or decisions about violent video game play in respondents’ homes. The chi-square statistic “tests whether the frequency distribution is likely to occur by chance” (Wildemuth, 2017, p. 362). If the chi-square test determined that there was a significant relationship, the Kendall’s tau-c test was used to determine the nature of the significant correlation. An alpha level of .05 was used for all statistical tests. As not every respondent answered all survey questions, all percentages reported are relative, in accordance with Wildemuth (2017).

5.4 INTERVIEWS

Interviews followed the survey and expanded upon questions asked in the online survey. The following sections outline how interview participants were recruited, how the interview questions were designed, the procedures for interviews, and how the results were analysed. (See *Appendices 9.5* for interview questions *and 9.6* for an example of coded interview notes.) Information about the participants is discussed in *5.4.2: Sampling Method and Interview Participants* and the findings of the interview analysis can be found in *6.3: Interview Findings*.

5.4.1 INTERVIEW OBJECTIVES

The objectives of the interviews were to gather more insight into how parents perceived violent video games and why they made the decisions they did for their families. Interview questions regarding parents' perceptions, decisions, and concerns were derived from the first three research questions. Furthermore, whereas the survey asked two questions about the COVID-19 pandemic and quarantine and its potential effect on violent video game play in participants' homes, interviews discussed this topic at length. Interviews also expanded upon potential sources of information for parents regarding violent video games, which included respected and influential adults and online news platforms.

5.4.2 SAMPLING METHOD AND INTERVIEW PARTICIPANTS

Interview participants consisted of parents who previously responded to the survey and chose to leave their email at the end of the survey. There were 101 survey respondents who expressed interest in being interviewed, 92 of whom typed their email in the last survey question. To reach the target demographic of parents with young school-age children, the first email sent on 15 June 2021 invited parents with children between the ages of five and eight to sign up for an interview. A second email was sent on 28 June 2021 inviting parents with children of any age to participate in an interview. On 9 August 2021, one last email was sent about a final round of interviews to seek more interview participants. The emails included a link to SignUpGenius

(www.signupgenius.com) where parents could self-schedule an interview at a day and time that was convenient. Out of 92 respondents, 24 responded to this follow-up email and scheduled an interview. Six parents cancelled or did not respond to a follow-up email with a consent form attached. One additional parent participated in an interview after their spouse signed up, increasing the number of interview participants. Over a three-month period between June and September 2021, nineteen parents participated in an interview.

Interview participants were not connected to their survey responses, as that data was kept separately. This ensured the privacy of interview participants' previous responses and allowed interviews to begin with no preconceived notions or ideas about the participants' perceptions or decisions.

5.4.3 INTERVIEW DESIGN

Interviews used the Zoom platform to ensure social distancing and safety measures during the COVID-19 pandemic. Using Zoom also removed a location barrier and allowed for parents from any city, state, or country to participate in interviews. Participants needed a phone, tablet, or computer as well as internet access or cell service. Before their interview took place, participants were emailed a consent form that explained the study and interview process (see *Appendix 9.4: Interview Consent*). The consent form had space for two signatures, one allowing the interview to take place and another permitting recording of the interview. Participants were not required to sign the second line consenting to recording, yet all participants did.

5.4.3.1 INTERVIEW CONTENT

Interviews addressed the question of parents' concerns when making decisions about violent video games for their children. They focused on specific household rules surrounding violent video game play and what led parents to make those decisions. Interviews also sought more in-depth answers to the research question four: Has the COVID-19 global pandemic altered parents' perceptions of or decisions about violent video game play?

A list of questions was created and used for interviews, which can be found in *Appendix 9.5: Interview Questions*. Interviews began by asking participants to describe their family, including their role, children's ages, and

any other information they wanted to offer. They were then asked about their children's video game playing habits, including the games they played and how often they played. After discussing any rules they had regarding violent video games for their children, participants explained how they came to those rules. Participants reminisced on their own childhood experiences with video games, told stories about family members' children playing video games, and information they had seen on the internet about screen time for children. They were asked what their personal feelings were about violent video games for children. Participants were presented with the scenario of their child asking to play a game about which they knew nothing and were asked how they would proceed. Interviews also delved into the COVID-19 pandemic, following up on a survey question about whether it affected their child's violent video game habits. Participants were also asked about their child's violent video game usage both before and during quarantine and if it changed any of their perceptions or decisions regarding violent video games. The last questions revolved around media headlines and what interview participants had seen on social media, in the news, or on the internet regarding violent video games. Interviews concluded with participants being asked if they had any additional comments.

5.4.3.2 INTERVIEW STRUCTURE

The interviews used a *responsive interviewing* technique, where the interviewer learns and adapts as the interviewees tell their stories (H. J. Rubin & Rubin, 2011). The interviews were as organic as possible, allowing the participant to talk and explain what they felt was relevant. The interview participants were seen as conversational partners who shared their stories with the interviewer because they felt trusted and understood (H. J. Rubin & Rubin, 2011). Ensuring that interviewees were comfortable and honest was an important and necessary part of conducting interviews for this study. As Seidman (2006) notes, "at the heart of interviewing research is an interest in other individuals' stories because they are of worth" (p. 9).

Although there was a set of interview questions for the interviews, the questions were not always asked in the same order, not all questions were asked at each interview, and other non-anticipated questions were often

asked. Participants were reminded that they could skip a question or stop the interview at any time. This method enabled the interview participant to talk freely while remaining on the topic of violent video game play in their homes. Additionally, it allowed for similar topics of interest to be explored whenever relevant (V. Wilson, 2012). Dilley (2000) supposed that interviewers should be “cognizant of time—to make judgements on whether to stray from protocol or stick to it” (p. 134). Responsive interviewing lends itself to this idea of respecting the interview participants’ time. Each interview lasted from 45 minutes to an hour and a half, depending on the participants’ comfort, experience with violent video game play, and interest level, as some gave short answers while others were more loquacious offered more comprehensive responses.

5.4.4 INTERVIEW PROCEDURES

Once a participant signed up for an interview time slot, they received another email from the researcher. This email included their personalized Zoom meeting link with the date and time. It also contained a PDF version of a consent form for the interview. Participants were instructed to either digitally sign the form or to print, scan, and email it back before the scheduled interview time. In the first email to potential participants, they were invited to take part in an in-person interview if they preferred, but no parents chose that option. For consistency, that option was not offered for subsequent interviews. Therefore, all interviews were conducted in a virtual environment using the Zoom platform. This online interview method also allowed for follow-up questions and a means to record the interviews (Driscoll, 2010). Before receiving a link to a Zoom meeting, informed consent was obtained from participants, and before proceeding with interview questions, participants received a message on their screen about the meeting being recorded. Once they clicked “agree to stay in the meeting,” the interview officially began.

Considering that some interview participants may not be comfortable with a face-to-face conversation, video was not required during the Zoom interviews. Participants chose whether or not to utilise the camera on their device for their virtual interview. This permitted interview participants to partake in the interviews according to their level of comfort. One advantage of

conducting interviews with cameras on was “the ability to see facial expressions and body language” (V. Wilson, 2012, p. 96). Dilley (2000) recommended that interviewers should aim to listen 80 percent of the time during the interview. Since listening “necessitates eye contact, understanding body language, and active mental consideration of both the content (words) and context (emotions) of what is being said, and not being said” (Dilley, 2000, p. 134) being able to see interview participants, even on a screen, was beneficial to the interview process. Only one interview participant turned their camera off, as they were in a public location at the time of the interview.

5.4.5 INTERVIEW ANALYSIS

Denscombe (2010) describes qualitative data analysis as being an iterative, inductive, and researcher-centred process. Analysis is iterative in that it is a process that evolves in phases, and it is inductive, moving from the specific to the general. As interviews progressed, common themes were noticed by the researcher, confirmed by notes, and later reiterated by reading the interview transcripts and listening to the audio. During the interviews, hand-written notes were taken as an informal recording of the conversation. All interview participants also consented to recording their interview, which provided both an audio-video recording and a written transcript. The interview notes, recordings, and transcripts were analysed using interpretive phenomenological analysis (Braun & Clarke, 2021). Employing this strategy, the first focus of interview analysis was the personal experience of each parent and then themes were developed across the interviews. Interpretive phenomenological analysis “sheds light on experiences as they are lived...[and] grasp the qualities of an experience as it is lived by an experiencing subject” (Eatough & Smith, 2017, p. 3). This was particularly relevant when listening to interview participants discuss the impact of COVID-19 on their child’s video game play. It was important to fully understand participants’ experiences during periods of lockdown and how they viewed those experiences rather than relying only on factual information about COVID-19 lockdowns, which was accomplished by interpretive phenomenological analysis (Eatough & Smith, 2017).

The hand-written interview notes were typed up and color-coded according to key words and themes in interview participants' responses. The themes found in the notes were coded as: not my kid, parent involvement, depends on my kid, scary, sexual themes, neurodiverse, benefits, language/cursing, definition of violent, decisions, strangers, COVID, ratings, and media. (See *Appendix 9.6* for an example of this process.) In accordance with Denscombe (2010), the written transcripts were consulted to verify the accuracy of the notes and to select direct quotes from the interview participants. Then the audio-video recordings were used to clarify any errors or confusions in the notes or transcript during analysis. Since "people do not always speak in nice finite sentences...the raw data [got] cleaned up...so they [could] be intelligible to a readership who were not present at the time of the recording" (Denscombe, 2010, p. 292).

5.5 MEDIA CONTENT ANALYSIS

Many interview participants responded that they did not remember seeing much on the internet in the past year, but that they did search online for information pertaining to specific games their children asked to play. Given that both survey respondents and interview participants declared searching the internet for advice, it was pertinent to know what parents would see online if they performed these searches or saw news articles in their social media feeds or online news sources. To conduct a content analysis, one must follow six steps: 1. choose an appropriate sample, 2. break down the text into smaller units, 3. develop relevant categories, 4. code the units of text, 5. count the frequency in each category, and 6. analyse the frequency within and across each category (Denscombe, 2010). The following sections explain how these steps were followed for this study.

5.5.1 MEDIA CONTENT ANALYSIS OBJECTIVES

Objectives of the media content analysis encompassed investigating what information parents would have been able to view online during the time of this study. The analysis included coding the articles by both content and sentiment to ascertain what information was posted online. As the purpose of a content

analysis is to look for a hidden message (Denscombe, 2010), this analysis revealed how the media viewed violent video games during the time of this study.

5.5.2 MEDIA CONTENT ANALYSIS PROCEDURES

NexisUni, the academic research database of LexisNexis, was utilised to locate articles posted online. *NexisUni* is used by many other studies that employed content analysis as a research method (Ford et al., 2020). *NexisUni* was accessed online through the University of Central Oklahoma's library. The search timeframe was one calendar year during which this study was conducted, beginning on 1 October 2020, 6 months before the survey was published live online in March 2021. This time frame also included the interview period, June to September 2021. Because survey and interview participants were asked about current media headlines, articles that were published a few months before and also during the time of the study were relevant to their responses.

The search was narrowed to search only newspapers, web-based publications, or news reports. Since most of the survey and interview participants lived in the United States, 91.2% and 94.7% respectively, the search only included publications from the United States. This would give a more accurate representation of what parents in this study would find when searching online for information about violent video games. All the research participants spoke English, and the survey and interviews were both conducted in English, so the search was then filtered to only include articles written in English. Without a translator, non-English articles could not have been analysed, nor would they have been read by English-speaking participants. Additionally, the search was set to exclude duplicates to filter out multiple copies of the same article.

NexisUni searched the headlines of articles posted on the internet between 1 October 2020 and 30 September 2021 for "video game" or "computer game" and "children." Finalizing the keyword terms was a process that included many previous searches. (See *Appendix 9.7: Content Analysis Searches* for a full list of results from previous searches.) Among other combinations, one initial search included "violent video games" and "children."

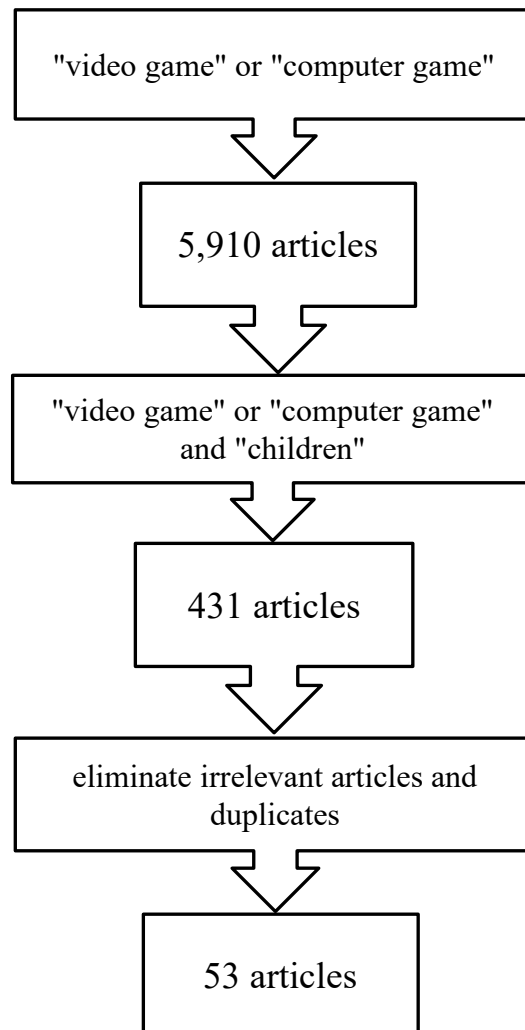
That search only returned ten relevant articles, which was too small of a sample. The search was then expanded by using the words “video games” or “computer games” and “violent” or “shoot” or “kill” instead of “violent video games.” This search returned 2,250 articles; adding “and children” to this search narrowed results to 506 articles. Searching for the keyword phrases “video games” and “children” resulted in returning only 218 articles, yet it was determined that 218 was also not a large enough database from which to draw conclusions. The McKernan (2013) study discussed in *2.8 Media Narrative* examined video game coverage in *The New York Times* from 1980-2009. Utilising the same methods to evaluate news articles in 2020-2021 enabled this study to continue previous research in the field. Building upon the terminology he used, this study replicated his research to include children. The identical terms, “video game” or “computer game,” were employed as keywords for the year of the data collection for this study. Having done this, NexisUni returned 5,910 results. This study focused on children, so including the word “children” in the search was pertinent. Adding “and children” to the search criteria narrowed the results to 431 relevant articles.

The NexisUni results were exported to Excel with hyperlinks to the articles. Columns labelled Headline, Publication, and Date were automatically included. The first three additional columns added to the spreadsheet were labelled: Summary, Not Applicable and Duplicate. When using content analysis as a research method, “inappropriate records...should be discarded, but a record should be kept of the reasons” (Krippendorff, 1980; as cited in (Stemler, 2001, p. 1). In accordance with this recommendation, articles in the NexisUni results not mentioning “video games” or “computer games” were excluded from final analysis. It was determined that these articles would not have attracted the attention of parents looking for articles about violent video games. There were 370 articles in the results that were not directly about video games or computer games. All the articles in the results list from numbers 191 through 431 were considered irrelevant to the purpose of this study, as they were summary reports from news briefings that did not contain content from the articles mentioned. Although the NexisUni search was set to exclude duplicate articles, eight remained in the results list. Those were also excluded.

After excluding articles that were irrelevant and duplicate, the remaining 53 articles were coded and analysed. **Figure 5.3** below illustrates the process.

Figure 5.3

Media Content Analysis Process



5.5.3 MEDIA CONTENT ANALYSIS METHODS

As discussed in *5.1 Media Content Analysis*, after choosing the sample for a content analysis, the next steps include breaking down the text, developing the categories, coding the sample, and counting and analysing the sample according to the chosen categories. The articles were categorised in two ways, by sentiment in accordance with Liu (2017) and by theme with guidance from Braun and Clarke (2006, 2021). Then the articles were coded, counted, and

analysed using both sentiment and thematic analyses, as explained in the following sections.

5.5.3.1 SENTIMENT ANALYSIS

A sentiment analysis helped determine the media's opinion of video games, as "sentiment is the underlying feeling, attitude, evaluation, or emotion associated with an opinion" (Liu, 2017, p. 15). After reading each article and inputting notes in the added Summary column on the spreadsheet, articles were coded using sentiment analysis as having a *sentiment orientation* of a positive, negative, or neutral position on video games (Liu, 2017). These designations were chosen after also reviewing other studies analysing media content that successfully used this method (Dallimore et al., 2019; Huey & Apollonio, 2018; Krittanawong et al., 2022). Articles that spoke positively about video games, either violent or non-violent, were marked by a "1" in the green "positive" column. In accordance with the sixth task concerning all quintuples of an opinion, articles that had expressed negativity about any aspect of video games were designated as negative for the purposes of this study and received at "1" in the red negative column. Articles that provided information or held no clear opinion of video games were given a "1" in the yellow "neutral" column on the spreadsheet. The spreadsheet was set to calculate the total in each column. A separate spreadsheet was then created for the positive, negative, and neutral article lists. The articles were copied over to their designated spreadsheet for further evaluation by theme, as described in the next section.

5.5.3.2 THEMATIC ANALYSIS

Reviewing the Headline and Summary columns, articles were then coded using keyword analysis and grouped into thematic divisions. Thematic analysis describes your data set and organizes it by "identifying, analysing and reporting patterns (themes) within data" (Braun & Clarke, 2006, p. 79). Using a reflexive thematic analysis approach (Braun & Clarke, 2021), as the articles were assessed and themes became apparent, other columns were added to the spreadsheet. In reflexive thematic analysis, themes "are generated by the researcher through data engagement...[and]...the coding process is unstructured" (Braun & Clarke, 2021, p. 39). At first, data was coded by

keywords in the headline only. For those articles with ambiguous headlines, a more comprehensive reading of the article aided in determining the intention of the author. Articles mentioned the following: crime, current events, online safety, desensitization, rating system, COVID-19, China's new law, racism, mental health, and connections. As these themes evolved, it aided in understanding the media's opinion of video games, as is often the outcome of reflexive thematic analysis (Braun & Clarke, 2021).

Excel was set to show an automatic running total of the number of articles in each column. Once all articles had been examined, the final numbers were used to create graphs (see *6.4 Media Content Analysis Findings*) for a visual depiction of the media narrative.

5.6 ETHICAL CONCERNS AND PARTICIPANTS' INFORMED CONSENT

Both the Institutional Review Board at the University of Central Oklahoma and the Swansea University College of Arts and Humanities Ethics Board approved this research. This study began as an inquiry into the effect of violent video games on young children. Surveying and holding conversations with parents allowed for a safe exploration of violent themes children might be experiencing in their video game play. Examining violent video game play with parents provided necessary information and alleviated the ethical issue of directly involving children in the collection of data, thus minimising the risk of harm to any participants.

All participants were required to sign consent forms (Appendices *9.1 Survey Consent* and *9.4 Interview Consent*) before participating in this study via the survey and interviews, as the British Educational Research Association (BERA) (2018) advises that:

...participants' voluntary informed consent to be involved in a study will be obtained at the start of the study...by which participants understand and agree to their participation, and the terms and practicalities of it, without any duress, prior to the research getting underway. (p. 9)

The survey consent form showed on the first page of the survey. Participants were unable to answer the survey without agreeing to the consent information. They were required to click "yes" on the first screen with the consent form

before continuing to the survey questions. If participants clicked “no,” then they received a “thank you” message from Qualtrics on their screen, and the survey was over. The interview consent form included two signature lines for consent; the first line was required to participate, and the second line for audio/visual consent was optional. Signing this second line allowed for the researcher to record the interview using Zoom’s recording feature. The form explained that the interview could occur with or without recording. No interviews were conducted without the return of the interview consent form with either one or both consent lines signed.

The consent forms described the purpose of the research, the procedures, expected length of participation, potential benefits and risks or discomforts, researcher and university contact information, explanation of confidentiality, and assurance of voluntary participation. Participants were assured that the study provided no harm beyond any other situation where one learns and grows. BERA also declares that participants:

...should be told why their participation is necessary, what they will be asked to do, what will happen to the information they provide, how that information will be used and how and to whom it will be reported. They also should be informed about the retention, sharing and any possible secondary uses of the research data. (BERA, 2018, p. 9)

Participants’ data was protected in multiple ways, all of which was explained to participants on the survey and interview consent forms. In the explanation of confidentiality and privacy, the consent forms affirmed that all participation was confidential, responses would remain anonymous, and no direct information would be known or retained by the researcher without further consent. Additionally, no identifying information would be used in the final report. It explained that if a participant chose to include their email address, it would be randomized and kept separate from the survey responses. The interview consent form included additional information concerning confidentiality and privacy. It stated that if any participants’ quotes were used in the final report, pseudonyms would be assigned. It also explained that a Master Code Sheet would be kept organizing the data, with any potential paper data being kept in a locked filing cabinet and electronic data kept on the researcher’s personal computer, which was both fingerprint and password

protected. This section assured participants that all data would be shredded and deleted three years after the conclusion of the study. The only attendees at interviews were the participant and the researcher. If the interview was recorded via Zoom, the researcher was the only one with the password who could view the recording.

BERA's guidelines also state that, "It should be made clear to participants that they can withdraw at any point without needing to provide an explanation" (BERA, 2018, p. 9). Therefore, the consent forms also informed potential participants that all participation was voluntary, and they may withdraw consent and participation at any time. The second line on the interview consent form that asked for audio-visual consent also explained that even if they previously signed the audio-visual consent, participants could withdraw consent for this. All participants gave informed written consent for their participation, and at the beginning of each interview, the researcher verbally reminded each participant that they could choose to not answer any questions or end the interview at any time.

5.7 SUMMARY OF CHAPTER

This study followed a social constructivist paradigm with an explanatory sequential mixed methods research design. A survey was conducted, followed by interviews, which fed into an analysis of media content. Each of the methods utilised for data collection - the survey, interviews, and media content - served a valuable purpose for collecting data. The COVID-19 pandemic affected the course of this research in its planning stages, leading to virtual interviews with added ethical considerations to minimise the risk of harm to participants. Before responding to survey questions or participating in an interview, all participants signed consent forms that informed them of the purpose of this study, their rights as participants, as well as any potential benefits or risks.

6. FINDINGS

6.1 INTRODUCTION

This chapter discusses the results of the survey, interviews, and media content analysis. It begins by discussing survey findings in *6.2: Survey Findings*, as a survey was the first method of data collection. Since the interviews followed the survey, *6.3: Interview Findings* discusses the interview findings. The next section *6.4: Media Content Analysis Findings*, discusses the findings from the content analysis of media that was conducted after the interviews. Each section discusses the findings with relation to the research questions in the order they were presented in *Chapter 3: Research Questions*. The chapter ends by summarizing the key findings from all three methods. Materials included in the Appendices that supported this research study are as follows: Survey Data Tables and Interview Notes Example (*See Appendices 9.3, and 9.6*).

6.2 SURVEY FINDINGS

In total, 509 participants responded to the survey. The data presented in this section will be presented in the order it was asked on the survey, in alignment with the research questions. It will cover parental perceptions of violent video games, ways parents replied that they make decisions regarding violent video game play for their child, the impact of COVID-19 on the gaming habits and decisions of respondents' children, and respondents' view of media headlines. Each subsection includes frequency results from selected questions to help frame the responses in the context of the research questions.

6.2.1 DEMOGRAPHIC INFORMATION ABOUT SURVEY PARTICIPANTS

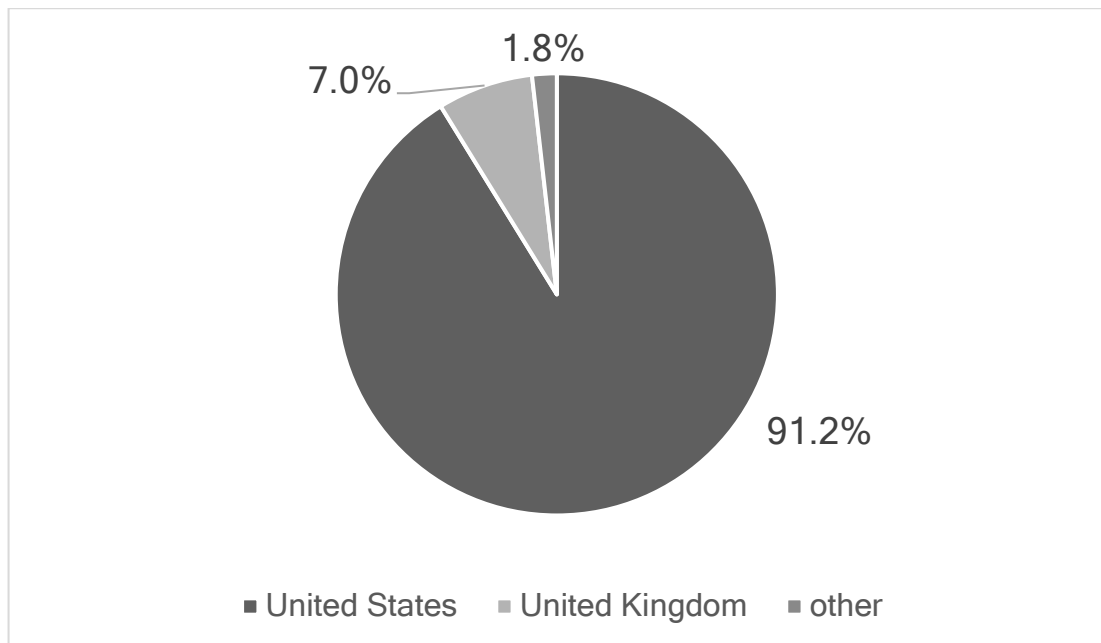
The first six questions in the survey collected demographic information about survey respondents. Questions inquired about respondents' location, age, relationship to their child, age of their youngest school-age child, and their youngest school-age child's position in the family.

Location

The survey received 509 responses, 498 of whom reported their country of residence. Respondents were asked if they lived in the US. If they chose “no,” then they were prompted to type their country of residence. **Figure 6.1** below shows the geographic location of survey respondents.

Figure 6.1

Survey Respondents’ Geographic Location



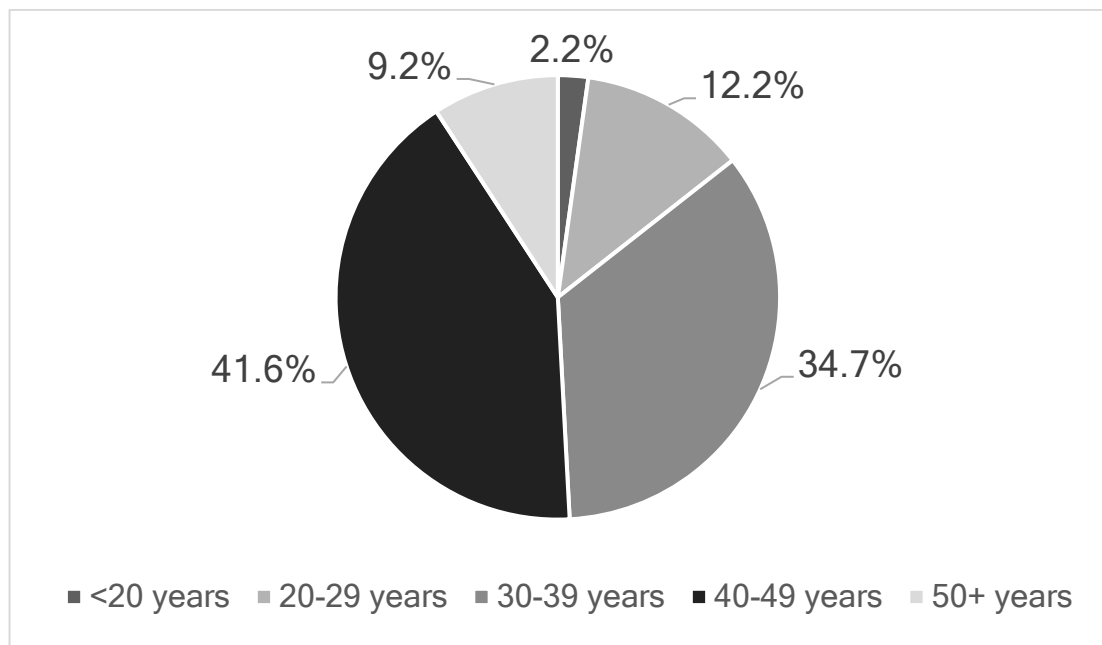
Of the respondents, 454 (91.2%) lived in the United States and 34 (7%) stated that they lived in the United Kingdom (responding with the UK, England, or Wales) while 9 respondents (1.8%) reported other countries of residence: Japan, Portugal, Canada, India, or Germany. Participation relied on opportunity and snowball sampling, and as the primary researcher was based in the United States, it was expected that most responses would come from participants who resided in the US. The 7% of responses from the United Kingdom was also expected, though lower than desired, as the survey was shared on social media by other students at Swansea University. Further investigation into exact location of survey respondents showed that over half (52.5%) of the respondents from the United States lived in Oklahoma, where the primary researcher resided.

Age

Out of 509 respondents, 498 respondents reported their age on the survey. Eleven respondents did not answer the question about their age. **Figure 6.2** below shows the age of survey respondents.

Figure 6.2

Survey Respondents' Age



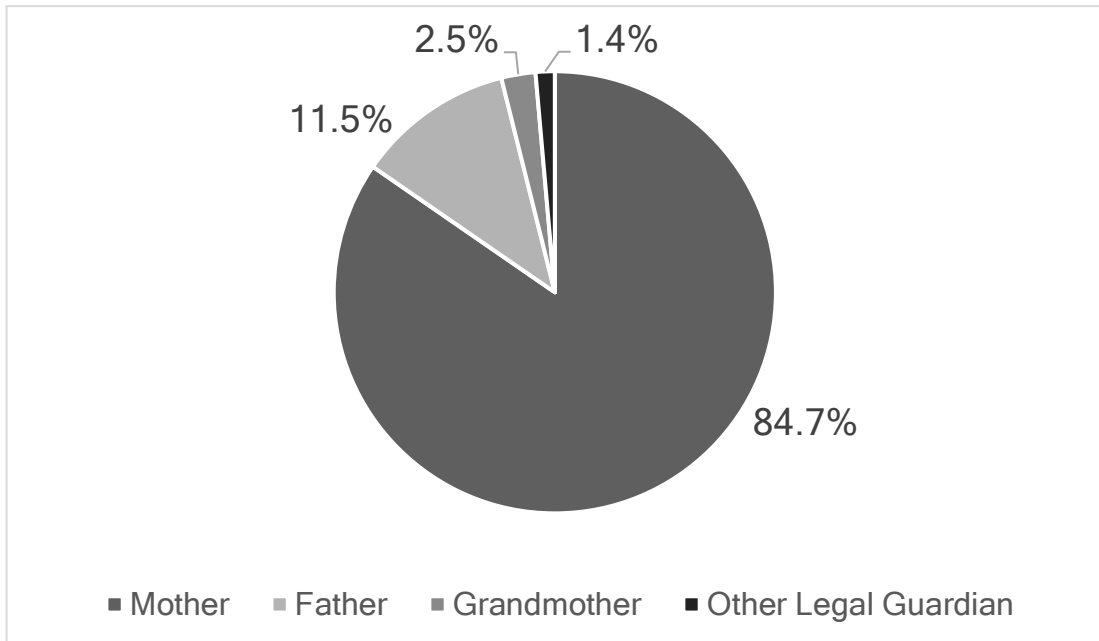
The vast majority (76.3%) of participation in this study was from parents between the ages of 30 and 49. This is not a surprise given that in 2021, the average age of mothers at the birth of their first child is 27.3 years in the United States (Schaeffer & Aragão, 2023) and 30.9 in the United Kingdom and Wales (Office for National Statistics, 2021).

Relationship to the Child

The survey asked respondents about their relationship to the child. Out of 509 responses, 365 chose to answer this question. Respondents could choose mother, father, grandmother, grandfather, or other legal guardian. **Figure 6.3** below shows the relationship of survey respondents to their child.

Figure 6.3

Survey Respondents' Relationship to Child



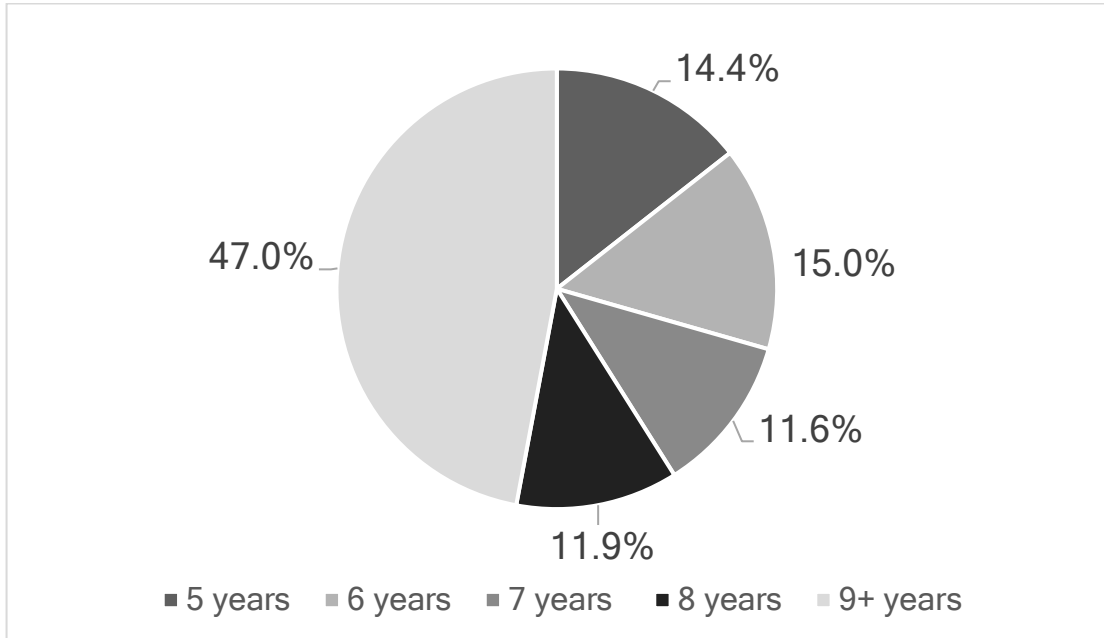
The results show that 84.7% of the respondents identified as their child's mother, 11.5% identified as their father, 2.5% identified as their grandmother, and 1.4% chose "other legal guardian." No respondents chose the option of grandfather. It was expected that most respondents would be mothers, in part because some of the social media groups in which the survey was posted were geared towards mothers (Eastern Momfidence, Deer Creek MOMS, and The Mommy Forum). Mothers are more likely to respond to research about their children, as comparably sized study on COVID-19 and video game use had a similar number of respondents (79.0%) identify as their child's mother (Donati et al., 2021).

Age of Youngest School-age Child

The target of this study was to gather information about parents' decisions regarding violent video game play for their young children. Knowing that survey respondents may have multiple children, respondents were asked to answer questions with respect to their youngest school-age child. Information about infants and toddlers was unnecessary for the aims of this study. **Figure 6.4** depicts the age of respondents' youngest school-age child.

Figure 6.4

Age of Survey Respondents' Youngest School-Age Child



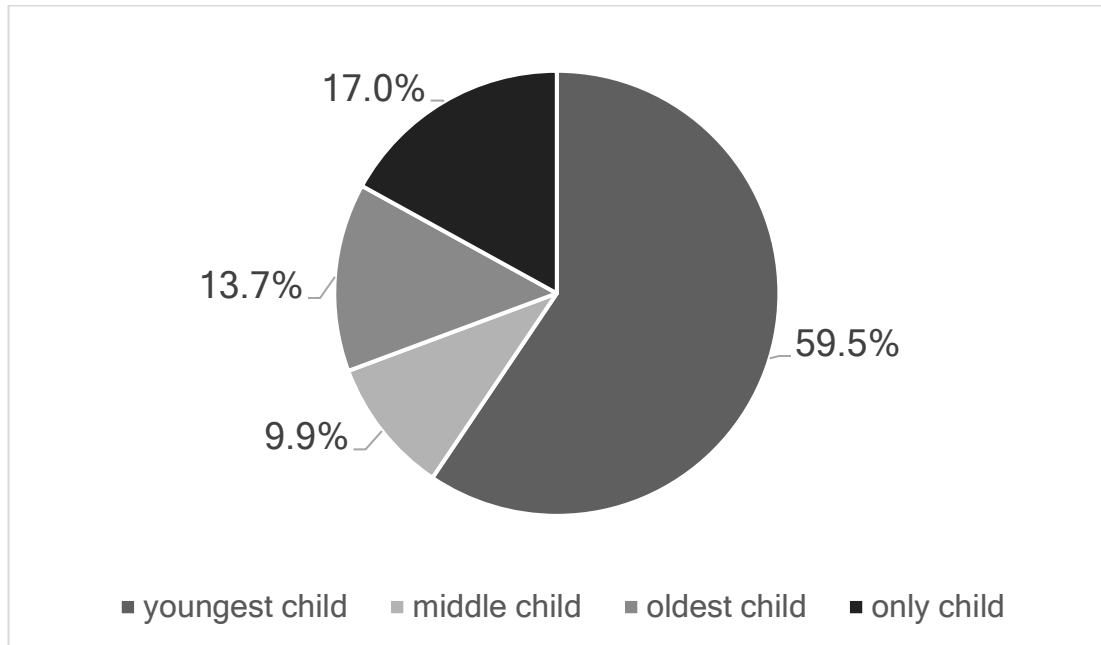
Of the 353 survey respondents who answered the question about the age of their youngest school-aged child, almost half of survey respondents had a youngest child who was nine years old or older. The original target population for this study was parents of young children, but the survey reached parents of children older than eight, expanding the respondent population.

Youngest School-age Child's Position in the Family

There were 365 survey respondents who answered the question about their youngest school-age child's position in the family. **Figure 6.5** below displays the results of that question.

Figure 6.5

Youngest School-Age Child's Position in the Family



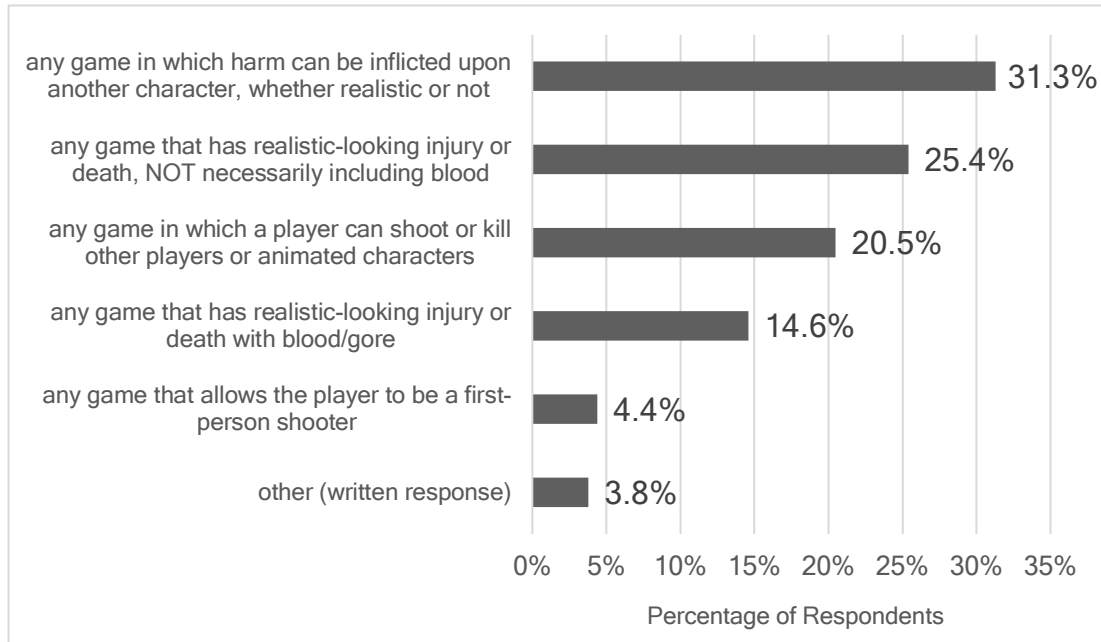
In over half (59.5%) of the survey respondents' families, their youngest school-age child was the youngest child in the family. Only 13.7% of respondents' youngest school-age children were the oldest in their family. It is possible that the decisions parents make for their youngest child were not the same decisions they made for their older children.

6.2.2 PARENTS' DEFINITION OF A VIOLENT VIDEO GAME

To gather information from parents about violent video games, the first question required was to ask what each respondent considered a violent video game. The survey instructed respondents to use their definition of a violent video game for the remainder of the survey. Survey respondents chose from five possible definitions of a violent video game or chose "other" and typed their own definition in the box provided. **Figure 6.6** shows the percentage of survey respondents who chose each potential definition of a violent video game.

Figure 6.6

Survey Respondents' Definition of a Violent Video Game



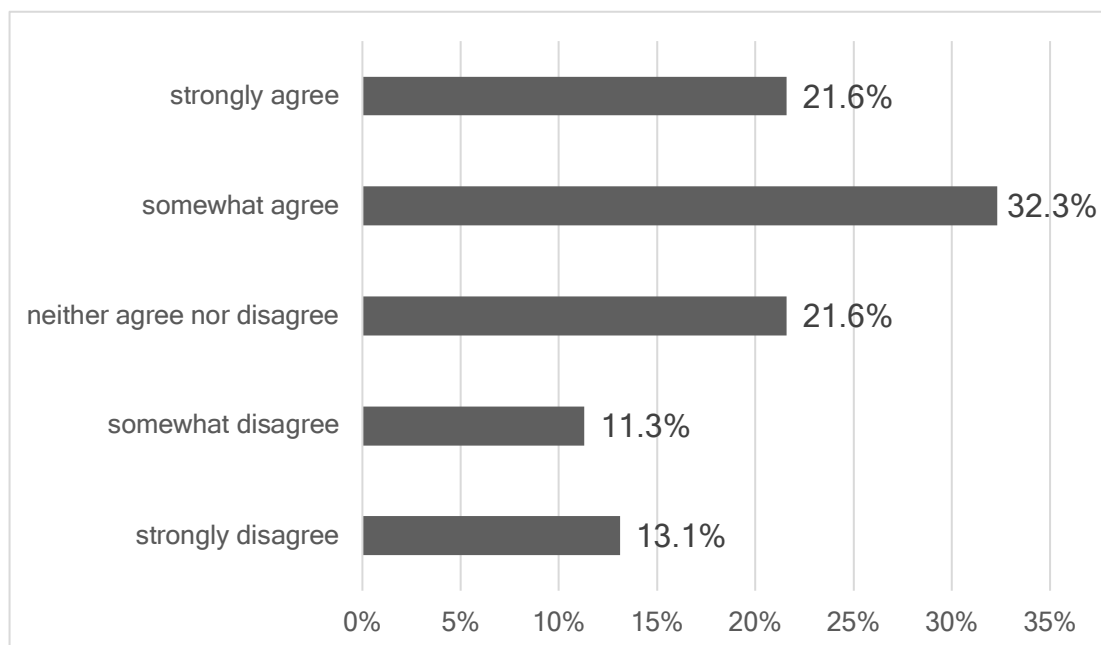
Of the 390 respondents who answered this question, 96.2% chose one of the proposed definitions and 3.8% chose to create their own definition. The definitions written by respondents who chose to create their own varied from “all of the above,” to “none,” with various explanations of physical or mental abuse, rape, blowing up cars, weapons, and celebrating death or injury. The answer, “Any game that uses weapons for realistic looking injury or death with blood/gore, especially against people or real life animals,” was similar to other responses. One respondent referred to rating systems, typing, “I agree with terms above [sic] Video game that is not “G” for general audiences.” Another defined a violent video game as one that contained, “rape, physical/mental abuse.” Some respondents were unsure, evidenced by one response, “I am really not sure,” and then continued to discuss the difference between cartoon and realistic violence in different games. Respondents viewed physical harm as a key component of a violent video game, regardless of if the violence is realistic or involves blood.

6.2.3 PARENTS' PERCEPTIONS OF VIOLENT VIDEO GAMES AND THEIR IMPACT ON CHILDREN

To ascertain survey respondents' opinions of violent video games and their impact on children, they were asked a series of questions. First, survey respondents were asked to choose the degree to which they agreed with the following statement: *Violent video games cause children to exhibit more violent behaviours*. **Figure 6.7** shows the percentage of survey respondents who strongly, agreed, somewhat agreed, neither agreed nor disagreed, strongly agreed, or somewhat agreed with that statement.

Figure 6.7

Survey Responses to the Statement: Violent Video Games Cause Children to Exhibit More Violent Behaviours



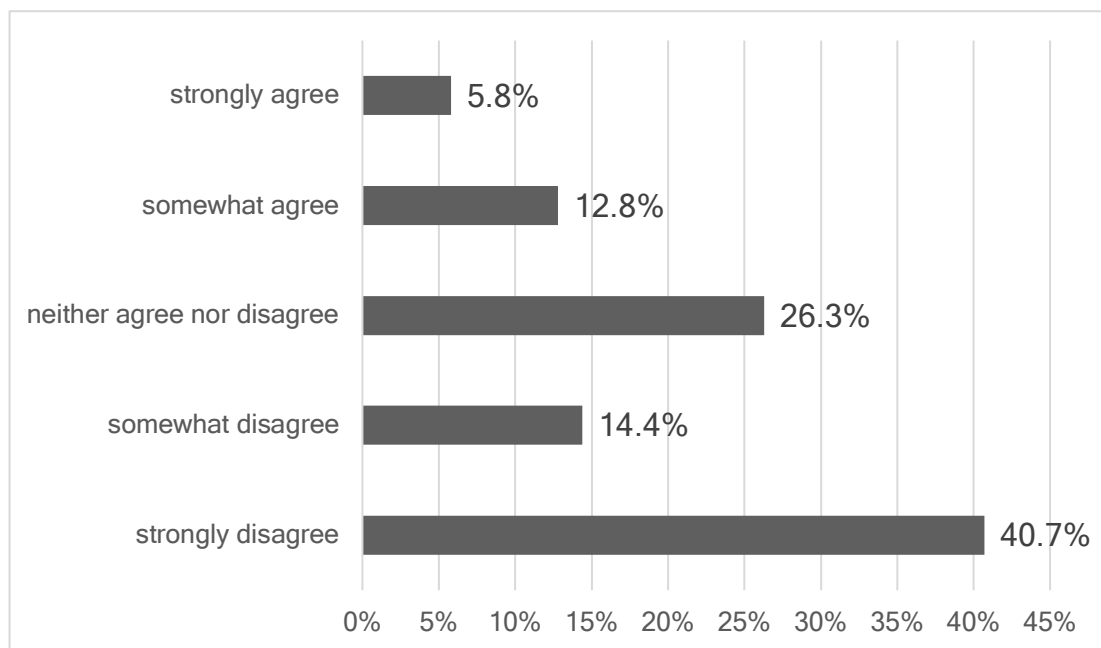
The majority of participants (53.9%) either somewhat agreed or strongly agreed with the statement, with a nearly quarter (24.4%) of participants disagreeing. This suggests that over half of parents believe violent video games negatively affect children's behaviour in that it causes them to act violently.

To apply the above to their context, survey respondents were then asked to choose the degree to which they agreed with the following statement:

Violent video games cause MY child to exhibit more violent behaviours. **Figure 6.8** shows the percentage of survey respondents who strongly, agreed, somewhat agreed, neither agreed nor disagreed, strongly agreed, or somewhat agreed with that statement.

Figure 6.8

Survey Responses to the Statement: Violent Video Games Cause MY Child to Exhibit More Violent Behaviours



Results from this question demonstrate that 18.6% of survey respondents either somewhat or strongly agreed that violent video games caused their child to exhibit violent behaviour. Conversely, 55.1% of survey respondents either somewhat or strongly disagreed that violent video games caused violent behaviour in their own children. Although over half of respondents agreed previously that violent video games caused violent behaviour in children, less than one-fifth of respondents agreed that violent video games caused violent behaviour in their own children. In fact, over half of respondents disagreed that violent video games caused violent behaviour in their own children.

A chi-square test of independence revealed a significant association between how parents responded to the statement, *Violent video games cause children to exhibit more violent behaviours* and how they responded to the

statement *Violent video games cause MY child to exhibit more violent behaviours*. The relation between these variables was significant, $X^2(16) = 155.115$, $p < .001$. The Kendall's tau-c test determined that there was a positive correlation between those two statements: $\tau_c = .411$, $p = .000$. Therefore, we can state that parents who strongly agreed with the statement *Violent video games cause children to exhibit more violent behaviours* were more likely to strongly agree that *Violent video games cause MY child to exhibit more violent behaviours*. Additionally, parents who strongly disagreed with the statement *Violent video games cause children to exhibit more violent behaviours* were more likely to strongly disagree that *Violent video games cause MY child to exhibit more violent behaviours*. **Figure 6.9** shows the results of the correlation between the two variables.

Figure 6.9

Correlation Between Survey Respondents' Responses to Violent Video Games Cause Children to Exhibit More Violent Behaviours and Violent Video Games Cause MY Child to Exhibit More Violent Behaviours

Violent video games cause MY child to exhibit more violent behaviours.

		Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Violent video games cause children to exhibit more violent behaviours.	Strongly agree	78.9%	38.1%	18.8%	14.9%	12.9%
	Somewhat agree	15.8%	52.4%	41.2%	36.2%	19.7%
	Neither agree nor disagree	5.3%	9.5%	37.6%	21.3%	18.2%
	Somewhat disagree	0.0%	0.0%	2.4%	25.5%	17.4%
	Strongly disagree	0.0%	0.0%	0.0%	2.1%	31.8%

This shows that parents who are of the mindset that violent video games are harmful are more likely to believe they will harm their own children, and the opposite is also true. However, it is interesting to note that as seen in **Figure 6.7.** and **Figure 6.8,** although 53.9% of respondents agreed that violent video games caused violent behaviour in children, only 18.6% agreed that violent video games caused violent behaviour in their own children. In fact, 27.8% of parents who somewhat or strongly agreed with the first statement somewhat or strongly disagreed that violent video games caused their child to exhibit

violent behaviours. Additionally, 55.9% of parents who agreed that violent video games caused violent behaviour in children somewhat or strongly disagreed that it caused violent behaviour in their own children.

6.2.4 PARENTS' DECISIONS ABOUT VIDEO GAMES

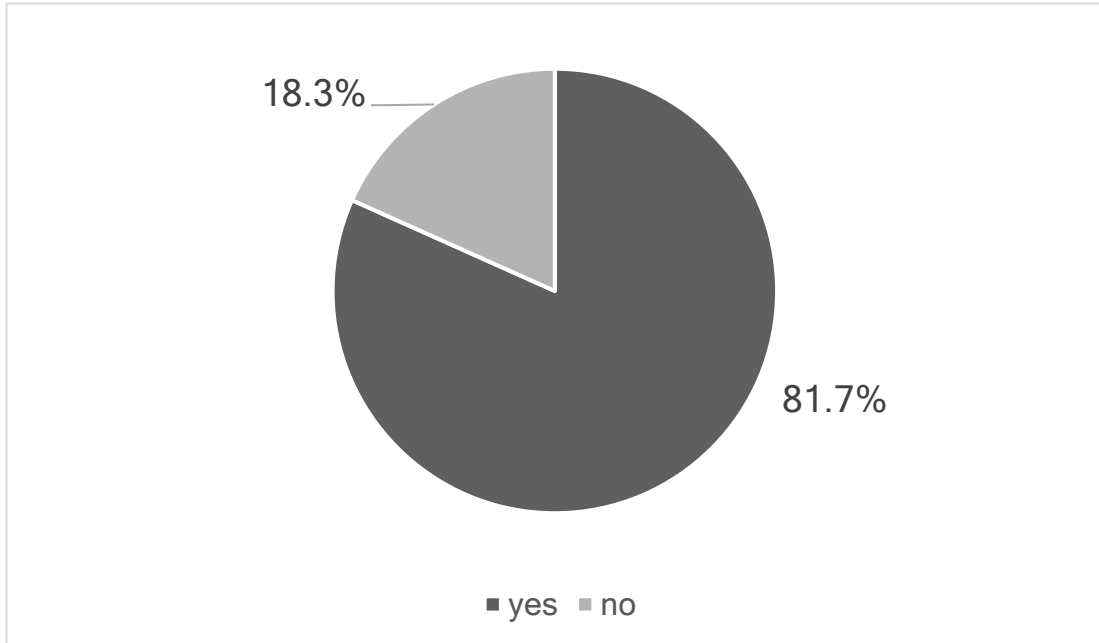
This section discusses data from the survey regarding how parents make decisions about video games for their children. Survey respondents answered questions about whether they set limits on their child's video game playing time and their violent video game playing time. The survey also inquired about respondents' knowledge of video game rating systems, their childhood experiences playing video games, whether they've bought games above the recommended age level for their child, and where they look for information to help make these decisions.

6.2.4.1 SETTING LIMITS ON VIDEO GAME TIME

Of the 509 respondents, 327 chose to answer the question: *Do you place limits on the amount of time your child can spend playing video games?* The details of the data can be seen in **Figure 6.10**.

Figure 6.10

The Percentage of Survey Respondents Who Placed Limits on the Amount of Time Their Child Played Video Games

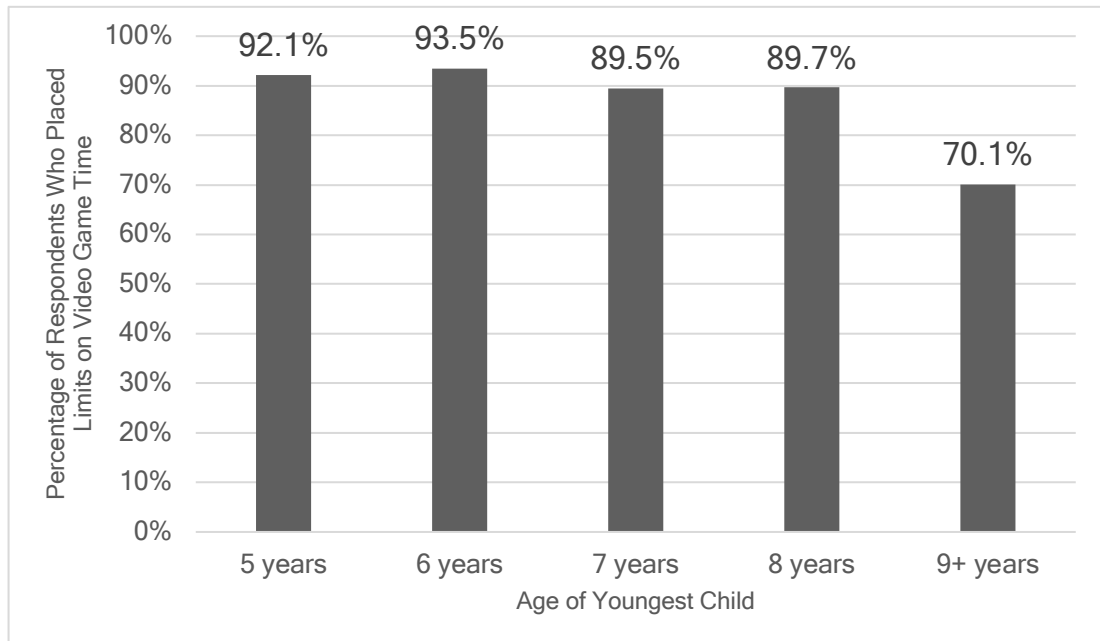


Of those 327 respondents, 81.7% replied that they imposed limits on their child's video game playing time, and 18.3% replied that they did not impose limits on their child's video game playing time. The majority of survey respondents did impose limits on their child's video game playing time.

A chi-square test of independence revealed a significant association between the age of their youngest school-age child and whether they set limits on their child's video game playing time: $X^2(4) = 23.188, p < .001$. The Kendall's tau-c test determined a positive relationship between the age of the respondent's youngest school-age child and whether they set limits on their child's video game playing time: $\tau_c = .219, p < .001$. **Figure 6.11** shows the relationship between those two variables.

Figure 6.11

The Percentage of Survey Respondents Who Placed Limits on the Amount of Time their Child Played Video Games by Age of Their Youngest School-Age Child



This graph shows that parents are more likely to place limits on their child's video game playing time if they are younger. Of parents of children who were five to eight years old, 89.5% to 93.5% responded that they placed limits on their child's video game playing time, whereas that number decreased by 19.6 percentage points to 70.1% for parents whose child was nine years old or older. In contrast, there was only a 4.8 percentage point difference between children ages five, six, seven, and eight. As this stated and as might be expected, the younger the child, the more parents were likely to limit their time on video games.

To see if the data varied between different demographic groups cross-tabulation tests were then run to compare survey respondents' answers to other questions with if they placed limits on the amount of time their child played video games. A chi-square test of independence revealed there was no significant difference between mothers, fathers, grandmothers, or other legal guardians as to whether they set limits on their child's video game time. It can therefore be suggested that the relationship to the child played no role

in if children had limits placed on their gaming time, however this was not the case for all demographic information. A chi-square test of independence revealed a significant association between survey respondents who lived in the United States and those who lived in another country and whether they set limits on the amount of time their child played video games: $\chi^2(1) = 4.423, p = .035$. Survey respondents who lived outside the United States were slightly less likely to report that they did not place limits on the amount of time their child spent playing video games and more likely to report that they did not place limits on the amount of time their child spent playing video games. **Figure 6.12** shows the relationship between those two variables.

Figure 6.12

Survey Respondents Who Placed Limits on the Amount of Time Their Child Played Video Games by Geographic Location

	Placed Limits on the Amount of Time Their Child Played Video Games	Did <u>Not</u> Place Limits on the Amount of Time Their Child Played Video Games
Lived in the US	83.1%	16.9%
Lived outside the US	67.7%	32.2%

This shows that 83.1% of parents who resided in the US placed limited on their child's time spent playing video games, compared to 67.7% of parents who lived outside the US. This is a potentially interesting finding, but with 91.2% of respondents living in the US, this finding requires further investigation to determine if the difference between US parents and non-US parents is valid.

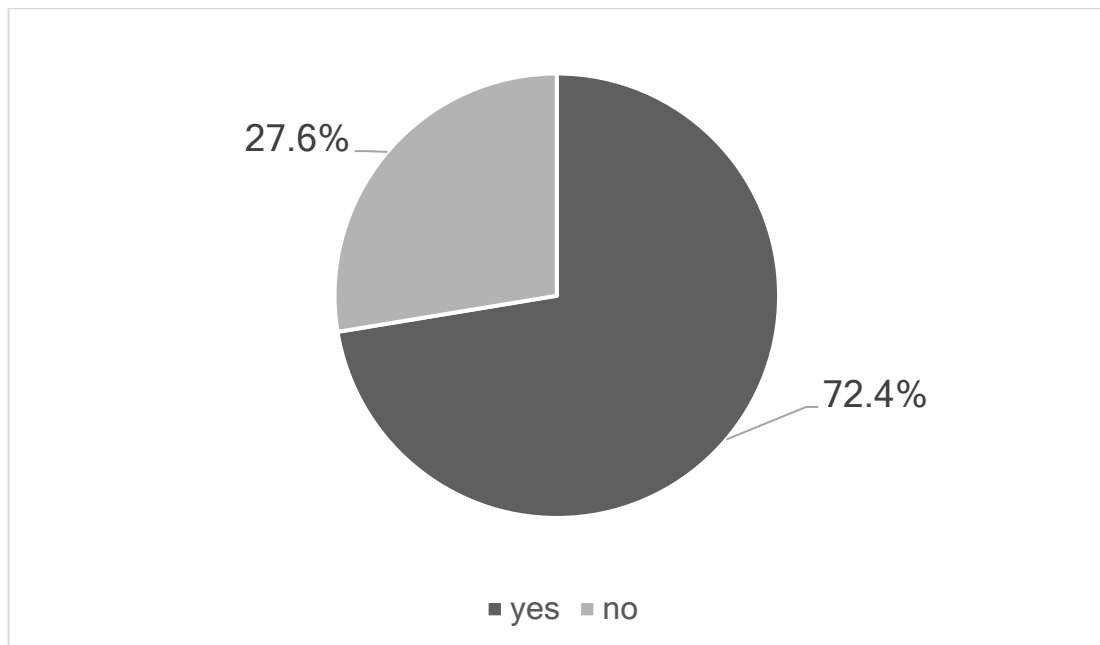
6.2.4.2 SETTING LIMITS ON VIOLENT VIDEO GAME TIME

After inquiring about setting limits on video game playing time in their home, the survey asked the same question about violent video game playing time. This helped determine if there was a difference between how parents made

decisions for video games depending on their violent content. Of the 509 respondents, 323 chose to answer the question: *Do you place limits on the amount of time your child can spend playing violent video games?* **Figure 6.13** below shows the results of that question.

Figure 6.13

The Percentage of Survey Respondents Who Placed Limits on the Amount of Time Their Child Played Violent Video Games



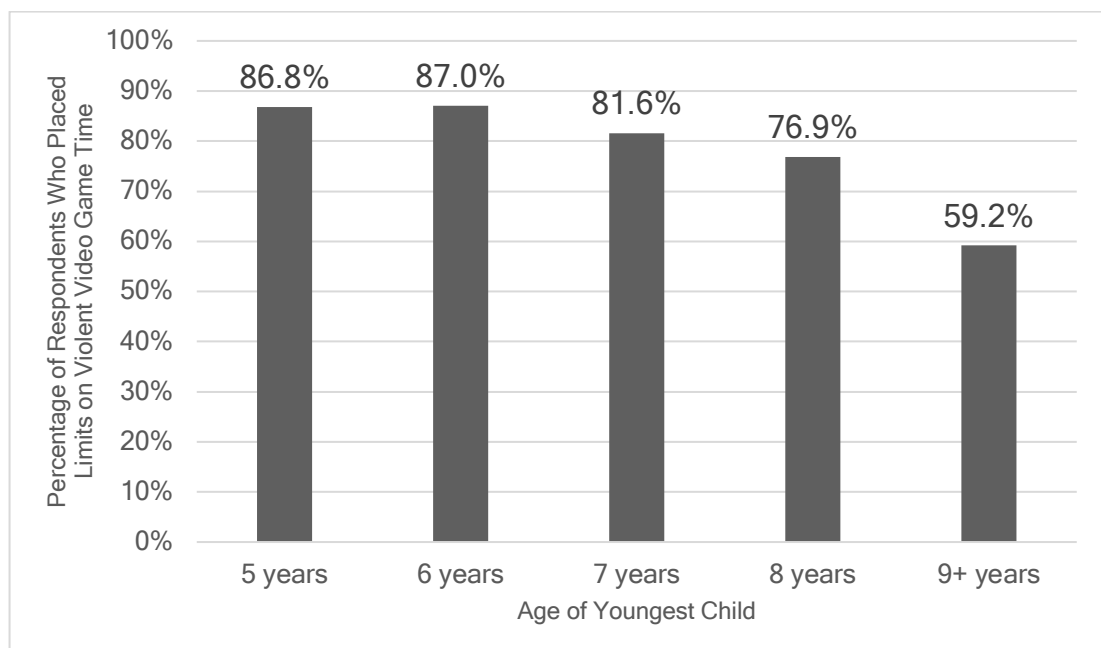
Of those 323 respondents, 72.4% replied that they imposed limits on their child's violent video game playing time, and 27.6% replied that they did not impose limits on their child's violent video game playing time.

To determine if a child's age and whether a parent placed limits on their violent video game time were related, a cross-tabulation was run between the two variables. A chi-square test of independence revealed a significant association between the age of a parent's youngest school-age child and whether they placed limits on their child's violent video game time: $X^2(4) = 23.537, p < .001$. The Kendall's tau-c test determined a positive relationship between the age of a child and whether a parent placed limits on their video game time: $\tau_c = .263, p < .001$. If their youngest school-age child was five, six, seven, or eight, parents were more likely to set limits on their child's violent

video game playing time, ranging from 76.9% to 87%. If their youngest school-age child was nine or older, parents were less likely (59.2%) to set limits on their child's violent video game playing time. **Figure 6.14** shows the relationship between those two variables.

Figure 6.14

The Percentage of Survey Respondents Who Placed Limits on the Amount of Time Their Child Played Violent Video Games and Age of Their Youngest School-Age Child

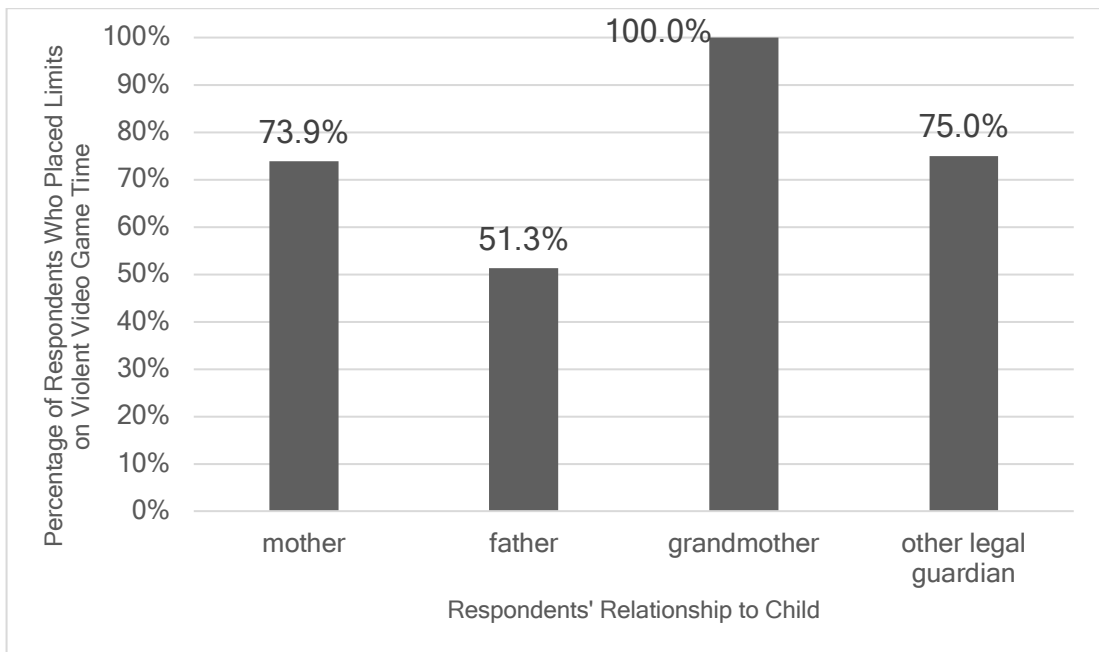


As with placing limits on video game playing time in general, this graph also shows that parents are more likely to place limits on their child's video game playing time if they are younger. Of parents of children who were five to eight years old, 86.8% to 76.9% responded that they placed limits on their child's violent video game playing time, whereas that number dropped over 17 percentage points to 59.2% for parents whose child was nine years old or older. The two questions about limiting video game playing time have shown that the younger the child, the more likely parents were to limit their time on both video games and violent video games. Both tests also showed a rapid decrease in placing limits once a child was nine years old.

To establish if a respondent's relationship to their child affected whether they placed limits on their violent video game time, a cross-tabulation was run between the two variables. **Figure 6.15** shows the correlation between those factors.

Figure 6.15

Survey Respondents Who Placed Limits on Violent Video Game Time and Their Relationship to the Child



A chi-square test of independence revealed a significant association between a survey respondent's relationship to the child and whether they set limits on the child's violent video game time: $X^2(3) = 12.228$, $p = .007$. There were 37.5% of the cells that had an expected count of less than five, so the Fisher-Freeman-Halton exact test was run. The results of the Fisher-Freeman-Halton exact test ($p = .005$) indicate a significant association between a respondent's relationship to their child and whether they placed limits on their child's violent video game time. Mothers (73.9%), grandmothers (100.0%), and other legal guardians (75.0%) were all more likely to set limits on their child's violent video game time than fathers (51.3%).

Cross-tabulation tests were also run to compare survey respondents' answers to other questions with placing limits on the amount of time their child

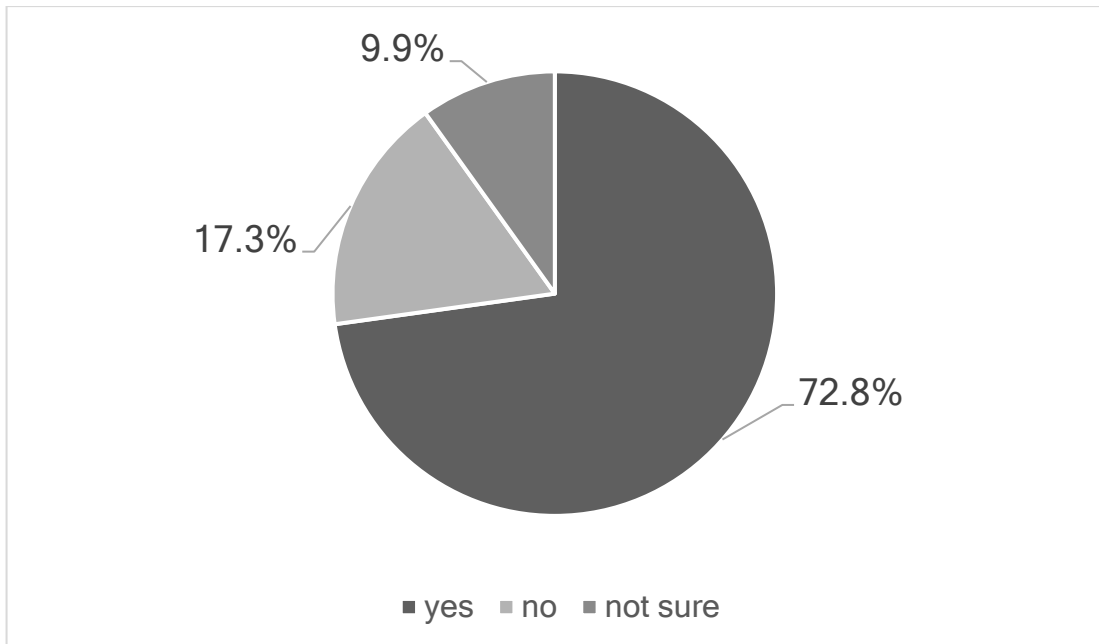
played violent video games. A chi-square test of independence revealed that there was no significant difference between parents who lived in the United States and those who lived in another country and whether they set limits on their child's violent video game time. It was previously determined that parents in the US placed more limits on their child's video game playing time, so it is unclear why there was not a difference for violent video game playing time. It is possible that respondents did not make a distinction between violent and nonviolent video game time. There was also no significant difference in limiting violent video game playing time between respondents whose youngest child was male or female. Gender did not appear to be a factor in respondents' decisions.

6.2.4.3 KNOWLEDGE OF THE VIDEO GAME RATING SYSTEMS AND THE RATINGS OF THEIR CHILD'S GAMES

One of the factors parents may have used when making decisions for their children is a video game rating system, the ESRB in the United States, or the PEGI in the United Kingdom, for example. Before asking survey respondents if they employed video game ratings, it was necessary to know if they were aware of video game rating systems. **Figure 6.16** shows the percentage of respondents who answered *yes*, *no*, and *not sure*.

Figure 6.16

Survey Respondents' Knowledge of Video Game Rating Systems

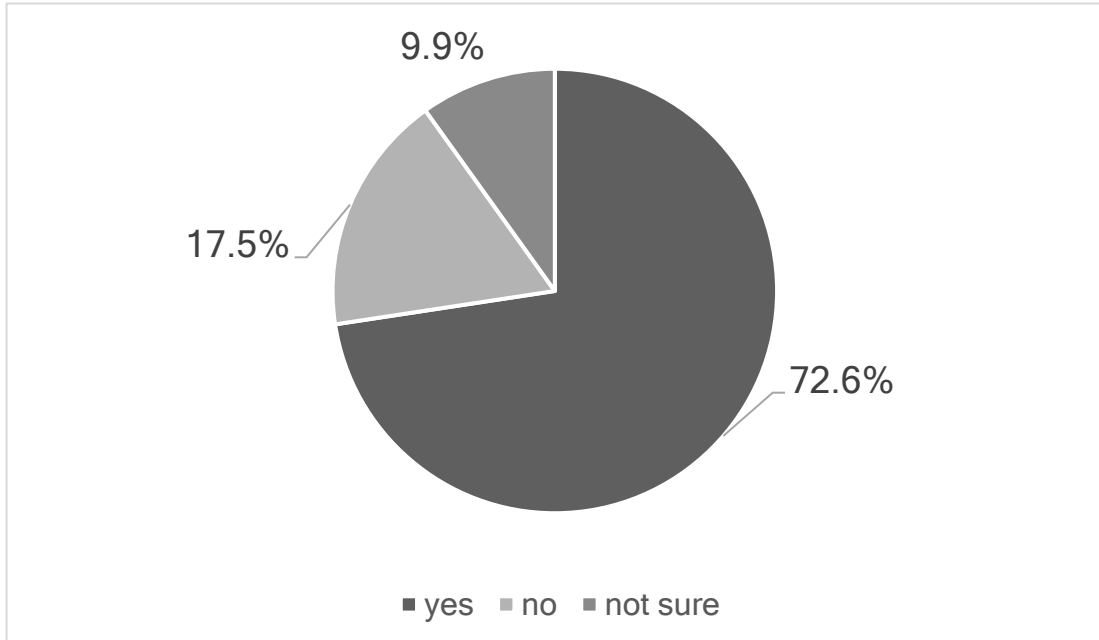


Of the 335 survey respondents who answered the question: *Do you know about the rating systems used for video games? (i.e. the ESRB in the US)*, nearly three-quarters (72.8%) of respondents answered “yes.”

Since most survey respondents lived in the United States, responses were then separated into those who did and did not live in the US to see if there was a difference in knowledge between countries of their respective ratings systems. Of those 335 respondents, 303 lived in the United States. **Figure 6.17** shows the percentages of respondents in the US who answered yes, no, and not sure.

Figure 6.17

Survey Respondents in the US and Their Knowledge of Video Game Rating Systems

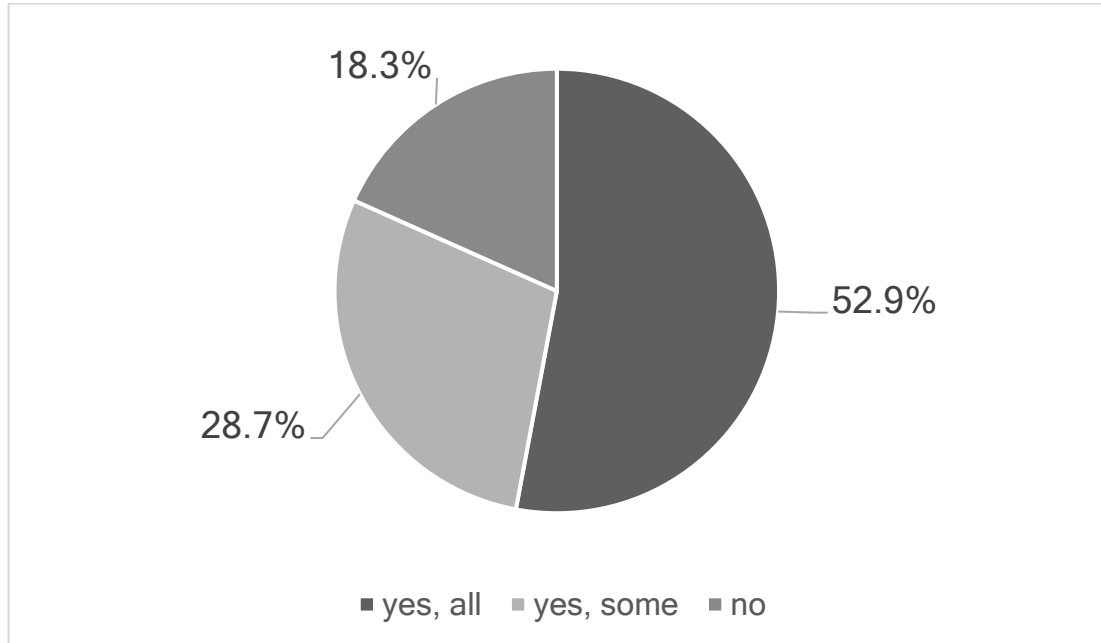


The percentages of those knowledgeable about rating systems who lived in the US were nearly identical to the responses of all respondents, with 72.8% of all respondents and 72.6% of US respondents aware of video game rating systems. There was no significant association between whether parents were aware of video game rating systems and their geographical location, either living in the US or outside of the US.

To get a picture of how many parents considered video game ratings when choosing what games their children were permitted to play, survey respondents were then asked if they knew the ratings of their own child's video games. **Figure 6.18** shows the percentages of parents who answered that they knew either *all*, *some*, or *no* to whether they knew the ratings of their child's video games.

Figure 6.18

Percentage of Survey Respondents Who Knew the Ratings of Their Child's Video Games

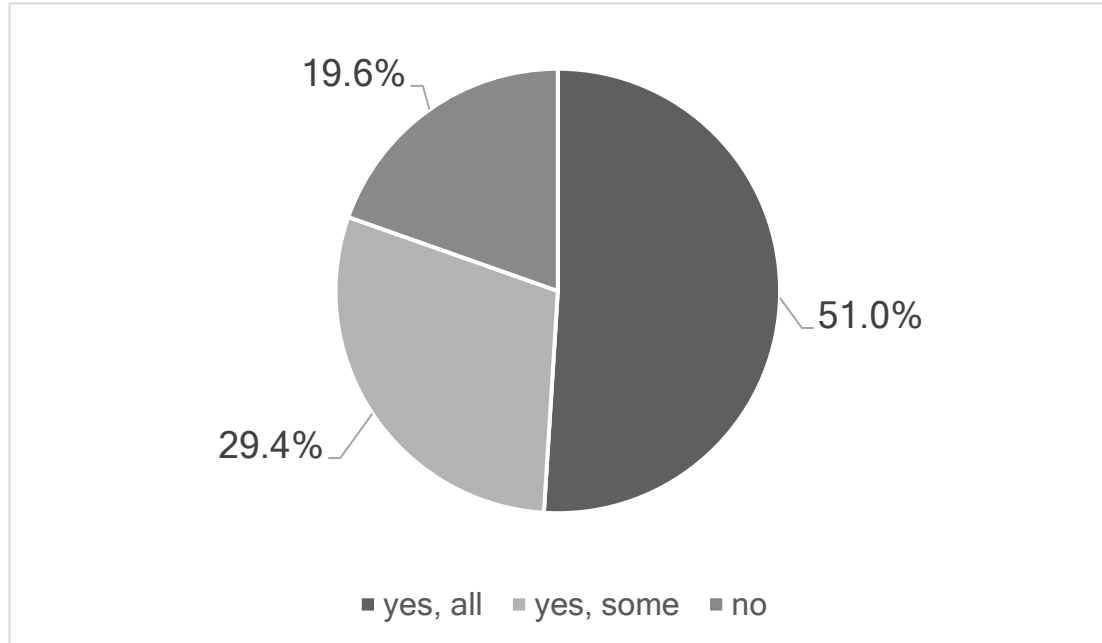


Of the 327 parents who answered this question, just over 80% of parents knew either all or some of the ratings for their child's video games, with over half knowing all of the ratings.

The results of this question were also examined based on geographical location. **Figure 6.19** shows the percentages of parents who answered *all*, *some*, or *no* to whether they knew the ratings of their child's video games.

Figure 6.19

Percentage of Survey Respondents in the US Who Knew the Ratings of Their Child's Video Games

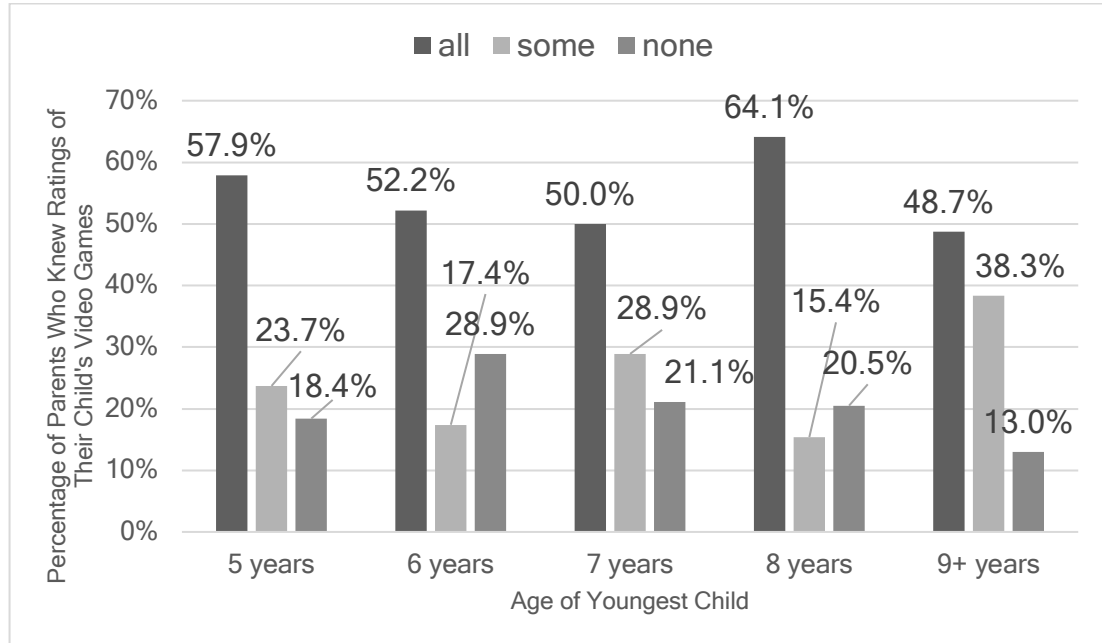


Of 327 respondents who answered the question about the ratings of their child's video games, 296 lived in the United States. Unsurprisingly, since most of the respondents lived in the US, the percentages did not change much. Again, around 80% of parents in the US knew the ratings of the video games that their child played.

A crosstabulation was performed to between whether survey respondents knew the ratings on their child's video games and the age of their child. **Figure 6.20** shows the correlation between a child's age and their parent's knowledge of all, some, or none of the age ratings on their video games.

Figure 6.20

Survey Respondents Who Knew the Rating on Their Child's Video Games and Age of Their Child



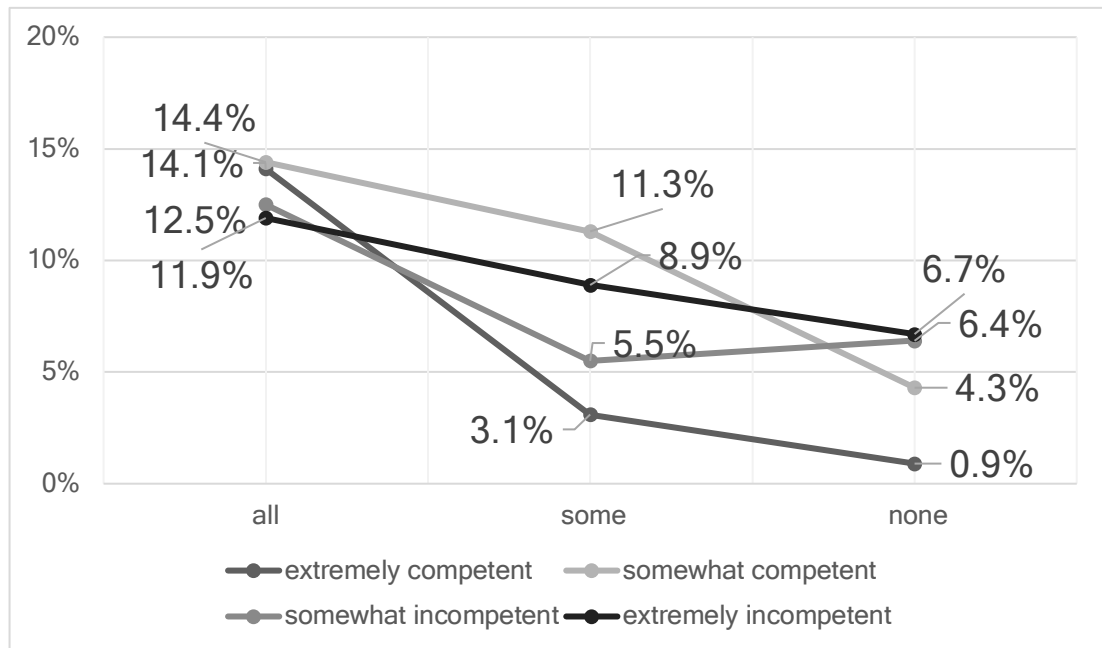
A chi-square test of independence revealed a significant association between the age of a child and whether a parent knew the ratings of their video games: $X^2(8) = 17.492$, $p = .025$. The Kendall's tau-c test determined a positive relationship between the age of a child and whether a parent knew the ratings of their video games: $\tau_c = .001$, $p = .978$. The results of this cross-tabulation reveal that, with the exception of parents of eight-year-olds, parents were more likely to know the ratings on all their child's video games if their child was younger. The data show that 57.9% of parents with a youngest school-age child who was five years old knew all the ratings on their child's video games, compared with 52.2% of parents with six-year-olds, 50.0% of parents with seven-year-olds, and 48.7% of parents whose youngest school-age child was nine years old or older. Interestingly, 64.1% of parents with eight-year-olds knew all the ratings on their child's video games.

Survey respondents' responses were also compared with how confident they felt operating gaming systems. **Figure 6.21** shows the relationship between how competent survey respondents felt operating gaming systems

and the percentage who reported that they knew all, some, or none of the ratings on their child's video games.

Figure 6.21

Survey Respondents' Competence with Gaming Systems and Knowledge of the Ratings for Their Child's Video Games



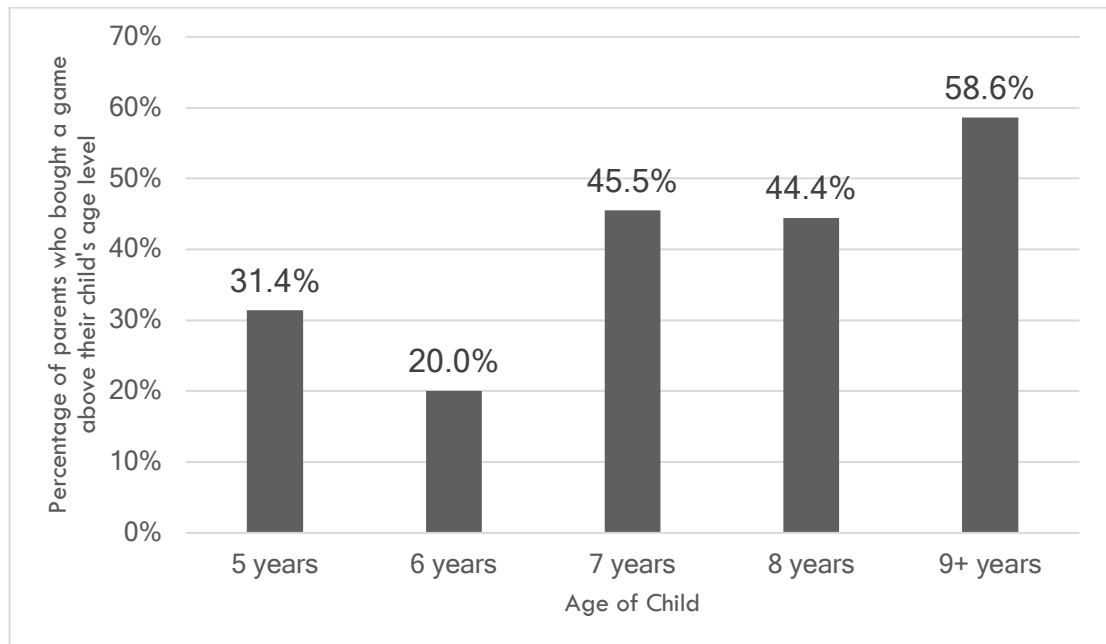
A chi-square test of independence revealed a significant association between how confident respondents felt operating current gaming systems (XBOX, PlayStation, etc.) and whether they knew the ratings of the video games that their child played: $X^2(6) = 27.228, p < .001$. The Kendall's tau-c test determined there was a positive correlation between those two variables: $\tau_c = .185, p < .001$. Respondents who felt "extremely competent" operating current gaming systems were more likely to know the ratings on all their child's video games and less likely to report that they did not know the ratings on their child's video games. Respondents who felt "extremely incompetent" operating current gaming systems were less likely to know the ratings on all of their child's video games and more likely to report that they did not know the ratings on their child's video games.

To explore if parents made different purchasing decisions for their children based on their child's age, survey respondents' responses for whether

they have bought a game above their child's recommended age level were compared with the age of their child. **Figure 6.22** shows this correlation.

Figure 6.22

Child's Age and Percentage of Survey Respondents Who Have Bought a Game Above Their Child's Age Level



To respond to the question “Have you ever bought a video game above your child’s age level?” survey respondents were given three choices: *yes*, *no*, and *not sure*. The not sure category was eliminated to run a chi-square test of independence, which revealed a significant association between the age of a child and whether a parent purchased a video game above their child’s age level. $X^2(4) = 22.764, p < .001$. The Kendall’s tau-c test determined a negative correlation between those two variables: $\tau_c = -.280, p < .001$. Respondents were less likely to buy a video game above their child’s recommended age level if their child was age five or six, and more likely if their child was seven, eight, or nine.

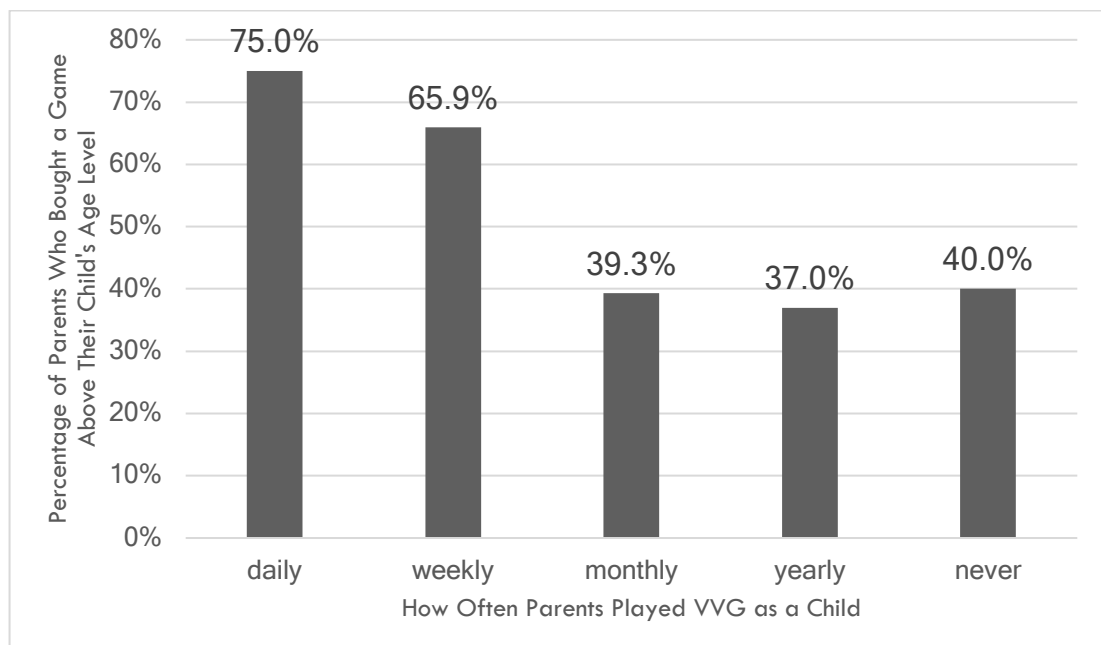
6.2.4.4 PARENTS' CHILDHOOD EXPERIENCES WITH VIOLENT VIDEO GAMES

The survey gathered information from respondents about their experiences playing violent video games as a child. Their responses to how often they played violent video games as a child and how comfortable they felt with gaming systems were compared to responses of other questions to see if there were any correlations between their experiences and their perceptions of violent video games or their decisions about violent video game play for their own children.

A crosstabulation was run to compare how often a parent played violent video games as a child and whether they have bought a video game for their own child rated above their age level. **Figure 6.23** shows the results of that test.

Figure 6.23

How Often Parents Played Violent Video Games as a Child and Whether They Have Bought a Video Game for Their Child Rated Above Their Child's Age Level



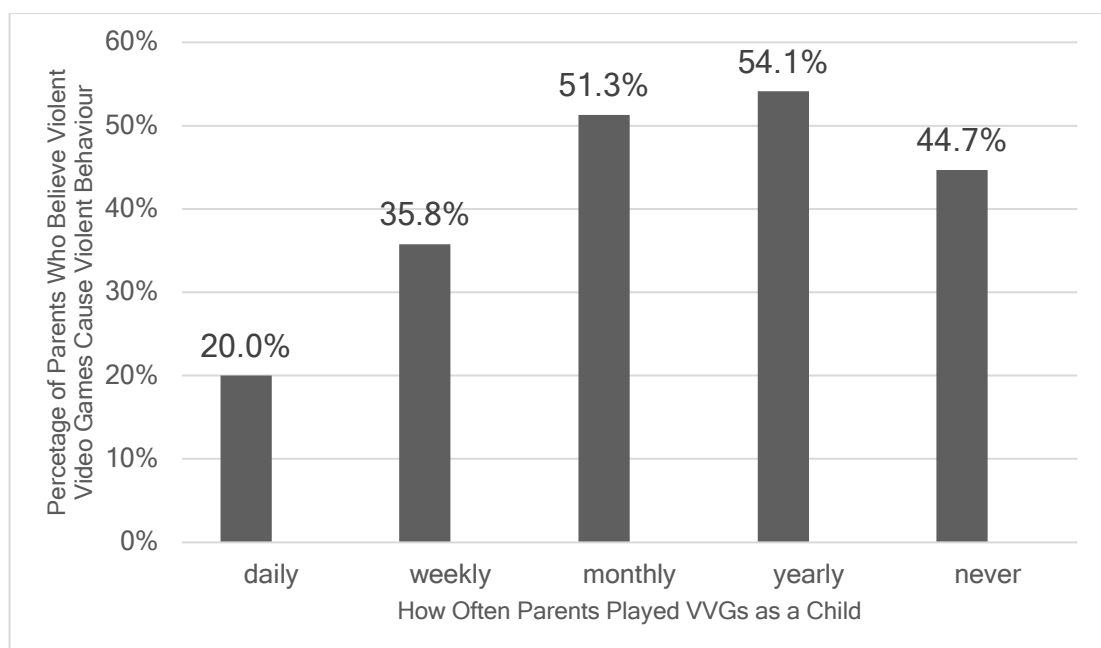
To respond to the question “Have you ever bought a video game above your child’s age level?” survey respondents were given three choices: *yes*, *no*, and

not sure. The not sure category was eliminated to run a chi-square test of independence, which revealed a significant association between the how often a parent played violent video games as a child and whether they purchased a video game above their child's age level. $X^2(4) = 16.357, p = .003$. The Kendall's tau-c test determined a positive correlation between those two variables: $\tau_c = .180, p = .002$. The more often they played violent video games as a child, the more likely they were to buy their child a video game rated above their age level. Three-quarters of parents who played violent video games daily as a child reported buying a video game above their child's age level, whereas 37.0-40.0% of parents who played violent video games monthly or less often as a child reported buying a video game above their child's age level.

A crosstabulation was also run to compare how often a parent played violent video games as a child and whether they believed violent video games caused children to behave violently. **Figure 6.24** shows the results of that test.

Figure 6.24

How Often Survey Respondents Played Violent Video Games as a Child and Whether They Agreed or Disagreed That Violent Video Games Cause Children to Exhibit More Violent Behaviour

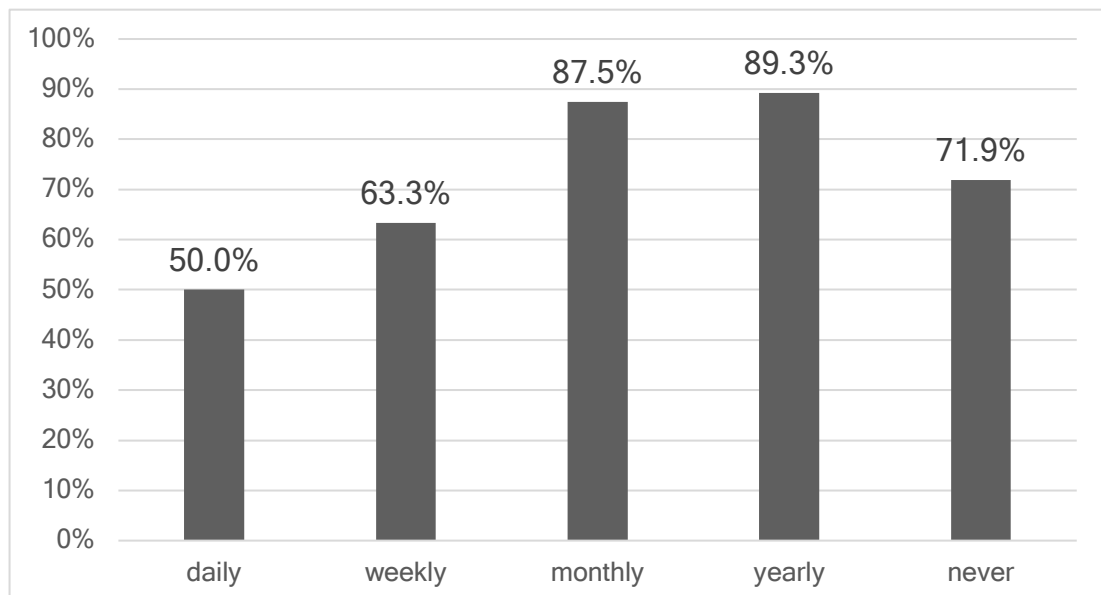


To run a chi-square test of independence revealed a significant association between how often a parent played violent video games as a child and whether they agreed or disagreed with the statement, *Violent video games cause children to exhibit more violent behaviours*: $X^2(8) = 29.526$, $p < .001$. The Kendall's tau-c test determined a negative relationship between those two variables: $\tau_c = -.115$, $p = .007$. Apart from parents who never played violent video games as a child, the less often parents played violent video games as a child, the more likely they were to agree that violent video games caused violent behaviour.

A crosstabulation was run to compare how often a parent played violent video games as a child and whether they placed limits on their own child's time spent playing violent video games. **Figure 6.25** shows the relationship between those two variables.

Figure 6.25

Percentage of Survey Respondents Who Placed Limits on the Amount of Time Their Child Played Violent Video Games by How Often They Played Violent Video Games as a Child



A chi-square test of independence revealed a significant association between how often a parent played violent video games as a child and whether they placed limits on their child's violent video game time: $X^2(4) = 14.248$, $p = .007$.

The Kendall's tau-c test determined a negative relationship between these two variables: $\tau_c = -.037$, $p = .492$. Except for parents who reported never playing violent video games as a child, the more often a parent played violent video games as a child, the less likely they were to place limits on their child's violent video game playing time.

6.2.4.5 CHILD'S BIRTH ORDER POSITION IN THE FAMILY

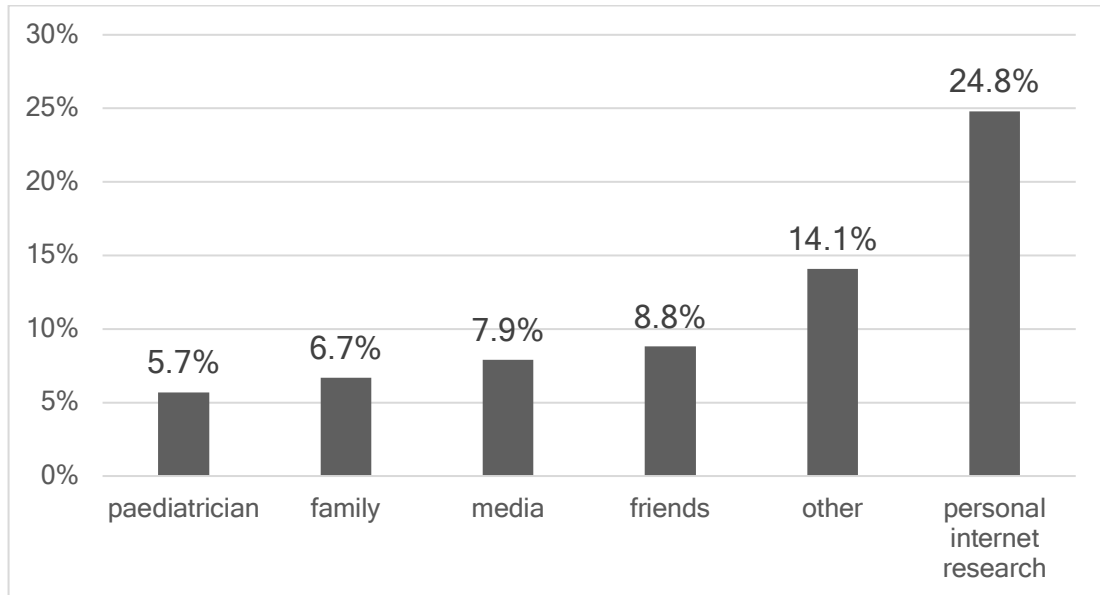
As mentioned in *6.2.1 Demographic Information About Survey Respondents*, parents were asked if their youngest school-age child was the youngest, oldest, a middle child, or an only child. It was necessary to explore the possibility that parents would make a different decision for their child based on their birth order. However, chi-square tests of independence showed that a child's position in the family did not affect whether parents placed limits on their child's video game playing time. A child's position in the family also did not affect whether parents placed limits on their child's violent video game playing time.

6.2.4.6 WHERE PARENTS GET THEIR INFORMATION

To answer the question of how and where parents seek information regarding violent video games and potentially imposing limits on their child's violent video game playing time, survey respondents were asked: *What information did you use to make your decision regarding limits on violent video game play?* The question instructed respondents to select all answers that applied **Figure 6.26** shows the percentage of parents who answered that they sought information from friends, family, their child's paediatrician, the media, their personal internet research, or another source.

Figure 6.26

Where Survey Respondents Got Information About Imposing Limits on Violent Video Games



All 509 survey respondents answered this question. Nearly one-quarter (24.8%) of the respondents chose *personal internet research* as a method they used to gather information about violent video games. This was the most common answer. This question also included an open-ended text box for respondents to type any other sources of information, which 14.1% of respondents chose to do. Nearly one-third of the respondents (31.9%) who chose “other” option reported that they relied on their own discernment, not any outside influences. They described making a “personal decision/did not seek others opinion [sic],” or using their “personal choice and feelings,” from “my gut” or “based on my opinion,” “my own best judgement,” “from my own ability to make decisions,” or “common sense,” to make these choices for their children. Other respondents (13.9%) replied that they made decisions based on their “child’s maturity, interest, and input,” or monitored their child’s actions after playing a violent game to then make decisions. Some of those responses included “My own observations of his imaginative play and my experience as a high school teacher,” “driven largely on his handling of these types of games, especially after playing them.” One parent said about their decision their decision, “I based it on his age, maturity level for his age, and the fact that

violent or scary games will cause him to have nightmares.” A few chose “other” because their child “is only allowed access to games I don’t classify as violent,” or “My kids don’t play violent video games according to the definition I selected for this survey.” One respondent cited “Information from my child’s psychologist,” and two others cited, “peer reviewed studies” and “research literature.” One parent was concerned about their neurodiverse child, responding in the short answer box, “Articles about children with behavioral disorders such as ADD heighten symptoms with increased screen time.” Only one respondent cited “game rating and manufacturers description” as a factor that they used to make decisions about violent video games for their child.

6.2.5 IMPACT OF THE COVID-19 PANDEMIC ON VIDEO GAME PLAY

To ascertain how parents felt about their child’s video game playing habits during the COVID-19 pandemic, survey respondents were asked if they allowed their child to increase their playing time of both video games in general and of violent video games. These questions required respondents to select a response to the degree that they agreed or disagreed with the following two statements:

1. *The COVID-19 global pandemic has increased the amount of time my child spends playing video games.*
2. *The COVID-19 global pandemic has increased the amount of time my child spends playing violent video games.*

Both questions received 331 responses, and the results are presented in **Figure 6.27** and **Figure 6.28** below.

Figure 6.27

Survey Respondents' Thoughts on Whether COVID-19 Increased the Amount of Time Their Child Spent Playing Video Games

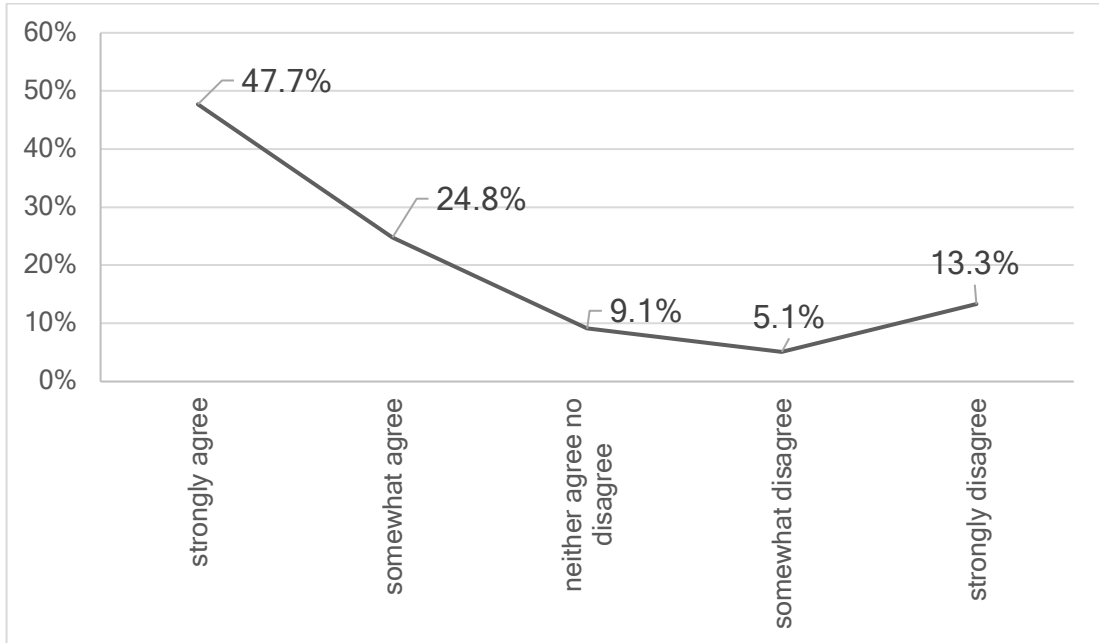
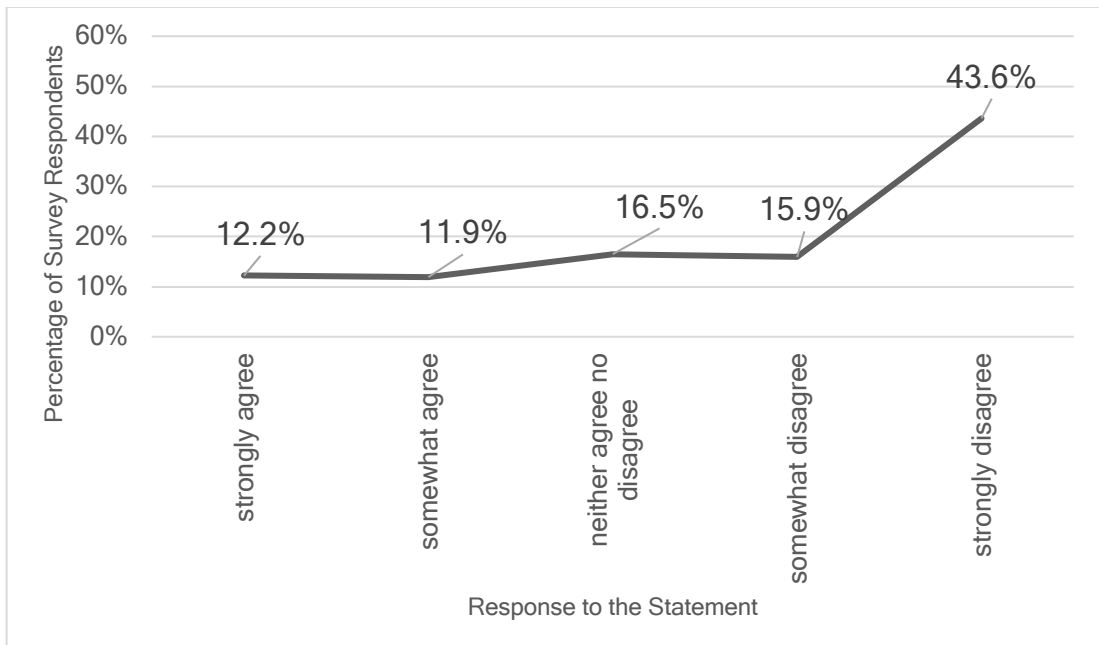


Figure 6.28

Survey Respondents' Thoughts on Whether COVID-19 Increased the Amount of Time Their Child Spent Playing Violent Video Games



The results are almost a mirror image of each other. Nearly half of survey respondents, 47.7%, strongly agreed that the COVID-19 global pandemic increased the amount of time their child spent playing video games, while 13.3% strongly disagreed with that statement. Conversely, nearly half of survey respondents, 43.6%, strongly disagreed that their child's time spent playing *violent* video games had increased, and 12.2% strongly agreed with that statement. This data reveals that although many parents allowed an increase in video game time during COVID-19, they did not necessarily permit an increase in violent video games during this time period.

6.2.6 THE MEDIA NARRATIVE AND OTHER PERSPECTIVES

As previously described in *Chapter 4: Theoretical Framework*, media and others within an individual's microsystems, macrosystems, and exosystems are factors that influence their perceptions and decisions. To ascertain if survey respondents were cognizant of media reports and others' opinions about violent video games, survey respondents were asked, in their experience, how violent video games were portrayed or viewed on social media, in the news, by other parents, by adults without children, by your child's grandparents, by your child's paediatrician, and by your child's teacher. **Figure 6.29** shows the detailed results of this question.

Figure 6.29

<i>How Survey Respondents Felt Others Viewed Violent Video Games</i>						
		All Negative	Mostly Negative	Neutral	Mostly Positive	All Positive
On	social media	5.5%	30.3%	29.4%	31.5%	3.3%
	In the news	15.5%	53.9%	18.5%	10.9%	1.2%
By	other parents	5.2%	46.5%	38.6%	9.7%	0%
By	adults without children	7.6%	19.7%	33.9%	31.8%	7.0%
By	your child's grandparents	33.7%	34.0%	30.7%	1.5%	0%
By	your child's paediatrician	16.0%	33.7%	49.7%	0.3%	0.3%
By	your child's teacher	12.9%	33.8%	52.0%	1.2%	0%
	average	13.77%	35.99%	36.11%	12.41%	1.69%

The results showed that about half of parents felt that paediatricians and teachers remained neutral about violent video games. Around half of parents felt that the news and other parents viewed violent video games mostly

negatively. Over one-third parents felt that their child's grandparents, more than any other factor, viewed violent games entirely negatively. No survey respondents answered that other parents, their child's grandparents, or their child's teachers viewed violent video games as *all positive*. Overall, survey respondents rated these factors either mostly negatively or neutrally, with both categories averaging around 36.0% of the ratings. These factors were rated *all positive* by survey respondents an average of less than 2.0% of the time.

6.2.7 SUMMARY OF SURVEY FINDINGS

The survey revealed many facets of how parents perceive violent video games and how they make decisions for their children. Over three-quarters of survey respondents were between age 30 and 49, with most of them identifying as their child's mother. Just over half of respondents' youngest school-age child was aged five to eight years old. There was no consensus on a definition of a violent video game, though nearly all were concerned with harm, weapons, and death. Many respondents believed that violent video games caused violent behaviour in children, but that their own children did not exhibit more violent behaviours after playing violent video games. The number of parents who placed limits on their child's video game playing time, violent or not, dropped significantly once their child turned nine years old. Just under three-quarters of parents knew about a video game rating system, but just over half of them knew the ratings of all their child's games. Respondents were less likely to buy a game for their child above their recommended age level if they were under age nine, and the more often they played violent video games as a child, the more likely they were to buy one for their child. To find information about violent video games, nearly one-quarter of respondents search the internet. During COVID-19, respondents reported that although their child's time playing video games increased, their time spent playing violent games did not increase. Overall, respondents did not place a lot of importance on other's views of violent video games and made decisions based on their own experience and opinions.

6.3 INTERVIEW FINDINGS

In total, nineteen participants participated in an interview. The data discussed in this section will be presented in accordance with the research questions. This section will cover which aspects of video games parents considered violent, parents' perceptions of violent video game play, how they made decisions for their own children about violent video games, their concerns about video games, their view of media headlines, and whether the COVID-19 quarantine periods altered any of their previous perceptions or decisions about violent video games.

6.3.1 DEMOGRAPHIC INFORMATION ABOUT INTERVIEW PARTICIPANTS

Interview participants were asked for their geographic location, with the possibility of comparing answers based on cultural differences. **Figure 6.30** displays this data.

Figure 6.30

<i>Interview Participants' Geographic Location</i>	
United States	17
Canada	1
United Kingdom	1

Although the survey was shared online in multiple ways, the majority of respondents lived in the United States. It followed that most interview participants also lived in the United States, with only two living in another country. Seventeen interview participants lived in the United States, one lived in Canada, and one lived in the United Kingdom. Of those who lived in the United States, twelve lived in the state of Oklahoma.

Interview participants were all parents, not grandparents or legal guardians. This was not by design, rather the result of those who chose to sign up and participate in an interview. **Figure 6.31** shows this information.

Figure 6.31

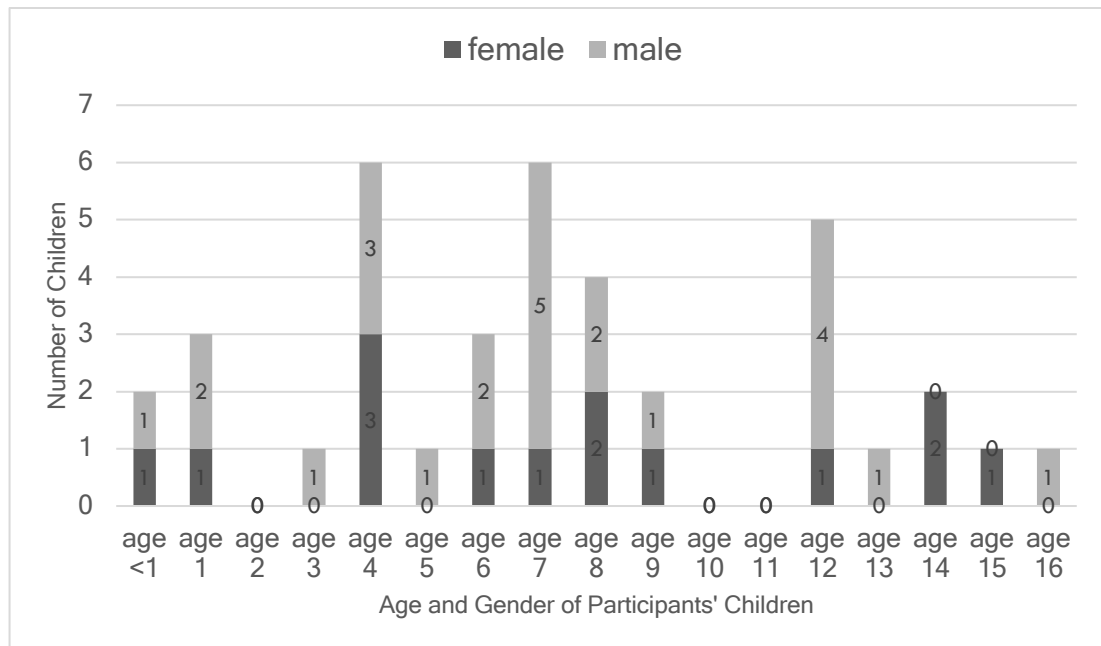
<i>Interview Participants' Relationship to Their Child</i>	
Mother	13
Father	6

More than twice the interview participants (13) identified as their child's mother than their child's father (6).

Interview participants were parents to a total of 38 children, fourteen females and 24 males, ranging in age from six months to sixteen years of age. **Figure 6.32** shows the breakdown of this data.

Figure 6.32

Age and Gender of Interview Participants' Children



Although the two parents with infants could not answer questions about their infants' violent video game time, they provided valuable insight on their experiences with and perceptions of violent video games. One of those parents had older children about whom they could discuss decisions they made in their homes about violent video game play.

6.3.2 PARENTS' DEFINITION OF A VIOLENT VIDEO GAME

This section discusses interview participants' responses that address Research Question 1: *What attributes of video games do parents consider violent?* When asking parents their definition of violence in a video game, most parents included the same ideas. Overall, there were four main themes that emerged from the interviews. Parents commonly mentioned the level of blood and gore, the presence of a physical altercation, games that involved weapons and killing, and a discrimination between cartoon violence and realistic violence. In addition to those four categories, other ideas about violence included P5's thought that there didn't have to be death in a game for it to be considered violent. She said "there's a continuum of violence that also includes "mental manipulation or gaslighting or just verbal abuse" in her definition. Another concern was something P11 mentioned that he was "not comfortable with violence for entertainment." Although parents explained what made a game violent, many of them *did* allow their children to play games with these attributes. All but two parents allowed some level of violence to be played in their home, though that varied based on their child's age and their own comfort level. One of these two parents had an infant who was not yet old enough to play video games, and the other parent did not allow video game play in their household at all.

6.3.2.1 BLOOD AND GORE

Over half of the parents interviewed mentioned blood and gore in their definition of a violent video game. P1 defined a violent game as any game that is "bloody and gory and graphic." P11 said he considered any game that has blood to be a violent game. P5 also believed anything that was gory constituted classifying a game as violent. P4 said if there was "blood involved" in the video game, she would consider it violent. "Gruesome, bloody scenes, where limbs are flying" made a game too violent for P16. P12 included games with "a lot of shooting, a lot of blood and gore" in her definition.

Many of these parents indicated that games with blood and gore were too violent for their children. P12 explained, "I don't like seeing those things and I definitely don't want my kids to see them at this point in their lives." P15

thought, “If there’s blood, then that’s a bit too far.” Some parents allowed some games with fighting or shooting, but not if it included blood or gore. P7’s rating of a violent game depended on how gory it was, by how much blood or gore was on the screen. She explained that her son “had some of the Star Wars games that had some of the fighting, but not, you know, graphic, nothing like that.” Because they were not graphic, these games were acceptable in her house. When making decisions about a game, a question she asked her son and herself was, “Do they have the blood that happens when you shoot someone or you stab someone, and how bloody is it?” P18 allowed his children to play games where they shoot people, but he noted that “we’ve kind of been more okay with those because they’re not graphic...there’s not blood shooting out everywhere, or anything like that.” Two games that P18’s children play, Fortnite and Apex, involve shooting people but since it is not graphic, he thought they were permissible for his children to play.

Two parents referenced their playing habits as children. Both parents had reservations about children playing games with blood and gore, yet one of them played violent games as a child and one did not. P17 referred to Mortal Kombat, which she played with her brother as a child, as being a violent game because of its gory content. She remembered pulling the head off your opponent and his spine coming out of his body. However, she did not notice Mortal Kombat was violent until she played it again as an adult. She thought it was interesting that she didn’t think of it as violent when she was a child. P6 was concerned about “the blood and gore thing” in the games that kids play today, as he did not play violent games when he was younger and played mostly in arcades. Although only one of them played violent games as a child, both parents were concerned about the level of violence in games when viewed from an adult’s perspective.

6.3.2.2 PHYSICAL ALTERCATION

When asked how they would define a violent game, parents often created a definition that included physical fighting on the screen. P5 defined violent games as ones that include “some kind of physical altercation between any two actors...whether that is a punch or...a fist fight,” shooting, or stabbing, and declared, “I know it when I see it.” P16 defined violence as any game in which

a player inflicts physical or “intentional harm.” P13 also included aggressive behaviour and beating people up in her definition of a violent game. P6 classified what he termed “beat’em up” games as being violent. As an example, P6 said he used to box, but that “by definition, the sport of boxing is violent.” He would therefore consider a boxing video game violent, as players’ goal would be to beat each other up. P17 noted that the game Grand Theft Auto includes running over people, which she considers violent. She also considered this to be a moral issue as well.

P15 said he was bothered when violence was the central theme of the game. Similarly, when P10 was a child, she played Nintendo games that she considered “a little violent,” where you “fight things” or “jump on things.” Her children were not allowed to play any game where there is fighting, but even a game they played for school was slightly violent, in her opinion. She described, “Even like the Prodigy game that my daughter plays for math, there is fighting in it and that bothers me... the problem is, [they’re] supposed to be like learning math and they get so many points, and then they have to fight a wizard to get to the next level and the wizard kills them or they kill it I just don’t understand why kids learning math needs to be [violent].” P10 was not completely comfortable with her children playing a video game with violence that was clearly pretend, despite the educational benefits of the game.

6.3.2.3 WEAPONS AND KILLING

In addition to physical altercations between characters, many parents mentioned weapons or killing as violent aspects of video games. For P19, any game with shooting, guns or weapons was a violent game that her children were not allowed to play. She referenced games with “a lot of shooting” that her husband liked to play in high school and college. She said, “we don’t play it now,” and “I definitely don’t think I’d be comfortable with kids playing that.” She was not alone in this sentiment. Referencing a game that her husband played, P4 said, “shooting balloons is okay,” but not if the object you’re shooting at looks like a human or an animal. If there was “a lot of shooting” in a video game, P12 said would not want her children to play it. When defining a violent game, P13 also included shooting things. Although P19 allowed

some level of violence in the video games at her home, she did not permit her children to play violent first-person-shooter games.

Shooting or killing did not necessarily need to be directed at a human or another player for parents to consider a game violent. P16 described games with weapons such as grenades, bombs, guns as violent. P4 included “killing a human shape” in her definition of violence. Although her husband disagreed, P14 did not want her children playing a game where they kill zombies. Any game where you shoot or tear things apart was a game that P8 considered violent. She did not even allow her children to play with toy guns. Inappropriate violence in a game, for P11, was where violence is unnecessary, or the player actively shoots or kills other people or animals. P19 mentioned, “The real-life rule is no shooting people or animals,” so that was also their house rule regarding video games. P14 said, “I don’t care if there’s blood or guts, [but] if you’re killing any living thing,” then she considers that game to be violent. She believed that first-person shooter games were a problem for children.

Parents spoke about video games their children play and where they drew the line on the too much violence. P19 allowed her children to play games such as Roblox and Minecraft, but said, “In our house we don’t allow shooting games....it still *feels* wrong to play first-person shooter games.” P18 also decided that violence towards people was not permitted in their house, saying, “In Fortnite and Apex they’re running around shooting people, so I would probably consider those violent.” P3, who worked in law enforcement and had personal experiences with real-world violence, will not let her son play a realistic first-person shooter game. P7 began her definition of a violent game by stating any game where you shoot or stab a person, but then added that did not include Star Wars. Star Wars was an acceptable form of violence in their house, as “you’re just using light sabres and lasers, but it’s also got the whole Star Wars saga series behind it, the movies, the books, the everything.” These parents were comfortable with violence as long as it was not directed towards realistic people, which was another category of violence introduced by interview participants.

6.3.2.4 REALISTIC VIOLENCE VERSUS CARTOON VIOLENCE

Considering the video games that their children played, some parents explained what type of violence was and was not allowed in their homes. P11 believed that age-appropriate violence is okay. He noted that even though there is no gore on Pacman, it is still a violent game. Many parents made a distinction between violence that was realistic and violence that was clearly pretend or imaginary. Like many parents, P9 thought there was a clear distinction in the brain between cartoony violence and real violence. P7 said it depended on whether the game was “the old pixelated stuff that’s not realistic at all, or some of the newer that really looks like a human being.” To her, the “more realistic it is makes it seem more violent.” P2 decided that a violent game is one that depicts violence in a realistic manner. His seven-year-old daughter played games on the Nintendo Switch that he labelled “cartoony violence.” He played other video games on the PlayStation, but not in front of his children because his games “are gonna have pretty realistic depictions of violence, you know, realistic blood...I just don’t want my kids seeing those things at this age.”

P9 noted that his four-year-old son played Mario but explained that he considered Mario a “low level of violence because...you jump on top of [enemies] and they kind of squish and then they pop and do a little burst of stars.” He said, “I would classify that as video game violence, even if it is since it is cartoony.” His son also played a game where he must save the little rubber ducks before “little toy sharks” get them. P9 considered this a “low threshold violence” as well, but acceptable for his young son. He believed he “would avoid any graphic violence” until his son was about thirteen years old. P19 decided that if the game had what she considered to be “cartoon violence,” then it was acceptable; their family didn’t “have anything that’s realistic shooting,” but they “definitely do play like Mario Kart where you’re shooting whatever at each other, the balls,” and other cartoon objects.

P4 thought that games were violent if the violence in it “looks realistic.” P13’s son played Fortnite, which she knew other parents categorized as violent, but she said, “I don’t find that one is bad because it’s not realistic.” P1 described the LEGO Batman game her son played as not violent, because “the figures, when they fell apart, they could come back together.” She said this

was different from games kids play where this cannot happen, and there's a lot more blood in those games. P18's children play a game called Boomerang Fu where you break things; he said it could be considered violent by some, though that level of violence was acceptable in his house.

P11 would classify a game as violent if any violence in it was realistic, though if violence in games was silly, then it was "probably okay." He noted, "When you play Pacman, if you see a child playing Pacman, you don't worry about the beating ghosts...but it's really violent...the creatures [are] trying to kill you and you're then at some point trying to kill them." P11 echoed the sentiments of other parents when he explained that although Pacman is violent, it's acceptable for children to play because it doesn't appear real.

6.3.3 PARENTS' PERCEPTIONS OF VIOLENT VIDEO GAMES AND THEIR IMPACT ON CHILDREN

This section discusses responses during interviews that answer Research Question 2: *What are parents' perceptions of the impact of violent video games on children?* Parents had mixed feelings about the potential impact of violent video games on children's behaviour and well-being. Despite not believing that video games necessarily cause violent behaviour, some interview participants nonetheless expressed concern over young children playing violent games. One interview participant, P17, remembered a class where she learned that children "can't imagine something they haven't seen." P17 thought "there's plenty of horrible things in the world that they'll experience, eventually, so why start out early?" Another interview participant, P6, expressed the thoughts of many parents interviewed for this study when he wondered:

What does the violence do to their brain? ...It's a dopamine hit, in some cases. It's the sad fact that we're not giving our kids the kind of love and attention they deserve and we're letting the electronic babysitter take care of them. ...If people constantly just let that be the way that they receive pleasure, and then you take it away or maybe they have bad games ...does that make them more violent? Maybe dejected in society, maybe not separating reality from fantasy, bringing fantasy into the real world....Video games, what role do they play into that?

6.3.3.1 DESENSITISATION AND IMITATION

Many parents interviewed worried about the “normalization of violence,” as P5 put it, or becoming “incredibly desensitized to the gun deaths and the school shootings.” She wondered “what are we normalizing” for our kids and ourselves, especially since “children [are] more impressionable.” P13 thought violent games “could desensitize” children depending on their mindset, and “make real life seem less realistic if it’s mimicking in any way.” P8 believed “It depends on their age,” but she said, “I think it does affect them. It desensitizes them to things that they should be sensitive to because they’re seeing it so often. Because it’s not only just playing it, once you start playing it, you get sucked in.” She commented, “I don’t think that it causes them to be violent, I think...it desensitizes them.” P15, had the same thought when she said, “I don’t even know that it’s going to cause them to be violent, it’s just de-humanizing...it makes them less sensitive.”

Parents also expressed concern that children would imitate violence that they saw on the screen. “I honestly believe that kids copy what they see a lot at this age; they’re sponges,” commented P10. She continued, “Why show them violence at this age? They have their whole life to learn about violence...I also think there’s definitely a connection to TV shows, the violence that kids are seeing in their cartoons. They see fighting on the screen and they want to copy it. They want to fight, and they want to kick, and they want to jostle...I know violence is part of life. I don’t expect to hide it from them their entire life.” She contemplated that maybe “I’ve become more sensitive to it now as an adult watching it.” P9 supposed, “at a young age that could be harmful in that you know you might find out the next day after school that you know your kiddo went and you know played street fighter with another kid on the playground, and they punch each other in the face and other both in trouble.” He also cited Social Learning Theory, as he was concerned about his sons modelling behaviour they saw in a video game. He realized that he didn’t want to “tangentially give permission to do things like punching your little brother.”

P14 had a lot to say regarding both desensitization and imitation of violence on the screen. “As a general statement, I do not think kids should be

playing violent games,” said P14. She continued, explaining she gets concerned, “When I see them watching movies, and then they try to play-fight and wrestle at the bus stop.” Her children are allowed to wrestle with each other, to an extent. “I feel like if my kid plays all these violent video games, he’ll go out and be violent. I don’t want him to go out and think it’s okay to hit and punch,” P14 explained. P14 added, “You can even say it de-sensitizes them.”

After working as a correctional officer in a prison and as a substitute teacher, P3 viewed violent video games as a potential harmful activity. She read a book written by a veteran who theorized that “in a way [violent video games are] teaching kids violence, and it’s not letting them see the real repercussions, what happens. You kill somebody, you kill something, you just go to the spawn point, and then you’re on the road again.” One particularly difficult day as a substitute, she began asking the students about their video game habits at home. She relayed a story of a 5th grader with behavioural challenges, who was “extra disruptive, hateful” and nearly flipped his desk when he got upset:

I asked him, and I asked the whole class. I said so, who plays video games? Who plays video games that are first person shooter? ...then it finally got to where I was asking who plays video games, more than four hours a day, and this particular kid ends up being a kid that, from the time he gets home until the time he falls asleep is playing first person shooter games. Everything that I was reading at that time applied to this kid. So it made a whole lot of sense to me that it should be limited.

As P3 understood, the violent video games played by this student greatly affected his behaviour in the classroom. She did not believe that children should be playing violent games, especially those where the child was shooting others.

6.3.3.2 NEURODIVERSITY AND PERSONALITY

Some parents discussed the differences between children and their understanding that no two children react to experiences in the same manner. P5 believed we needed to “keep in mind that no two brains are set up the

same.” P9 noted that age and maturity level do not necessarily correlate, so what is acceptable for one child may not be okay for another child of the same age. To that point, although P1 believed violent games to be acceptable for her own son, she did not feel that way about her niece, who had a personality disorder. She did not imagine that her niece would react appropriately to violent games. Some parents noticed that their child became easily frustrated while playing video games. Not all were convinced that the fault lied with the video game itself. P16 explained:

I don't know if, like the games that he's playing or like whatever he's trying to do on Roblox is like contributing to his frustration or causing him to have more anxiety and frustration over things because he's looking for that, like immediate...feedback. He's trying to do things like in a perfect way and it's just not happening for him so. But he also plays baseball, and I noticed like he's kind of the same with baseball. He just needs to be like a perfectionist so some of that comes down to his personality traits.

P10 played games on Nintendo as a child. She remembered getting “so mad” and “so hooked” on the slightly violent games that she played. She speculated that it was her personality type that caused her to react in this manner. P1 also wondered if video game issues had to do with age or personality rather than the games themselves. Also, she said, “I think it has more to do with a maturity level. I understand that my son isn't going to re-enact some of the stuff that he's seeing without understanding that there will be consequences. However, I do also know that he has some friends that have more self-control issues and others, and I can't guarantee that they wouldn't be like ‘hey I'm gonna hit you over the top of the head with this some more, and it was funny’.” P9 believed that “your natural level of aggression might cause you to be drawn to specific types of video games.”

Genetic proclivity towards violence or addiction were factors that other parents considered as well. One parent, P11, did not think that violent games causing violent or aggressive behaviour was a causal effect. He believed that people who were harmed by violent video games would be harmed by something else, and then he compared violent video games to marijuana. He said, “There are definitely people who are harmed by it, but it seems that there

are people who would have been harmed by it or without it by something else.” He continued to say, “Violence in games will be shown to harm some children, but those are the children who would have been harmed by something in some way, and you could get probably the same outcome.” He articulated this point further by saying, “It’s not that the violence in the games is causal, it’s just that...they were on that road.” Another parent, P5, also wondered if children who have trouble with violent video games possibly have an addictive personality or family addictions present. She said,

I do think that, again, all of us are different...Some people can go out, and you know, have a drink a couple nights a week and other people that's going to turn into alcoholism; so I think when we understand that the brain is just different for every person you can't have necessarily the same expectation, so I don't. ...I'm not on like a vendetta to like ban violent video games or anything like that, but I do think that we have to be mindful of [these differences].

P5 acknowledged that her perception of video games may be subjective because her own children were neurodiverse. She had two children with two different diagnoses. P5’s 7-year-old son had ADHD and “some behavioural struggles,” as she explained. At the time of the interview, doctors were “not really sure if it is autism or not.” He performed a lot of mirroring, or copying behaviours, and had a lack of impulse control because of his ADHD. P5 said that she noticed higher levels of hyperactivity when he watched shows with cartoon violence, such as Ninjago. She did not see these behaviours when he played soccer or participates in martial arts. P5 commented, “almost any time when he's having a hard time I can go back to say what of what has been playing on the tablet, etcetera, and make some adjustments there.” Her 8-year-old was diagnosed with high-functioning autism, so she explained that it was extra important to be mindful of things that activated the pleasure centre in his brain. She declared that he had no predilection towards violent video games, though.

Many other parents specifically mentioned ADHD during their interview. P9 believed that “kids get hooked” and wondered “how that connects to...[a] diagnosis of ADHD, attention deficit and things like that.” P10 noticed that more time playing games affected her 8-year-old daughter, who her teachers

suspected may have ADHD. She was not the only parent to specifically mention ADHD in their interview. P3's 13-year-old son was impulsive; he had been diagnosed with ADHD. Because of his impulsive tendencies, she tried to limit all artificial input. She reflected that playing video games required a high mental involvement but had no physical aspect, and he needed more physical activities because of his ADHD. She said that her son is on the "cusp of being aggressive" and is therefore mindful of the types of video games that she allowed him to play.

P19 noted, "The other thing that's really relevant is my oldest has ADHD." She found that it is difficult for her 9-year-old with ADHD to transition between activities. She believed video games were a "high reward" activity for him, so he was more susceptible to the negative effects of sitting and playing all afternoon. She believed, "It's hard for him to get off of those games." In contrast, her 6-year-old, who did not have ADHD, had an easy time switching to and from activities, including video games. Her husband "feels more strongly that it does have an impact," that violent video games were an issue for children with ADHD. She conveyed that, "From his observations," he believed that the violence in games made their son more hyperactive; she disagreed. She was willing to concede that their son's ADHD could be a potential issue regarding violent video games, saying "I think there may be more chance of an issue with kids with ADHD, [but] I still don't think it's much of an issue." She thought it was related to the dopamine reward he received when playing, as opposed to the violence in the games.

P7's son was diagnosed with ADHD in third grade and with anxiety and depression in fourth grade. When he got frustrated with video games, he became visibly upset. He would throw things, hit the couch, and scream. She recalled an incident where "he threw the Xbox remote at the TV and broke the TV," and continued by saying, "I don't know if part of that was just the ADHD lack of executive function." She was not sure if it was the game itself or if these behaviours were because of his ADHD. She thought it was important to note that "he hasn't tried to harm anyone or harm animals or anything like that. He hasn't acted out on anything violent; he just, his outbursts are due to frustration at the game." Parents like P7 described their perceptions of violent video

games based on experiences they had with their own children, especially those diagnosed with ADHD.

6.3.3.3 NOT MY KID

When asked if they thought violent games were a problem for children or if they were not an issue, almost all parents interviewed were initially concerned, wondering if they were desensitizing kids to violence. Nearly all the parents interviewed allowed their children to play games that they considered mildly violent, though, since their child appeared to be fine playing them. They did not witness any behaviour changes or violent actions from their children after playing violent video games. Many of these parents also explained that they discussed the violence in the game with their child and concluded that their child understood that video games were pretend.

P16 decided that violent games themselves were not an issue, though they could be an issue when paired with external influences. Her own kids, she said, knew violent games were not something to emulate. They were “able to discriminate” between violence in the game and real-life situations. She said, “They’ve never pretended to shoot anybody,” and “when the game is done, it’s like that whole violence kind of just stays there. They don’t take it anywhere else.” If she saw behaviour issues with her children that were a result from playing violent games, she would stop the game or decrease their screen time. However, gaming had not been a problem for her family, as “they’ve never shown any signs of aggression.” Her son was an avid reader who read multiple grade levels above his age. She worried more about what he read than about what he saw on a screen. She explained,

Sometimes the text I find for him is worse than like the video game violence or anything in the movie...I think it’s just the way his mind works. I think visually, if he is seeing something and he’s actively playing a game, it’s very surface for him. Whereas the reading, when he reads, and he is always thirsty to know more.

Regarding violent video games, P16 said, “I feel like that’s a mindless activity for him, where he just like has fun.”

When their son was younger, P9 and his wife thought it “was probably not good behaviour to be modelling for him on screen,” so they stopped allowing their son to play a video game that involved beating someone up. P9 noted that his son “didn’t start like replicating behaviour or anything,” though. P1 did not have an opinion on whether violent games affected other children, but she did not see a difference in her own son’s behaviour when he played violent games as compared to when he played non-violent games. “I don’t see any difference in his attitude or behaviours,” she said.

P17 described her son as “a bit more sensitive than most boys...and he isn’t really into that sort of thing, like he doesn’t really like blood and fighting.” She continued, saying he was “a little bit more emotional about stuff like that, like he doesn’t really want to watch superhero movies, for the same reason, because people die and or there’s blood or people get hurt or things like that.” He had played Fortnite at friends’ houses before, but P17 was not sure he “really knows how to shoot, he just kind of runs around and plays, not like he’s trying to kill people.” P5 could not imagine allowing her son to play a game she considered exceptionally violent. She reflected, however, that he did “not seem[sic] to be impacted by something like LEGO Batman,” which she considered to be a mildly violent game.

A few parents rationalised how and why they reluctantly allowed their children to play a violent game. P6 was one of the parents who wondered if some children might have trouble separating reality from fantasy. His 15-year-old son played a game called World of Tanks that P6 qualified as violent, but he allowed it because his son knew it was not real. P3 allowed her son to play Call of Duty for a short time at age five, younger than any other interview participant, but avowed that it was not a problem because he didn’t “get it.” P12’s 7-year-old son played Minecraft and a game called Piggy, which she said, “is more violent than I’d like.” In the game, the cartoon characters have become zombies, and the main character Piggy beats characters with a baseball bat. “I don’t like it, but we’ve made sure that he knows that’s pretend. You don’t really hit people with bats. He knows that that’s just a game.” She had talked to him enough that she was confident he understood you do not really behave like the characters in the game. She had not “seen any signs”

of the game affecting her child, as “there’s been no aggressive behaviour” from him.

For a long time, P13 would not allow the game Call of Duty because of its violent nature. After letting him play during the pandemic, she had been pleasantly surprised to realize that the game did not affect him. P13 said she would not let her son play Call of Duty if he “lived in that reality...If I felt like he was the type of kid that had any kind of violent tendencies, then I might have been more concerned, but he’s a pretty passive kid.” It did surprise her that he enjoyed that game, saying, “I don’t know why he enjoys shooting things, but he does.” To further illustrate her remark, P13 noted that her son went hunting with his dad and was working towards earning his hunter’s licence “in real life.” P13 did not allow Grand Theft Auto either, until recently, but since he was “playing it at his friend’s house anyway,” she relented. She said, “he knows it’s a game, [so] there’s no issue.”

P11’s 8-year-old daughter enjoyed playing Minecraft. As a parent, he was “deeply uncomfortable” about the violence in Minecraft. His daughter, however, told him that she understands why he doesn’t like it, but it was not real. She reiterated that she loved animals and understood it was just a game. He remembered a conversation where his daughter “turn[ed] to [his] wife and said, ‘Mommy I understand that you think this sounds horrible and understand why but they’re not real animals we’re killing.’” After a conversation with his daughter about how the videos were stressing her mom out and she agreed to no watch them anymore, he said he “sat there thinking, the 8-year-old is slightly more mature.” P11 conceded that it was not an issue for her, but possibly for other kids, especially boys, “because little boys do horrible things to animals.” He wondered if gender played a role in the effect violence in games has on children.

Like P11, P2 thought that violent games are an issue for “over 50% of kids,” but luckily his own child “doesn’t get locked in” to video games, so his child played violent video games without issue. P18 also believed there were kids somewhere who violent games did affect, though his kid “seems to not make any connections between the game violence and real life.” He stated, “I have tried to evaluate his game stuff, if he’s doing a lot of messed up things

and [if it] affects the way that he behaves...But I have not seen him play anything that does.”

P16 was not worried as much about the violence in video games as she was about the violent things he was reading in books that she felt were not age appropriate. She admitted that sentiment could “be a little contradicting,” but her son’s imagination scared her “because I don’t know where his mind is going when he’s reading some of these things...I don’t want him to start asking questions that maybe like [sic] he really can’t comprehend.” For her son, P16 believed that “the text, I find for him, is worse than than like [sic] the video game violence or anything in the movie.”

6.3.3.4 PARENT INVOLVEMENT

Parents thought violent games could cause violent behaviours but most likely only in situations where parents were not monitoring children or talking about video games with them. P12 said that children needed to have the game explained to them, so they understood what they were playing and seeing on the screen. She stated that “some kids should not play all day, especially not unsupervised.” She believed that both unlimited playing time and unsupervised play are an issue for children. She believed that supervision was especially important if a child is playing violent video games, because “kids who are playing it completely unsupervised and...not being explained that’s just a game...that you’re not supposed to be hitting people with a bat.” She continued, “I can’t speak for other parents, but...we do at least try to explain to him that this is not a real-life thing.”

As a special education coordinator for a public school district, P16 compared violent games causing violent behaviour to when a child did not do well in school. She saw some correlation between kids who played games in an environment with little to no supervision and those who had behaviour troubles at school. She noted that home should be a safe place, and that the kids who were affected have a home life that isn't safe. In contrast, her boys played video games with their dad. She saw a sense of comradery playing with him, with no emphasis on the actual violence in the game. The reflected on the difference:

I don't think that the violent games are an issue. I think that when you pair the violent games with external stimuli and other variables, that it can be an issue. I think it also comes down to values and morals within the home environment.

P4 also worked in conjunction with a local school district, as a parent educator. When she visited families, she encouraged parents to watch television with their children, to make it a family activity. She told parents, “[your children] need you to be there to watch with them” so they can “talk about what happened.” The curriculum she used discussed screen time as well, and P4 had the same philosophy for video games as it did for television.

P3 believed it was important for parents to be informed. She thought parents must be knowledgeable about what games their children are playing, and they needed to participate with their children. Speaking about the potential negative effects of violent video games, she declared, “I think, with like with all things parents have to be very knowledgeable and involved with their kids so that they know that that's a possibility. They have to watch for the signs. They have to know their kid.” She worried about learned behaviours. As an example, P3 referred to households where guns were not stored safely, thereby creating a dangerous situation. She believed that violent video games were a similar situation: parents must be in control. “If the kid starts mimicking things, the parents teach them not to. Whereas, if they're in a house where the parents aren't there or are involved in their own stress,” she worried.

P10 asserted that parents need awareness of what video games their children are playing. She understands that parents are in time crunches, but children “get hooked” on video games and need parental guidance. She believed “it's a lot more work to teach them not to” fight in real life if they're exposed to fighting in games at a young age. If her son played a new game, P10 thought she “would be watching a little bit [to see] what's going on.”

P17 tried to have an open conversation with her kids. She will ask them, “Do you think that's a good way to treat people?” when they saw violence in a game. She thought it was important to encourage conversation. She warned, though, that violent games can be a replacement for family time if parents are not cognizant or involved. If your child wanted to play a violent game, she thought it was important to play it together first. She believed that children who

performed violent acts such as school shootings most likely had “parental supervision [and] family dynamic” issues. P1 also mentioned that young children playing violent games “opens up conversations that are more difficult for children at that age. I don’t necessarily think that it’s going to affect them long-term. Why did that hurt this person? What does that mean? And honestly, the concept of death, which isn’t really great with younger children.”

When her son played video games, P19 and her husband “keep an eye on it as he’s playing [to] see what they’re doing.” Even with the “low threshold violence” games that his son played, P9 mentioned that he has “had to have conversations about that and how these are toys and it’s okay” in the context of the game only. He said that he wanted to ensure his son “has a clear understanding [of] what is and is not acceptable.” Since permitting her son to play Grand Theft Auto, P13 told him, “If you’re going to play it, then I expect you to play it respectfully.” She knew there were “things that aren’t appropriate” in that game and wanted to be sure her son understood that.

P8 thought it would take more effort for parents to negate what she believed to be negative effects of violent video games. She did not allow her children to play any video games yet but imagined that they would start with Mario Kart as a family. She was one of many parents who discussed playing video games *with* their children. When his son asked for Apex, AFP18 explained, “We talked about it and it seemed fine, and I’ve gone in and watched it a couple of times.” When his son first asked to play Fortnite at age 10 or 11, P18 played the game with him first. He engaged his son in conversation about the game while they played and then trusted his son to play independently. He did the same with the game Halo. P18’s family also plays Boomerang Fu together. When deciding if a video game is important for your child, he thinks it is important to play a game together with your children.

Other dads interviewed discussed playing games with their children. P9’s four-year-old son played video games with him. P9 enjoyed playing with his son and helped guide him through games “where he can’t fail catastrophically.” P2 was “not interested” in decreasing his daughter’s video game time because it was an activity that they enjoyed together. All the games he bought were ones that he would enjoy, too, since, as he put it, “I happen to be the one with the money.” P2 thought it was bonding time for the two of

them, noting “we can play at the same time, or she comes up against a hard level and asks for my help, you know, I can do that. She watches me while I play. That’s really cool. I like that, you know, so I am not interested in taking that away.” In the most recent game he bought, “you can take turns with the controller.” Another dad, P15, played *Stardew Valley* with his seven-year-old son. P15 said, “I had played [*Stardew Valley*] a few years back,” but he started playing it again when he realized it was something he and his son could do together. He said the game “is a creative type, tactical type, working together” game. He described a scene where they both sat at his computer and played on the same account together.

Some of the moms interviewed talked about their children playing video games with their dads. P1 discussed how her son played *Red Dead Redemption*, a game she considered violent, with his dad. She did not see any negative effects from her son playing that violent game, attributing at least some of that to the fact that he played with his dad. P14 explained that since *Stardew Valley* was “a game where you build stuff and acquire stuff,” her son “comes up with the strategy and [Dad] helps him.” P16 believed playing violent video games was not an issue for her son, possibly “because he plays with his dad, so it’s kind of supervised and there’s like some camaraderie there.” Since “there’s no emphasis on the actual violence because of who he is playing with,” she thought that might be “a reason why” violent video games are not a problem for him.

6.3.4 PARENTS’ DECISIONS AND CONCERNS ABOUT VIOLENT VIDEO GAMES

This section discusses interview responses that answer Research Question 3: *How do parents make decisions regarding their children’s access to violent video games and what are their concerns?* When presented with the hypothetical scenario of their child coming home from school and asking to play a game because other kids were playing it, parents responded with many of the same strategies. Most parents said they would search for the game online to see what it’s about. A few parents mentioned they would go to Common Sense Media (www.commonsensemedia.org) online to read reviews. Several parents thought they would watch YouTube videos about the

game or watch others stream the game. A couple parents decided that they would first play it with their child to decide if it was a safe game for their child to play independently. When playing with their child, parents specified that they would be able to have conversations with their child as possible scary or violent themes arose in the game. They also felt that playing the game with their child gave them a sense of how their child would react to the game.

Parents made decisions that were right for their family, based on their own knowledge and experiences. Although P16 was confident about her decisions for her family, she noted, "I feel like we're silently being judged by conservative family members." P12 and her spouse struggled with whether to allow violent video games in their home or not. "We just kind of said, you know it's this or Fortnite, or you know, then it's been coming to Call of Duty or like one of these other games. They're just going to get progressively worse. Yeah, as they grow up in that, but, and I don't know. It's just the world we live in." Two parents who were interviewed did not allow violent video games at all. P3 had personal experience with violence, so she did not allow her son to play games such as APEX or Destiny. P8 did not allow her children to play any video games at all, so violent ones were out of the question.

This section also discusses interview responses that answer the second part of Research Question 3: *How do parents make decisions regarding their children's access to violent video games and what are their concerns?* In the interviews, parents were asked if they were concerned about violence in their children's video games. Many parents who were interviewed had concerns other than violent content. They were worried about their children being scared while watching or playing a game, encountering sexual images or themes that were inappropriate for children, interacting with strangers who could be potential child predators, or hearing unscrupulous language in a game or a game chat feature. P18 summarized the issue as "Shooter games are just so normalized now...that's just kind of what kids do...so I think in general, it's not a huge thing." One parent, P19 claimed that the amount of YouTube related to violent video games was more of an issue in her house. She thought that even if her children weren't playing the games, watching YouTubers stream violent video games was still providing them with an experience of the games.

6.3.4.1 RESEARCH

Many parents responded that they would research a game before allowing their child to play it. Research took the form of searching online for reviews and videos, and a few parents mentioned asking other trusted friends or family members. When asked how she would research a game, P1 said that meant she would and use “video game reviews” to “read up on it.” P4 also mentioned that she would read reviews online. P12 said she “would do some online investigating myself to see what it is, especially if I didn’t know what it was.” “I usually just Google it,” said P18. He used “sites that give you all the rundown like parenting reviews and that kind of stuff.” If his research did not “raise any red flags, I give him the thumbs up. It if does...I dig into it a little bit further and kind of see how it’s played or if it’s a free one.”

P5 specifically mentioned Common Sense Media as a resource. She would read reviews from parents in addition to those from kids who wrote reviews on the site. She found reviews “from children that are in that age range and from parents...really, really valuable.” P15 said, “I kind of have a cheat sheet.” He also used Common Sense Media. “It literally says this is age whatever plus, you know, and it’ll say exactly why. So I look at all the whys.”

Other parents discussed looking online for videos and footage of the game being played. P4 and P6 said they would search for videos about it on YouTube. P9 mentioned that he would pull up a trailer for the video game his son wanted to play. He thought “seeing the gameplay in action, video footage of it, is really one of the best ways to gauge like what that experience is going to be like for him.” He would then navigate to the game’s landing page that had a “blurb” about the game and the age recommendation. If there was not a lot of footage on the game’s website, he would find and watch a YouTuber play the game. In the past, P9 has also used Metacritic for reviews. He would be on alert for graphic violence and possible predatory micro transactions within the game. P9 was not the only parent who would consult the game’s website as part of their research. Before allowing her children to play a new video game, P10 would go to the game’s website to explore its content. She would look for elements such as fighting, shooting cops, and playing online with strangers, all of which she would not allow.

A few parents mentioned other sources of information, such as the library or talking to other parents as part of their game research. P13 mentioned that she “usually ask[s] other moms their opinion on certain games,” but felt that “you got to use your best judgement” as a parent. P4 thought she would also ask her cousin and co-workers, who have older children, for advice about the game. When her son began talking about Minecraft in kindergarten, P10 allowed him to check a Minecraft book out of the library first. If he asked to play a game she did not know, she said “I would probably go online and like look at the website for the game and read up on, you know what’s going on there.”

6.3.4.2 PLAY IT

If their child asked to play a new video game, many parents such as P4 and P10 decided they would play the game themselves first. P5 said, “If I’m on the fence about something,” then she and her husband play the game because “we want to invest in our children that way.” P10 thought that after looking up a game, “depending on how it looks, I might even play it myself a little bit first to kind of get a sense,” of the game. P15 referred to a previous instance with a video game where, “We had this whole conversation that was brought up that I wish we didn’t have to have.” He relented, “I was trying to explain that no you don't you don't actually want to ever use the nuclear weapons, but you still want to have them, and it was just it was just very uncool because he’s seven.” Because of this, P15 said that now, “I’d try it myself first,” before deciding if his son could play a new game. While playing it, he would “imagine his [son’s] reaction” because “if he watches violent stuff, I find myself having to answer some difficult questions. I’d imagine his reaction and whether or not I want to deal with him asking me about the violence in the game.”

Other parents said they would investigate the game side-by-side with their child. P17 thought her first approach to a new, unfamiliar game would be to check out the game with her child. She “would say, okay, let’s give that a try. I’d like to play it with you. Let’s see what it’s all about you know.” P15 relayed a story from the time that their babysitter recommended a game called Totally Accurate Battle Simulator. The first time their 7-year-old son played the

game, P15 played with him. Then he played it with their babysitter and her boyfriend. “He’s never gotten to play a game by himself,” said P15. When his son first asked for Fortnite, P18 said he “played with him, you know, to start off, just to kind of see what the game was like and those kinds of things.”

6.3.4.3 GUT FEELING AND KNOWING MY KID

Parents mentioned a few other aspects of making decisions for their children, not always related to violent video game play. “We kind of try and keep an eye, just like on how he's reacting to things he's playing in general,” explained P18. He said, “I feel like a lot of those decisions, you have to adapt to your kid your own kid because I think they affect people differently, I am sure there are kids somewhere who violent video games and the shooting stuff messes with them.” Many parents interviewed echoed this sentiment.

P2 understood that “some kids are going to be able to handle things a little bit more realistic than others.” He equated this to children viewing PG-13 and R-rated movies. “That would be how I would gauge if he could handle violent video games,” P2 said, “how does he deal with violent TV?” His decisions for his child were for his child only, and no other children. P19 and her husband disagree on how violent video games affect their children. She said, “I do not think it’s an issue in general” for children. Nonetheless, she mentioned, “In our house eliminating any shooting game is a good thing for us so that's how I choose to enforce it.” P4 also believed “it depends on a child.” Her infant son is not old enough to play video games yet, but she said she “know[s] a lot of children [who are] really mature and they understand that it’s fake. I know that a lot of children don’t understand that and carry it into their real life.” She wants to “see how he is” before making decisions about violent video games for her son.

P3 believed it “comes back to parents having to know their kids.” As P4 said, it depends on the child; some children understand it is fake and some do not. She noted that everyone is different and “parenting isn’t 1+1=2.” Similarly, P5’s guidelines for her children differ because of their personality differences. She is “100% positive” that cartoon violence increases hyperactivity in her seven-year-old with ADHD. On the other hand, she notices no issue with her

eight-year-old when he watches cartoon violence in a show such as Ninjago. P6 agreed that if his children could control themselves, then they could play a game. His teenage son was “the one that gets the most out of control,” so he is not “allowed to play during the week at all.” His other two children, also teenagers, did not have that restriction.

P10 also believed that video game play affected her eight-year-old daughter, explaining that a game she used for school frustrated her and she could not manage her emotions. She attributed these behaviours to allowing her daughter to play on screens, specifically a Leap Pad, when she was very young. Because of her daughter’s reactions to video games, her younger child, who was six years old at the time of the interview, was not allowed to play until he was four years old. She believed the delay in an introduction to video games was why he did not have as difficult of a time stopping video game play.

P7 struggled with deciding what her son could play. In her experience, “you start with the small stuff. And it’s like, okay, Star Wars isn’t bad, so then you are like, okay, maybe this next one’s not so bad. And then maybe this next one’s not so bad, and where do you draw the line?” Her son displays physical behaviours when he is frustrated with a video game. Although he will scream, throw things, and hit furniture, he had not tried to harm anyone or animals, which she understands are problematic behaviours. Now, when he begins to get upset while playing a video game, she has him pause the game to recollect himself. Her decisions are influenced in the moment by her son’s behaviour and reactions to a video game.

P1 thought that a child’s age should be a factor in deciding whether they could play a violent video game or not. She expressed that conversations with younger children were more difficult than with older children, so younger children would not understand the nuances of the violence on the screen. If P9’s son wanted to play more violent games, he would consider not only his son’s age, but his younger son as well. He understood that if he gave permission for his older son to play, then he was “unofficially giving permission” for his younger son as well. His older son is currently four years old and P9 thought he might consider violent video games when he is around six years old, but only if it were clearly pretend. He felt that he would still avoid graphic violence until age thirteen. If, however, his son wanted to play a 12+ game at

the age of eight, he would potentially allow it if his son understood what was and was not appropriate in real life. He felt as though children needed to be mature enough to play a violent game.

P2 acknowledged that “If you have older siblings, you’re going to get exposed to things faster.” Now that their son is twelve, P18 said:

we’ve kind of developed a pretty good trust with him...He always asked before he gets a new game and we kind of, say, you know, look at it...There’s no way we can keep up with [all the little games]. Well, I mean we probably could, but I don’t want to. So we can say hey, you know, is there anything we need to be worried about? [We] talk to him about it because we really do kind of trust him on there.

He also remarked, “I think over time we’ve kind of eased up on the violence thing.” With their younger children, aged three and four, however, he and his wife haven’t “let them do any of those” games with violence in them, “just in case” they’re too young to understand. P8 and her husband are wondering when they start their children being able to use devices, and with what device should they begin. She said, “I feel bad for [our son] because he has to wait longer until [his sister] is age appropriate.”

Parents like P1 frequently cited using a “gut feeling” when deciding if a video game was appropriate for their child. P12 just used her own judgement to decide for her child; she said that they went with what was comfortable for their child. P2 said that despite using his “gut feeling,” he defaulted to the rating system.

6.3.4.4 RATINGS: TO USE OR NOT TO USE?

Parents were asked if they ever used a video game ratings system to decide if their child could play a game. If P7’s twelve-year-old son asked to play a new game, her husband did the game review, which included looking at ratings. Since he was a software developer, he oversaw video game review in their house. She said, “I make his dad do all of the review of the game, of is it okay or is it not okay?” A few other parents mentioned that they looked at the ratings as a guide. Some parents reported that they knew ratings existed but rarely used them, a few of those parents said they forgot about ratings for video

games. Other parents, such as P4, P14, and P8, did not know a rating system existed. No parents interviewed for this study made all their decisions about whether or not their child could play a video game based on the game's rating. Parents who were aware of ratings often looked at them as part of a more comprehensive review of a video game when possible.

A few parents followed the recommendation of a video game rating if a game was rated for significantly older children than their own child. P6 and P7 mentioned looking at the ratings next to the game titles on the boxes or advertisement as part of their decision. P12 relied mostly on her judgement, but she did use age ratings to determine highly inappropriate content; her seven- and twelve-year-old children are not allowed to play anything with an age rating of eighteen or older. P10 admitted that she did not know much about the ratings. If she did not have a lot of time to decide and had to quickly review a video game, however, she might use them because "it's easy sometimes to look at a rating." She said, "Ideally I'd check it out myself, but when you're in these time crunches, you take short cuts."

Most parents who knew games had ratings might consider them, but they did not base decisions for their children strictly on someone else's assessment of a game. They compared game ratings to tv and movie ratings: some are accurate, but some are ok for their kid to watch even though they're "too young" for it. When asked about the rating system, P10 replied, "I don't know it off the top of my head, but like similar to videos and movies and stuff, I'm aware that there is one." P17 did not use the ratings for video games, though sometimes she did for movies. P19 echoed this sentiment, as she used the ratings for television shows that her children watched but was unaware of a video game rating system. Although P18 knew of the ratings, when asked if he used them, he replied, "not really. The ratings are not as really important to me as what's actually in the game." P18 also said he was not overly conscious of the rating system for video games; he did not know the ratings on his children's games. "I know what is in them, content-wise, but I have no ideas what the ratings are," he said.

Subjectivity of the rating system was a concern for many parents. P5 remarked that she knew the ratings are subjective, so they were not always helpful. "I'm aware of the age ratings," said P12, "but I just use my own

judgement.” ED “would prefer” to use the rating system, but its “not quite enough for [her] because they’re so subjective.” P15 knew there was a rating system but was not fully aware of or trusting of the ratings. “I should probably read up on it,” he decided. He said, “there are a lot of times where...even if it says it’s the right age for him, there’s things I consider worse than like, what they consider.” P2 said he likes the rating system for video games, though he noted that he was aware it is owned by a private company. Because of this, he uses it as a guide and knows it can be biased. He played violent games as a child if they were within his age rating, but at his friends’ houses he played games that were rated above his own age. P2 knew the gaming industry created its own rating system and felt as though “in general they have it right.” However, he remembered “begging my mom to let us rent a game that was rated M for mature and before we were 17 and she said no. But at the same time, one of my good friends had it and I played that whenever I was at his house.”

As a gamer himself, P9 was one of the few parents who knew about ratings. He declared, “I’m very aware of the video game age ratings and what at each rating you’re probably going to get.” In his experience, playing video games above the ratings’ suggested age level “didn’t seem to do any harm.” He noted that none of his friends turned out to be “sociopaths” and that “it was very easy to just turn on the TV and get very similar degrees of like violence or even sexual content in some cases.” He would “probably be fine with twelve and up at the age of eight because...it’s interesting to see sometimes the things that increase the rating.” Sometimes, “there’s a character who smokes or something like that” and he did not believe “children under the age of thirteen can’t know cigarettes exist.”

A few parents relayed that ratings were not yet a factor in their child’s video game play. “We haven’t gotten to the point where we have had to really look at the ratings yet,” said P16, but she “probably would not go based off the ratings” since she did not “use it for movies a lot.” There are movies she watched when she was her son’s age that she views very differently as an adult. However, she found that “the kids are watching these things from a little bit of a different lens.” She does not remember shooting, violence, or language in certain childhood movies, yet he does. Once, her son “picked up a game

and the content of the game wasn't violent, but it did have an older rating and the only reason I told him to put it down is because I didn't think that he would be able to play it." She thought he would get frustrated with the game because of his age and ability. P11 said his eight-year-old daughter does not watch or play anything above her age level. He doesn't specifically block that content, but she doesn't seem to have an interest in it yet.

6.3.4.5 PARENTS' EXPERIENCES

In interviews, a few parents considered that their own life experiences affected their decisions about video games for their children. Some also speculated that this might be the case with other parents as well. P11 contemplated, "I'm wondering if your split is gamer parents, like my brother [raising his kids where] gaming is normal in their world and those kids are more influenced by and it's just it's grown up." Some parents had lots of experience with gaming and others had very little; both proficiencies influenced parents' perspectives and decisions.

P4 and her husband do not want their infant son to play video games too early. She said her husband "got introduced very early and people at that time didn't know how it [affects] children yet." Her husband told her that "it was introduced too early to him so that's why he got really into it." She related a story where he told his mother that she allowed him "to watch TV early and "that's why [he] got into watching TV and playing so much." She is a parent educator who is concerned that video games will affect children's "social-emotional development." Children who play video games will "act like they are a hero in the real world" who simply comes back to life when they get hurt or "die."

P15 was cautious about his children playing video games, and said, "Because I've played so many games, I know how much like that can like take over your mindset." Remembering her childhood experiences with video games, P10 said, "We just got like so hooked, like all we wanted to do was play the Nintendo game to get beat the levels right. And we would get so mad we lost right, so my parents are like this is enough, and took it away. And ever since then I've just never been interested in video games." P5 described

playing PC games in college and believed it affected her mindset regarding video game play. She explained:

And for me, there were some unhealthy habits that came out of that, and so I remember, making the decision to not necessarily never play a video game again, but I went cold turkey for half a year, as I was preparing to try to become a mom. And so that, for that, for me, was really important, and I, I wonder, sometimes if that shapes my perspective of the kids playing video games right just knowing that I had, I mean Keri, I was spending so much time with World of Warcraft. When I sat back, and I was realizing what that was doing to my health, and you know just how much of our life that was, it was just such a change that I wanted to make, and I think was important for us.

Reflecting on her childhood, P8 recalled, "It was never part of the thing we did," so she and her husband were not comfortable allowing screens at their house at all. She admitted, though, "I feel bad that my kid is the left out one." She was conflicted, as she already worried about her children getting judged for being a minority, and their lack of video game knowledge also made them outsiders amongst their peers. Because of the colour of their skin, P8 did not allow toy guns in their home or allow her children to make the fake gun symbol "with their fingers." She defended this decision, saying "there are kids who literally die because somebody thinks they have a gun in their hand." She was concerned they would be targeted or in danger. She referred to the death of Tamir Rice, a 12-year-old African American boy who was shot and killed by police who thought he had a real gun (*Justice Department Announces Closing of Investigation into 2014 Officer Involved Shooting in Cleveland, Ohio*, 2020). She also explained that she wanted to create empathy in her kids and "violent games seem to go against that." P8 imagined that eventually they would permit video games in their home, but they'd start slowly with family-friendly games.

Two parents were concerned about violent games specifically. P9 said, "I have experienced and do believe that a frustrating game will increase aggression." P3 was employed as a law enforcement officer and a substitute teacher. She was convinced violent games led to violent behaviours, due to what she witnessed at the correctional facility where she worked. Based on

her experiences, she decided to allow video games in her home, but not violent ones.

6.3.4.6 SCARY IMAGES

Like many parents, P11 thought that when violence in games was scary, that could be a problem for children. P9 specifically expressed that he was not worried about violence with kids after playing violent video games; he was more worried about gore in the games or things that may be scary for them in games. He expressed that he would probably allow his eight-year-old to play a game rated for 12+ if he understood what was and was not appropriate, but he was also aware that a game with a higher age rating could scare his child. Violent video games had not been an issue yet in P17's household, as her young children had not asked to play anything she considered violent, so she was solely focused on the potential for a game to scare them. If in the future, her children did ask her to play a game that she knew to be scary, she planned to ask them why they want to play it.

Some parents banned particular games in their household that they knew would or did induce panic in their children. When P1's son was younger, he tried playing *Five Nights at Freddy's*, and it scared him. She declared that he was not as afraid now, at age twelve, but she still was not comfortable with him playing horror games. Therefore, P1 did not permit her son play horror games such as *Resident Evil*, a game he had previously asked to play. As a self-identified gamer, P2 played video games on the PlayStation with images that he considered frightening, but not in front of his children. He told his children, "It's scary," so they would not want to watch him play. "For my daughter," he said, "that's enough. Like if it's scary, then [she thinks] 'I don't want to be a part of it.'" He further explained, "I think that if she saw that she would have some concerns, and ... she might think about those images and that might scare her."

A few parents discussed frightening images on the screen and referenced movies that previously scared their children. P15 noted that his four-year old daughter got scared easily and mentioned children's movies that he believed to have scary parts, such as Disney's *The Lion King*. P15 said his son "gets freaked out when the monsters are like hitting me," in the computer

game they play together. “I try to anticipate how scary it is, you know, but sometimes I’m wrong,” he said. With these instances in mind, P15’s definition of a violent video game included if the game was scary. P17 noticed that her seven-year-old son was afraid of being scared, as evidenced by watching the movie Jumanji recently as a family. Before watching it, her son told her, “I don’t like scary, Mommy. I don’t want to see it.” She read movie reviews ahead of time to see if the movie was scary and tried to “push him a little” out of his comfort zone so that he is not so easily scared.

Not all interview participants’ children were afraid of frightening images on the screen. According to P17, her four-year-old-daughter, in contrast to her son, was not initially scared of anything. Her daughter came across a few scary videos on YouTube, so that is something of which she was aware. P17 told her daughter,

I think that might be a little bit scary. Let’s try to find another video to watch or something. They don’t seem scary at first, but then at night when we’re trying to go to sleep or things like that, we might think about it. It might scare us then, so I’d rather us just not watch it. And so I guess, in that sense, I do limit it, but I haven’t really had to.

P18 noticed that his twelve-year-old son seemed to like to be scared. He especially liked the “jump scare” aspect of movies and games. His son enjoyed playing Hello Neighbour for this reason, even though it made P18 uncomfortable. If his children asked to play a game, and “If it was like some sort of horror game, I’d want to look into it a little bit more,” he said.

6.3.4.7 SEXUAL THEMES

In their interviews, when asked about their concerns for video game play, some parents spoke of sexual images or premises. A game with sexual content was one of a few circumstances under which P2 would not allow his children to play a video game. “Anything with sexual themes, I’m not going to be super comfortable,” he said. He was one of many parents who shared this concern. When researching new games for his children, P18 looked for “red flags” such as sexuality that were included in the game play. “We try to steer away from” sexually related content, he said. P11 did not want his 8-year-old daughter to encounter sex through her video game play, especially if she conversed with

strangers online. He was concerned that she was “not old enough to have a conversation about, you know, inappropriate sexual stuff.”

Again, for a few parents, violence was not as looming of a concern as sexual content. When asked how apprehensive she was about violence in her son’s video games, P1 replied that she was more concerned about overt sexual themes that he may encounter. “I’m more worried about it being sexually explicit more than violent,” she said. P7 and her husband agreed that shooting in a game is okay, but they do not allow anything with sexual innuendo. She said they “generally try not to have the graphic like sexual type of activity...but the shooting and killing stuff I guess seems to be okay.” P16 said, “Anything with nudity I probably wouldn’t be okay with right now.” Provided that a game “doesn’t involve any nudity,” she was not concerned about it.

A few parents directed their concern over sexual content towards violence against women. P5 worried that games mimic “what we see in society.” She believed that there had been no reduction in violence against women in real life and was concerned that children were being exposed to sexual violence in video games. P5 feared that exposure to certain things, such as pornography, at young ages caused more harm than if they were older at the time of exposure. So far, P6 hadn’t “ever had to say no” to any video games that his kids wanted to play. If, however, they requested to play a game that depicted anything degrading to women, he would not allow that. P12 would not allow games with “anything that’s like sexual violence.”

6.3.4.8 TALKING TO STRANGERS

Another common concern among parents was their child’s potential access to unsafe strangers online. Some parents banned online gaming completely at their homes, while others allowed it but disabled chat functions or restricted the ability to play with people their children did not know. As P10 articulated, “You want to make sure you know who they’re playing with and what they’re doing” if your children are playing games online. Although P8’s children do not yet play video games, she had already thought about the online features of most video games. “The thing that scares me is the social capability, not as much the violence, because I wouldn’t even provide that to him,” said P8. “It’s more

the social aspect of talking to other kids...Now video games isn't just the actual game, it's opening yourself up to this universe of random people." When they do start playing, her children will not be allowed to play multi-player games. She compared the online experience to going over someone's house. She needed to trust that the other children were kind in their interactions.

Although in general P2 recognized that games were more fun if you could talk online, he was hesitant to let his daughter join a public chat at the age of seven. He explained, "Anything can happen if it's hooked up to a microphone. They could talk about anything, which I don't want them to hear. At some point, I probably will have to let that go and let them interact with people online." He also contemplated, "Maybe it would depend on the game, you know. If it's something like Super Smash Brothers open chat, it's probably not as bad as a shooter, a first-person shooter [game]." He speculated that the conversation between players in a violent video game could potentially be more inappropriate than in a less realistic or violent game.

P12 did allow her children to play games online, but she disabled the social component. She turned off the Roblox chat so her daughter could not chat with strangers. When her daughter was younger, she told her, "There's a lot of bad people on the internet and you never know who you're talking to." Now that her daughter was almost thirteen, she was more honest about "what kinds of dangers are out there." P5 did not allow any social gaming for her boys at all, "especially because of predators, and how unsafe online is." She referred to her sons having ADHD and autism, and how "maybe not having the same social skills as other kids" created an additional concern. She was uncomfortable with them playing online with others. At the time of the interview, she professed that her husband was trying to convince her to play Minecraft on a family server for a safe, social gaming interaction.

Some parents initially permitted the online chat components of video games but have since strengthened the controls. P13 also mentioned playing with strangers as a concern of hers. When her children mentioned playing online with other kids, she would tell them, "Remember, no personal information." There was an incident in her town where girls were lured by strangers online, so she was extremely cautious because of that situation. Concerned about who her children might be connecting with online, P13 said

“I removed Roblox at one point when there was security concerns, but then they talked me back into it, and I just increased their security settings.” “People who may be toxic is way way [sic] above violence on my list of concerns,” voiced P11. His eight-year-old daughter was not allowed to communicate with strangers online. He was “absolutely clear” that she “mustn’t play a game where she can communicate with men pretending to be children.” However, she “went around the rules” and had a real-life friend talk to an “eight-year-old girl living somewhere in France” on her behalf. This upset and worried him, because P11 was unsure if this person was truly an eight-year-old child or not, and there was no way to know for sure.

Many parents allowed their children to play online video games with family or friends only, with no access to individuals whom they did not know. P1 allowed her twelve-year-old son to play online, but only with his friends. She clarified, “He does not play with strangers. We don’t allow that.” P15 played games with his son but said he would fear his son using the virtual social component of a game. P14 supposed that it would be acceptable for their son to play online with friends, but not with strangers, even children. She said, “In theory, I would have met these kids.” Both P15 and P14 remarked that they would be more open to virtual aspects of video games if their son played with adults he knew, as those would be safe people with whom he could interact online. P17’s son would play Roblox and Minecraft with family and friends together online. She did not want him to play online with strangers and declared that she would always prohibit him from doing so. P19’s nine-year-old son played online with other kids, mostly friends he knew from school. She was aware that one day the chat feature in his games could be a concern, but right now she did not believe that he was paying attention to it. She was monitoring it, however, and had seen some other kids being rude or swearing in the chat.

6.3.4.9 INAPPROPRIATE LANGUAGE

Almost half of the parents interviewed for this study had concerns about their child hearing or repeating inappropriate words in their video games or from other players. Some parents did not allow their child to hear that type of language, while others had conversations with their children about not

repeating those words. A few parents did not worry much, as they decided that language was part of the experience.

P18 was worried about language in games and that inappropriate language would raise a “red flag” for any game that his children would like to play. “We lean away from anything” that has “fairly strong language,” he clarified. Other parents who thought language was a potential issue with video games had already heard it as their child watched or played and become concerned. Speaking about his son watching a video game stream, P11 mentioned that he “could hear the video” and his wife “was disturbed by some language that was being used in videos my child was watching.” Both P14 and P15 agreed that cursing was a potential issue in games their children might want to play. Even though he had never played it, their seven-year-old son “was so obsessed with Minecraft.” They let him watch YouTube videos of other people playing Minecraft but got concerned because “the teenagers in the videos are saying bad words.” They felt that it was not appropriate for their young son to hear how older children were talking, so they increased their vigilance and restrictions on his use of YouTube to watch video game play.

Some parents were aware of the potential inappropriate language issue but used this as an opportunity to have conversations with their children. P12 was cautious of the inappropriate language she heard in her children’s games. She tried to monitor what they were hearing and saying and categorized inappropriate language into “big swearing and little swearing.” If there was “big swearing” in a video game or on a television show, then she did not want her children to play or watch it. P1 was also more concerned about language her twelve-year-old son might hear than about the violence he might see. She stated, “We just tend to keep an eye more on the language rather than the violence of it. And we do remind him that he’s just not old enough to say those words yet.”

Other parents were not overly concerned about their children hearing inappropriate language during video game play. P6’s son played World of Tanks “with a platoon of teammates.” When he got frustrated, “there’s a few curse words, there’s the FUs, that come out.” Although P6 was dismayed by this, he said that his son has “never broken anything,” so he accepts the bad language as a “trade-off” for the benefits his son receives from playing the

game. Despite the intention of the chat to help teammates strategize, the players “cuss at each other.” P3 noticed that if her son played Fortnite, he would say inappropriate things. For this reason, she required him to leave the door open while he played so she could monitor what was being said during game play and intervene if necessary. P16 mentioned inappropriate words as well, though she wasn’t too concerned. She noted that her children listened to music with curse words, and they did not repeat them.

6.3.4.10 GAMES THAT ARE OFF-LIMITS

Many parents interviewed for this study cited two specific games deemed inappropriate in their home: Call of Duty and Grand Theft Auto. Parents’ concerns about these two games centred on issues of prostitution, drugs, violence towards law enforcement, and stealing. “I can’t even conceptualize allowing my children to play like, Grand Theft Auto or you know Call of Duty or things like that,” said P5. P7 said, “There’s the pretty obvious ones like Call of Duty because you’re shooting people, [and] Grand Theft Auto because you’re shooting and robbing people.” She proclaimed that her twelve-year-old son “doesn’t do Call of Duty or Grand Theft Auto...[they] were just not ones that I feel comfortable [with him playing]. I think Dad’s decided that’s not okay either, just because of some of the other stuff and not just the [violence].”

P3 echoed this sentiment when she pronounced, “I will not let him play Call of Duty or first-person shooter games that are very realistic.” P17 was also concerned about Call of Duty because of “the treatment of people in general.” She disliked that you “try and run over and [get] more points for hitting the prostitute.” In her words, “Not only is that violent, but it’s not okay, to evaluate somebody’s life more than somebody else’s.” She saw the problem with Call of Duty as twofold: violent and moral.

P6’s children did play some violent games, but none that concerned him. “Luckily I don’t think I’ve ever had to say no because none of them have been really bad, or in my opinion bad.” He continued, “But...Grand Theft Auto, they’ve never asked me to play that. Because I would say no. I’d draw the line there.” “The only game, I think that I would not allow them to play that has violence in is probably like the Grand Theft Auto because that has like stealing

and violence, and it has like hookers on the streets, and I feel like that's where I would draw the line," said P16. She also mentioned that she was not comfortable with the game because it included drugs. Referring to his daughter, P2 said, "If she was playing Grand Theft Auto, I would have a real problem with that."

Two parents considered not just a specific game or two, but the type of violence in the game. When the level of violence in a video game exceeded what was typical in his opinion, P18 was concerned about his children playing it. He explained, "If you're doing like torture kinds of stuff or other things that goes a little bit beyond just running around shooting at each other, those are the ones that kind of make me nervous...Are we putting ourselves into a headspace of something beyond just a friendly game?" P10 said she had heard "there are some really violent games that they're playing out there now." She did not know the name of the game, but one where "they shoot cops" would be off-limits for her children.

6.3.5 IMPACT OF THE COVID-19 PANDEMIC ON VIDEO GAME PLAY

This section discusses interview responses that answer Research Question 5: *Has the COVID-19 global pandemic altered parents' perceptions of and/or decisions about violent video game play?* While most parents did stick to their rules about which games their children were allowed to play, nearly all parents reported that their children played games more often and for longer periods of time during lockdown. A few parents declared that they eased up on their limits regarding which games or type of games their children could play.

Although her kids did not ask to play different games during lockdown, P12 admitted that they played a lot more hours than they did before the pandemic. "My motto, especially since this whole pandemic craziness started...whatever gets you through the day!" Before the COVID-19 pandemic, P1 estimated that her son played one hour, sometimes more, after school. She said that her family was "doing whatever we can right now" to get through the pandemic. That included allowing her son to play as often as he wanted, provided his schoolwork was completed. Prior to the pandemic, P1's son mostly played Fortnite, though when he was around ages five to eight, he

played what she considered “non-violent” LEGO and Marvel-themed superhero games. She explained,

We were a little more strict prior to COVID, as to his screen time and what video games he could play. In the last year and a half that has changed quite a bit. Now that seems to be one of the main ways that he is social with his friends. So we are a lot more lax with screen time and the types of video games he plays.

P1 was one of two parents interviewed who relaxed their household rules and allowed their twelve-year-old sons to play Call of Duty. Both parents decided it was a way for their children to connect with friends while everyone was quarantined. “I said no for a long time,” said P13. “And then, it was one of the games that he could play online with his friends, so I gave in during the pandemic to that one.” After allowing her son to play, P13 was surprised that playing Call of Duty was not a problem for him. Like many parents, P13 allowed her children to spend more hours on devices when the pandemic began. She supposed, “What were you going to do in the pandemic?” P13 was concerned about her son becoming isolated. She explained, “He wasn't allowed to see anybody, at least he was connecting with his friends...It's definitely different. I never would have pictured allowing my kids to spend as much time on screens, as I have.” At the time of the interview, her son had continued to play Call of Duty and Grand Theft Auto, both games she had previously not permitted. She considered her son to be a gamer now, which surprised her. “I wouldn't have thought he was going to be a big gamer until the pandemic...I don't know if it was the age or if it was the pandemic, [or] the combination of the two,” she said.

Other parents also mentioned social connection as a reason for their child's increase in video game play during the pandemic. The spring of 2020 was when P15 began playing Stardew Family with his son. He thought his son “might have been more interested in video games because he had less interaction with kids his age.” He did attend school the entire time, but there were no after-school activities and only eleven children in his class. They also did not have free play other than outside recess. “Because the classes didn't cross-pollinate,” said P14, “there were fewer kids for him to hang out with.” P18 wondered if his son's increased interest in online video games was due to

a desire to connect with others. He observed, “I would say that's probably a bigger shift he's made in the last six months or so... he wants to play with other people more than just play by himself...especially during COVID, he had a much bigger group of people he played with too, because everyone was stuck at home.”

Many parents contributed their children's increase in screen time during the pandemic to occupational changes in 2020, which included both new positions and increasing demands on their previous job. During the height of the pandemic, P3 “was around so many people all the time [and] would have to sit at the hospital with people and COVID,” and could not visit her sister, mom, and nephew. Although she did not originally want to allow it, P3 relented and allowed her son to play Fortnite and Minecraft online with his cousin. She decided that it was a way for them to connect since they couldn't see each other in person. P17's children had more screen time both at her house and at their dad's in 2020. “In the beginning of quarantine last year. I was just starting a new job, and I was doing it from home, so I was trying to, you know, adjust.” She said, “In any given week I used to be a little bit more flexible with [tablet time], but I will say that when the pandemic hit and they came home with tablets. And when school [was] requiring so much tablet work, that changed my perspective.”

Prior to the pandemic, other than “Tech Free Thursday,” P5's children could choose whatever they wanted for their tech time, whether it was a show or a tablet app. As someone in a human resources position, P5 talked about how busy she was at home when the pandemic hit “because of the 9000 policy changes and all the people freaking out.” Both she and her husband were “working nonstop... [and] were pretty much always working or dealing with the kids, and so, by default, they ended up just kind of getting more electronic time.” Tech Free Thursdays disappeared, and because of the increase in tech time, they tried harder to monitor and regulate what their children were doing on their devices.

P14 said, “I don't anything changed for before versus after the pandemic other than us getting more lax [sic] on the screen time limit. Essentially my kids are watching more TV.” She said they were home, but “I still have to work.” P10 noted that her children had “gotten a lot more screen time than they have

in the past.” After a few months, “We made a conscious effort,” she explained, “to scale back because we noticed that my daughter in particular, she would start acting up whenever I was getting ready to go into a meeting,” because she knew she would get extra screen time.

Not all parents were worried about the increase in screen time for their children, however. Although P2’s daughter played more video games at the time of his interview than she did before the pandemic, it was not a problem for him. “I am not interested in reeling it back in right now, because right now, this is something that we can enjoy together,” he said. A positive outcome of the pandemic, for him, was the “ability to talk to other people about my daughter playing video games, and I don't feel as if they'll judge me as much as much.” P16’s views on violent video games changed over the past few years. She admitted, “I said was a huge advocate for not letting my kids play violent video games and I would be that person who gave a parent like the side eye, but now I really I don't even care.”

6.3.6 THE MEDIA NARRATIVE AND OTHER PERSPECTIVES

This section discusses interview responses that answer Research Question 4: *What narrative do media headlines mentioning violent video games portray and what are parents’ perceptions of media reports?* Most parents who were interviewed did not remember seeing anything in the media recently about violent video games. Many of them, however, did remember media coverage following a few school shootings in the United States. P15, P17, and P14 noted that they used to see more in the media about video games and violent video games but had not noticed any coverage lately. Most parents did not place much value on media reports, regardless of the content.

When they read about video games causing children to display violent behaviour, many parents did not believe that to be the truth. “What I seem to come across [in the media],” said P7, was “the stereotypical violent video games make violent kids and you shouldn’t let your kids play any of that.” She remembered articles declaring that “all of the mass shooters play violent video games,” attributing that to their despicable behaviours. She said, “I was always sceptical of that just because there are so many culminating factors and situations” that contribute to an individual performing such horrific acts of real-

world violence. P7 recalled the mass shooting at Columbine High School in 1999. The media reports of the shooters, that “obviously they played violent video games and that was what” caused their atrocious behaviour. She sarcastically declared, “It was not the fact that they were bullied or that they like didn’t have friends; it was the violent video games and that’s why.” P7 noted that she had not “paid much attention on purpose” to current media, because “so much of it seems to be lacking in good data, good science, it’s all just speculation.”

P12 specifically remembered the media connecting violent gaming to the school shooting at Columbine Elementary in Littleton, Colorado. She had not seen anything about the particular games that her children played. P17 also remembered the media coverage of the Columbine school shooting in 1999. She remembered that the media message blamed video games, which she did not believe to be a reasonable explanation. She explained, “In my head, if a kid is going to pick up a gun and shoot a school, [there are] issues with parental supervision,” trouble with the family dynamic and possible mental health concerns. She does not believe that violent video games are the cause of school shootings, but she also doesn’t think young children need to be playing violent video games. “That’s a different story,” she said.

P5 also mentioned the tragedy at Columbine. “I remember being in high school when Columbine happened and how like world shattering it was,” she recalled, “and now it's just we probably don't even hear about all of them.” Other parents echoed this sentiment, that mass shootings used to be in the news a lot but were not mentioned anymore. P13 remembered a “big uproar about the violent games” in the media “years ago,” though she had not “seen anything recently.” “I know people were trying to say that it was causing violent outbursts,” she said. She believed the connection to violent behaviour had been disproven, that “violent people are violent, games or not.”

When asked what she had seen in the news about violent video games, P16 stated that she had not seen anything in the media regarding violent video games. Similarly, P10 replied, “It’s not anything I’ve looked at recently, [though] I’ve heard it somewhere.” After further reflection, P10 remembered the media questioning violence in video games and whether it was connected to school shootings. She declared that she saw articles with “arguments on

both sides,” and believed it was “similar to the arguments out there that violent movies don’t go out and make people do things.” Not believing there was a direct correlation between screen violence and real-world violence, she wondered, “Where is it coming from? Is it mental health? Is it other family issues? Is it poverty?” Similarly, P17 thought, “In my head, if the kid’s going to pick up a gun and go shoot people at a school, there’s a lot more issues there than video games.” She said, “I just don’t know that I believe that video games are the cause of some of the horrible things that people say they are”.

P8 admitted, “Video games scare me!” She was trying to figure out “where to draw the line” as a parent when it came to her children playing video games. She did not remember seeing any recent media, but she did remember past news stories that claimed violent video games affected children. Although P8 did not allow her four- and seven-year-old children to play any video games at all, she did not believe that children would become serial killers if they did play violent video games. As a non-white female, her view on the matter considered race as a factor. She said:

I never bought the bullshit [sic] excuse of white males, white boys who shoot up places...that it’s because they played a violent video game. I don’t think that it causes them to be violent...I always hated that because you’re making excuses for these people, for the way they’ve been raised, or whatever, you know, their life circumstances, but you’re not giving that same accommodation to black males.

P8 was not the only parent to wonder if media reports differed depending on the racial ethnicity of children involved in the story. P19 also alleged racial undertones to shaming busy, working, lower-income parents and children who played violent video games. She provided her personal opinion on the matter. “From what I have read,” said P19, “I personally don’t think it’s an issue. I think it has a very minimal impact on what kids actually do in real life.” She supposed violent video games were being “used as a cultural touchstone.” P19 believed the negative coverage in the media was meant to shame parents whose kids play violent video games, parents who are doing their best. She saw negative coverage as an attack on lower-socio-economic, and therefore busier, parents.

P9 recounted media reports from “when Jack Thompson tried to bring down Grand Theft Auto...because of all the harm it would do.” He asserted that the backlash against Grand Theft Auto didn’t make sense, as he played the game with friends as a teenager and saw no negative effects of playing. When he was a child, P9 mentioned that “the news media was screaming at my parents that video games are bad,” and “that had a pretty big impact on my upbringing.” Believing that “video games were dangerous, and they were going to change [his] personality,” his mom banned him from playing video games at home, though he continued to play at friends’ houses. Eventually his mom “eased off quite a bit on her viewpoints” and now “admits that was a scary time with regards to that because this thing was brand new and...they felt like they didn’t know anything about it, and what long-term effects that would have.” In addition to violent behaviour, one parent talked about media reports that discussed the issue of gambling within video games. P9 was aware of the concern surrounding “microtransactions” and “loot boxes” in video games, which he said, “really are a gambling mechanic.” He felt that the gaming community “should crack down on that.”

P5 remembered media reports of shooters who played “really violent video games,” but thought, “there are plenty of people who play like Call of Duty...and they are not out there, with some agenda to hurt any other human being. My husband and one of his best friends are a good example. They will pretty much play any video game, it can be super nerdy it can be you know, a shoot 'em up game, and they are both like gentle giants.” However, she also remembered “this article coming out about like a baby that passed away because their parents were watching or playing World of Warcraft and who were like neglecting this child.” She said, “I don't remember all the details...[but]...I want to say the kid passed away, [or] the kid got taken away.” This particular story shocked her, especially since she was playing World of Warcraft herself at the time, and she could sometimes hear a baby’s cries through the headset. P5 and her husband “had been trying for years” to start a family, so it really bothered her to witness that couple ignoring their baby while they were playing. Therefore, her concerns were not surrounding the violence in games. Instead, the media article had her question the potential addictive nature of video games. She discussed these concerns earlier in the

interview in relation to her children, one who had ADHD and one who she stated was potentially on the autism spectrum.

Some parents paid little or no attention to mainstream media. One parent, P3 stayed away from news altogether, as she felt it was hateful, specifically towards law enforcement. A few sought the information they wanted from sources they trusted. As far as news, P6 said, “I specifically watch what I want on YouTube. I don’t get anything about that kind of stuff.” P2 spent time on gaming sub-Reddits but stated that he had not seen any news from the non-gaming public. If he did encounter an anti-gaming article, though, he supposed he might read it out of curiosity. Having a background in psychology and being a gamer himself, P2 said he had “chosen not to interact with gaming news from outside gaming journalism spheres.” He was sceptical of many studies that do not appear to have valid methods.

6.3.6.1 BENEFITS OF GAMES, EVEN VIOLENT ONES

A recurring theme among interviews was the positive outcomes parents perceived that arose from their kids playing video games, even those games with violent content. This section explores the benefits that parents introduced and discussed in their interviews. Parents cited social benefits, stress relief, reinforcing family connections, and developing their child’s knowledge and skills.

6.3.6.1.1 MAKING FRIENDS AND SOCIAL CONNECTIONS

One such story was told by P7, whose son had always struggled in school, at least in part due to his anxiety, depression, and ADHD. He moved homes and changed schools three times before and during COVID, which further isolated him. By playing online, though, he met a kid from another state. They played Minecraft and Fortnite together, had Zoom meetings to hang out, and learned about each other’s lives. P7 embraced this friendship because her son had not made any friends yet at his new house. She mentioned that one day the kids might meet in person. She said, “at one point they were planning for this summer, which totally wasn’t going to happen, to try to meet either in Michigan or Oklahoma or somewhere in the middle.” Her son “was a little sad [because]

it's still not necessarily safe for everybody to travel. I don't know about [friend's] family and vaccines and all that fun stuff." She was hoping that the boys could try again to meet up next year.

Other parents saw video game play as a twenty-first century way for children to socialize. Video games were the main way that P1's son was social, and she believed that video games helped her son make friends. She saw video games as a great source of social interaction and said that "it's a source of socializing." P2 also appreciated the social component to playing video games online, comparing the experience to being social while playing games in an arcade. He believed games are more fun if you can talk online with others who are playing. He enjoyed "playing with my daughter [and] checking out what she's doing" in a game. P12 allowed her twelve-year-old daughter to play online with her friends from school. P12 relayed how her daughter and her friends "FaceTimed" each other at the same time, while they played. It appeared to her that it was similar to them playing a game together in person.

As discussed in *7.3.6: Impact of the COVID-19 Pandemic*, many parents stated that they allowed their child to play more video games during periods of lockdown because it allowed them to interact with friends. P13 was one parent who expressed this sentiment. Her children spent more time online during quarantine in 2020 than they had previously. Since they could not see their friends in person, she figured "connection is connection, no matter how it's done."

6.3.6.1.2 RELIEVING STRESS

P10 was not a gamer, but admitted, "Maybe I just don't understand. I know some people say it's a de-stressor." As a college professor, she said, "I've heard of people talking about putting...textbooks online into games and making a game to teach students...This whole education aspect, maybe there's something there."

In his twenties, P11 "would use computer games to de-stress." He remembered, "I'd come home from work stress to play a game to relax." He would play Tomb Raider 1, which was a more difficult game to play. He found it to be a relaxing activity, and once he played, he found that he could easily solve his problem the next day. The way he saw it, "Game stress is temporary.

Game stress evaporates very, very, very quickly because it's make-believe." He was able to "transfer work stress into game stress." In his experience, "Game stress is easy to switch off, [whereas] work stress takes a long time to switch off." P4, who used to be a gamer herself as a teen, said that she could see both pros and cons of gaming, and as a pro, it could "take the edge off." P15 also used video games in college to relieve stress. P14 played World of Warcraft, what she considers to be a violent game, when she was younger. She said it helped her escape tough times.

P11 noticed that if he allowed his daughter to play a video game for half an hour, it changed her mood in a positive way. He also believed that video games were a way for adults to continue playing and having fun. "Adults don't play," he said, as "society tells them to stop playing at around age twelve or thirteen and grow up." Reflecting on why his daughter enjoyed gaming, P11 said, "I think the attention and love and control of your own space and so gaming is an area where my kid feels it's her thing, and she can have control over that." He also wondered if the video games that she played increased her ability to develop empathy towards animals and people, since she was used to bad things happening to them in her games.

6.3.6.1.3 CONNECTING WITH FAMILY

Before they moved to a safer neighbourhood last year, P3 explained, "the rules were: you don't open the door; you don't look outside; everything stays locked; you don't go in the backyard; you don't do anything; you stay inside if you're at home." In their new city, "not only does my mom live there, but he can go and ride his bicycle all over town and do whatever." She described their new community as very small, where "everybody knows where he lives, everybody knows who he belongs to, [and] where he goes." She clarified that "the video game consumption by him is very different, depending on where he's at." In a safer environment, her son is free to leave the house, play outside, and meet with friends. In their previous home, however, he connected with his friends through video games. She said, "I've kind of relaxed a little bit. I let him play Fortnite. I let him play Fortnite with his cousin... I want to promote that relationship, because he is an only child...If they're not getting to play together in person, I want them to be able to interact with each other at least every day."

As previously revealed, a few parents talked about playing video games with their children, in person. P15 enjoyed playing video games such as StarDew Valley, as it was a game he played when he was younger and now enjoyed playing with his son. P2 and his daughter spent quality time together playing video games, and he intended to continue that trend as long as she wanted to play video games with him. One parent explained a positive sibling relationship benefit of video games. P12 explained that her seven-year-old son would sometimes play with his big sister and her friends, which she saw as a good thing for their relationship.

6.3.6.1.4 EXPANDING KNOWLEDGE

P6's son's favourite game is World of Tanks. Although his son cannot always control his emotions when playing, P6 realized that "He's good at it, you know. He's really talented, and the good thing that can come out of it is the eye-to-hand coordination that he's got." The game has also gotten his son interested in history to the point where he took and aced AP History in school last year. "He's learning something and he's taking interest in something that he wouldn't otherwise," noted P6. "And even beyond the tanks, he's actually interested in politics and in the world."

6.3.7 SUMMARY OF INTERVIEW FINDINGS

To decide if their child could play a violent video game, parents sought advice on the internet; they Googled it, watched videos on YouTube, and checked websites for ratings and comments. Overwhelmingly, though, parents went with a gut feeling based on their perception of the game and their child's age, personality, experience, and other individual factors. Of the nineteen parents who participated in an interview, seventeen parents were flexible with their rules about violent video games. There were two outliers who placed strict limits on their children's video game play. One parent did not allow any violent games in their household, and the other did not allow any video games at all. Parents who had children 12 or older were more relaxed with their rules about violent video game play than those who had younger children. As their children got older and wanted to play more games, they altered their rules to fit their

family situation. Although they expressed concern about violent video games affecting children, the parents interviewed for this study were less concerned about violence in their children's video games than they were about other features. They were more apprehensive about sexual themes in games, talking to strangers on the internet, child predators, and whether a game is scary for their child or not.

Regarding media coverage of violent video games, parents remember negative reports around the time of the Columbine High School shooting in 1999 and in the few years after but couldn't remember many news stories recently. During the COVID-19 quarantines, some parents allowed their children to play games they previously deemed too violent, as they understood that playing online was how their children were continuing to make social connections with friends and family whom they could not see during lockdown periods.

6.4 MEDIA CONTENT ANALYSIS FINDINGS

Using the parameters described in *5.5.2: Media Content Analysis Procedures*, NexisUni returned a total of 431 articles posted online between 1 October 2020 and 30 September 2021 using the key terms "video game" or "computer game" and "children." These 431 articles were narrowed down to 53 articles for analysis. The following sections describe how articles were coded, and the results of the sentiment and thematic analyses.

6.4.1 SENTIMENT ANALYSIS

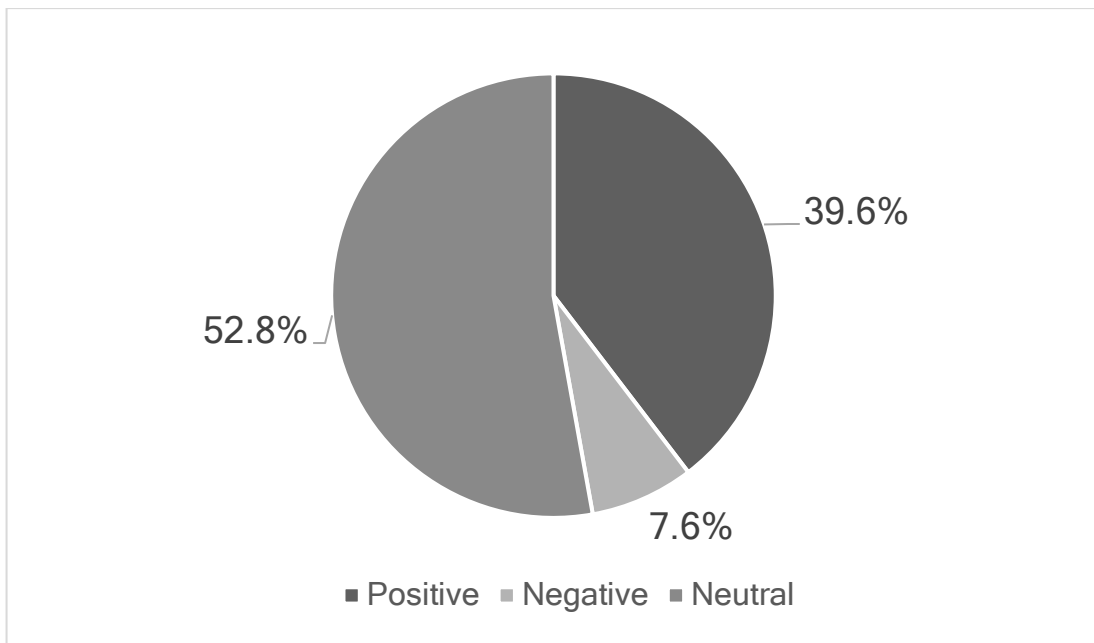
After results were narrowed to the final 53 articles, the content of the articles was coded using sentiment analysis as outlined in *5.5.3.1: Sentiment Analysis*, and separated into the categories of positive, negative, and neutral. Articles coded as *positive* highlighted advantages of playing video games. Articles coded as *negative* did not view video games favourably. Articles coded as *neutral* had no apparent bias either for or against video games. The sentiment analysis resulted in 21 articles coded as viewing video games as positive, four as negative, and 28 as neutral. The content of positive, negative, and neutral articles is as follows:

- Positive articles discussed the benefits of video games on well-being, social connection, or family bonding.
- Negative articles linked video games to crime, gambling, or racism. One of these articles was written specifically about a game's creator going to jail, but it was decided that parents would view this as a negative of video games.
- Neutral articles discussed current laws or game releases, gave opinions or advice to parents, or presented equally positive and negative sides of an argument surrounding video game play.

Figure 6.33 demonstrates the breakdown of articles coded as positive, negative, and neutral.

Figure 6.33

Sentiment Analysis of Media Articles



Positive articles comprised 52.83% of the articles. These 21 articles coded as having a positive view on video games consisted of the same recurring themes. Ten of them addressed current events, specifically the COVID-19 pandemic, with all of those mentioning using video games to make connections. Seven of these articles also specifically referenced video games being beneficial to a person’s mental health during the pandemic. Nine of the articles that viewed video games in a positive way indicated research to support this conclusion, and seven of the articles also stated a personal experience or opinion. One positive article discussed healthcare and potentially using video games to treat patients’ mental and physical health. Two articles addressed a negative event, a comment by the 45th President of the United States, Donald Trump, who was in office when this article was written in 2021, by disproving it. These articles were titled “Video Games are Not Responsible for Mass Shootings” and “Console Yourself, Video Games are Here to Stay.”

Articles coded as negative in this analysis comprised 7.55% of the results. There were no recurring themes throughout the four articles that viewed video games negatively. One article mentioned racism in an in-game chat. One included video game violence when discussing research that

revealed childhood exposure to violence within the home or community increased violent behaviour as an adult. Crime, the video game rating system and desensitisation were also each mentioned once. One article, “Loot Boxes Should Be Regulated,” discussed loot boxes within video games leading to gambling addictions.

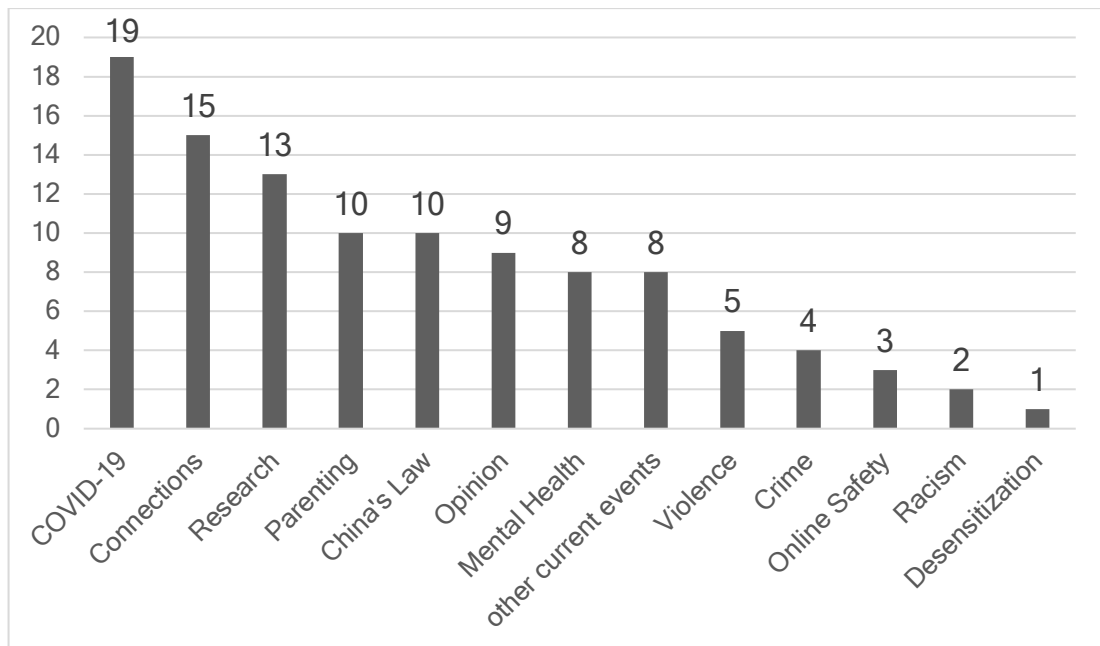
Neutral articles comprised 39.62% of the results. Of the 28 articles coded as neutral, that took neither a positive nor negative stance towards video games, 25 of them were reporting on a current event. Ten of these mentioned China’s restrictive gaming law and six discussed the COVID-19 pandemic. Seven articles in the neutral category were directed towards parents. One discussed parents’ struggle to manage children’s video game time during the pandemic and referenced Devorah Heitner’s book *Screenwise (2016)*. Another compared being a mother during the pandemic to past generations, explaining how parenting trends have changed. Two articles directed towards parents addressed online safety and offered tips to help your child stay safe online. One article titled “Gaming Has Benefits and Perils - Parents Can Help Kids by Playing With Them” encouraged parents to play video games alongside their children.

6.4.2 THEMATIC ANALYSIS

After coding for sentiment, the content of the articles was also coded by theme. Many articles were coded into more than one theme category. Reading not only the title of the article but also its contents determined which theme or themes it represented. **Figure 6.34** shows the results of the thematic analysis.

Figure 6.34

Thematic Analysis of Media Articles



COVID-19: Articles about COVID-19 comprised 35.9% of the news media in this analysis. These articles suggested that playing video games was a way to make connections with friends and viewed video games to improve mental health during quarantine during the pandemic. These articles also gave advice for parents, dispelled information relating violent video games to crime and violence and included a mixture of opinion and research.

Connections: Using video games to make connections was mentioned in 28.3% of the articles. Most of them, eleven out of these fifteen articles, referred to the COVID-19 pandemic. One-third cited research that supported playing video games to make connections with others.

Research Studies: Research studies were referenced in 24.5% of the articles. Most of them, nine out of these thirteen articles, used research to support video games as a positive activity. One article cited research that was negative towards video games. Three articles used research that resulted in a neutral view of video games. Four of the articles citing research also included advice

to parents about their children playing video games, either setting limits or understanding that video game play was not a negative activity.

Parenting. Ten of the articles (18.9%) were specifically targeted to parents, mentioning parents, parenting, learning, or “your child” in the title. These articles focused on managing screentime, the COVID-19 pandemic, keeping your children safe online, educational video games, and defeating “gamer’s thumb” if your child plays a lot. This article, titled “4 Pro Tips to Help Your Child Defeat Gamer’s Thumb,” also discussed implementing screentime limits. One article about the pandemic discusses being a mother during a pandemic in the 21st century and how parenting trends have changed over time. Another article titled, “10 Parenting Strategies to Reduce Your Kids’ Pandemic Stress,” includes allowing your children to play video games online with friends while quarantined at home. Online safety was a theme in two articles aimed at helping parents keep their child safe from online predators. One article, “Gaming Has Benefits and Perils - Parents Can Help Kids by Playing With Them,” encouraged parents to play video games with their children in order to ensure their child benefited from the games they played.

China’s Laws. During the period of this study, China passed a law restricting children’s video game play. In 2021, Beijing restricted minors’ playing time to three hours a week, and the Chinese government suspended approval of online video games. Of the articles in this analysis, 18.9% referenced these new laws.

Opinion. There were nine opinion pieces, comprising just under 17.0% of the total results. Seven of these articles were coded as positive and two were coded as neutral, presenting both positive and negative aspects of video games. Four of the seven positive articles utilised research to support their opinion.

Mental Health. Mental health was discussed in 15.1% of the articles in this analysis. Five of these articles included information from research and two included author’s opinions. Five of them touched on current events, all of

which mentioned COVID-19. Four of these articles discussed how making connections through video games created a positive impact on players' mental health. Two of these articles were directed towards parents and parenting decisions, with one mentioning the rating system and one mentioning violence.

Other Current Events: Ten articles, 15.1%, discussed current events other than COVID-19 or China's new video game restriction law. These articles discussed gaming stocks, new game releases, a discussion of eSports, Ally Financial's interest in the game Animal Crossing, and Gucci selling for video-game-themed clothing.

Violence: Video games were connected to real-life violence in 9.4% of the articles. Four out of these five articles cited research to support their claim, either connecting or disproving a connection between video games and violence. Three of the articles mentioned current events, three gave an opinion, and three also pointed to crime rates. Two of these articles discussed using video games to make connection, contradicting the idea that video games perpetuate violence. One article mentioned a rating system, one specifically included mental health, one cited COVID-19, and one wondered about video games increasing players' desensitization to violence.

Crime: Articles mentioning crime composed 7.6% of the total analysis. Out of these four articles, three mentioned research or violence. Two discussed current events, one being COVID-19, and two authors offered their opinion. One article discussed making human connections through video game play, and one offered the idea that desensitization to violence occurs when people play violent video games.

Online Safety: Articles discussing online safety were 5.7% of the results. These three articles included parenting, current vents, and COVID-19. One was an opinion article, and connections and the rating system were each mentioned once.

Racism: Of the articles analysed, 3.8% of them touched upon racism in relation to video games. One of these articles referenced current events, and the other one was a letter to a game maker about racism in their in-game chat.

Desensitization: Only one, or 1.9%, of the articles in this analysis examined desensitization to violence. It was an article that viewed violent video games negatively, referencing crime and violence. The author of this article also used a research study to support their claim.

6.4.3 SUMMARY OF MEDIA CONTENT ANALYSIS FINDINGS

The media content analysis found that more than half of articles published online during the time of this study had a neutral stance on violent video games, and less than eight percent of articles viewed violent video games negatively. The most common topics for articles were current events, specifically COVID-19 and a new video game law in China. Over a quarter of the articles discussed using video games to make social connections. Very few articles, only five, discussed violence as being related to video games.

6.5 SUMMARY OF CHAPTER

Each method of data collection revealed different aspects of parents' perceptions, decision-making processes, and the impact of COVID-19 and the media. The survey found that parents made many decisions based on their own personal opinions, were more likely to have video game restrictions on younger children, and those who had experience with violent video games were less likely to be concerned about violent behaviour with violent video game play. Both the survey and interviews found that there were many parents who either didn't know about rating systems or didn't use them. Interviews also revealed that parents' concerns included internet safety, desensitization, and mental health, yet only twelve articles total mentioned any of these topics. The COVID-19 pandemic was an important event worldwide during the time of this study, and that was evident in the findings of the survey, interviews, and media content analysis. The next chapter will discuss the meanings of these findings more in depth.

7. DISCUSSION

7.1 INTRODUCTION

This chapter discusses the results that the analysis of the survey data, interview data, and media content and relate these to the current academic literature. The chapter is structured around the research questions, which are restated below.

1. What attributes of video games do parents consider violent?
2. What are parents' perceptions of the impact of violent video games on children?
3. How do parents make decisions regarding their children's access to violent video games and what are their concerns?
4. Has the COVID-19 global pandemic altered parents' perceptions of and/or decisions about violent video game play?
5. What narrative do media headlines mentioning violent video games portray and what are parents' perceptions of media reports?

This chapter also explains the findings within the context of play and neo-ecological theory.

7.2 EXPLORATION OF RESEARCH QUESTION 1: WHAT ATTRIBUTES OF VIDEO GAMES DO PARENTS CONSIDER VIOLENT?

This study revealed that there is not one agreed-upon definition of a violent video game. When asked what constituted violence in a video game, answers varied greatly. This finding is consistent with criticisms of research on violent video games (D. A. Gentile & Anderson, 2003), which was previously discussed in *2.6.4 Criticisms of Previous Studies*. It is difficult to conduct comparable research if not all studies are using the same parameters due to a lack of a precise definition of violence in a video game.

There are games such as those in the Mario Bros. franchise that display cartoon violence, where fighting or injuring another game character is clearly

fictional. The characters in these games are imaginary and outlandish. Most do not even resemble human beings. Many people interviewed for this study do not consider these types of games to be violent. This is supported by current research such as Wang (2020), who noted that “the killing in Mario Bros is more of an artistic form. When children kill monsters, they do not associate violence with the game. The game is entertaining and relaxing.” (p. 2). As discussed in *Chapter 2: Literature Review*, in the 1970s and 1980s, Atari would not release games that involved violence towards others. The only violence in games released by Atari was violence involving inanimate objects. This is in line with what most respondents surveyed and interviewed for this study believed about depictions of violence in video games, that cartoonish violence was acceptable and not of much, if any, concern to them.

Representations of blood and gory scenes in a video game troubled many parents in this study. Over half of the interview participants and 14.6% of the survey respondents included “blood and gore” in their definition of a violent video game. Some parents would allow a game involving shooting or killing, provided there was no realistic blood as a result. A few of the parents interviewed remembered playing and watching games such as *Mortal Combat* as children. They remarked that they were not bothered by the gory scenes at the time, that it is only now, as adults, that they look back and realize the excessive violence that was portrayed in those games. These parents understand that children may not be bothered by gory or bloody images in games, but they are still not comfortable with their children playing them. Parents repeatedly make rules for their children based on what “feels right” to them. Ashbarry et al. (2019) found that blood and gore in a video game did not increase a player’s physiological arousal or aggressive cognitions, as only players who routinely played video games with blood and gore had a higher level of physical arousal during play, a result also found by Bösche (2010). These findings suggest that personality is a factor in how an individual responds to video game violence (Ashbarry et al., 2016).

7.3 EXPLORATION OF RESEARCH QUESTION 2: WHAT ARE PARENTS' PERCEPTIONS OF THE IMPACT OF VIOLENT VIDEO GAMES ON CHILDREN?

Over half of survey respondents either strongly or somewhat agreed that violent video games caused children to exhibit more violent behaviours. One can conclude that even though parents who played violent video games as a child were less likely to agree and more likely to disagree with that statement, overall, parents held the belief that violent video games cause children to behave violently. One interview participant believed that violent video games were part of a larger societal problem. P5 claimed that society is seeing an “ever-increasing proclivity towards violence [and] we’re not seeing any kind of reduction in violence against women.” She noted that, “We have so many just the [sic] gun deaths [and] we become incredibly desensitized to the gun deaths and the school shootings.” P5 expressed her disgust that the United States was “really violent for being more advanced and being a first world nation.” She felt that violent video games perpetuated her concern. As discussed in *2.8 Media Narrative*, the public believes danger is increasing although it is not due to the media’s coverage of violent events (Benekos & Merlo, 2014; Romer et al., 2003).

Ecological systems theory (Bronfenbrenner, 1979) describes the levels of influence on a child. Those closest to a child, in their home and school, are most likely to influence the child’s behaviour and development. A child is not immune, however, to outside influences in their neighbourhood and larger community. Events and political climate in their city, state, and country affect what a child sees and experiences, though indirectly. These factors can distress others in the child’s microsystem, which in turn affect the child. These are the influences which bother parents, perhaps because they cannot control these things. One thing parents can control is what happens within their home. Parents in this study felt the need to control their child’s exposure to violence in video games. However, not all parents remained strict about their anti-violence stance as their child got older.

Interviews revealed that parents do not believe violent video games are something children should be playing. However, they were unwilling to commit

to a completely *causationist* mindset (Grimes et al., 2008), as they were unsure if violent video games were inherently harmful in all cases. They were concerned about seeing violence on a screen possibly leading to children re-enacting those violent behaviours. Parents discussed violence in the real world, and how they wouldn't want children to be exposed to violence in any way. Some wondered if real-life violence was being mimicked on the screen made it more detrimental to a child. Many wondered if those without appropriate parental guidance would be negatively affected by violent video games. Grimes et al. (2008) refer to these as *contributionist* mindset, in which one believes that good parenting, choices, and society can mitigate the negative effects of violent media.

This mindset demonstrates the third-person effect, whereby one assumes others are more influenced by outside factors such as violent media (Conners, 2005). One study that asked parents about violent television discovered that most parents are concerned about the influence violent media has on other children, but not their own (Hoffner & Buchanan, 2002). Walkerdine (2007) found that parents believed video games could cause children to be violent, but those beliefs never included their own children. Their beliefs extended to children, specifically boys, in other households. These parents saw violence as a societal problem, but not one that existed within their own family. In their opinion, violence was produced from a lack of supervision and regulations surrounding their video game play. Grimes et al. (2008) recognized that this "argument allows us to understand the bully and the criminal as a failure of the family (not ours, of course, but those allowing these 8- to 9-year-old children to consume violent media)" (p. 85). This same phenomenon was found in this study.

When survey respondents were asked if violent video games caused children to exhibit more violent behaviours, 54.9% of survey respondents either somewhat or strongly agreed with that statement. However, when asked if violent video games caused their own child to exhibit more violent behaviours, only 18.6% of survey respondents somewhat or strongly agreed. Of those parents, 40.7% of them strongly disagreed that violent video games caused their child to exhibit violent behaviours, compared to only 13.1% who strongly

disagreed that violent video games caused children to exhibit violent behaviours in general.

Interview participants also echoed this sentiment. Although parents were hesitant to say that violent video games were acceptable for children, they largely did not believe violent video games caused violent behaviour for their own children. Parents who said violent games were not something children should play often allowed their own child to play some violent games. They noticed no difference in their child's behaviour, concluding that violent games were only harmful for some children, but not their own. Some interview participants had older children who were allowed to play violent video games during COVID, something that was not asked in the survey. The shift in parental decisions surrounding video game play during COVID could explain the difference. It is possible that parents initially held a belief that violent video games were a cause of violent behaviour, but experiencing own child played violent video games with no violent real-life effect changed their perspective.

Olson et al. (2008) discovered that even adolescent boys were susceptible to the third person effect. Boys aged twelve to fourteen did not believe that violent video games influenced them in a negative manner. They felt that they accurately understood the difference between video game violence and real-world violence. They were apprehensive, however, about younger children playing certain games or viewing particular scenes in games, especially those that involved sexual themes or inappropriate language. The boys worried that younger children might not be able to distinguish fantasy from reality and would possibly use inappropriate words after hearing it in the video game (Olson et al., 2008).

7.4 EXPLORATION OF RESEARCH QUESTION 3: HOW DO PARENTS MAKE DECISIONS REGARDING THEIR CHILDREN'S ACCESS TO VIOLENT VIDEO GAMES AND WHAT ARE THEIR CONCERNS?

Although violence in games concerned parents, violence alone was not a quality that would necessarily cause a parent to ban a video game in their home. Parents worried about whether a game was scary for their child, had

sexual themes, inappropriate language, and if their child could potentially talk to mal-intentioned strangers. These were non-starters for most parents; if they found a game had any of these qualities, they did not permit their child to play it. Nikken and Jansz (2006) found that parents were more likely to employ restrictive or active mediation strategies on their children's video game playing time if they feared it would have negative effects on their child's behaviour. This survey revealed that more mothers (73.9%) than fathers (51.3%) placed limits on their child's violent video game time, which is consistent with research that found mothers were more likely to mediate their child's video game time by imposing restrictions and discussing content with them (Nikken & Jansz, 2006).

The following sections discuss five themes that were persistent throughout the interviews and surveys regarding parental decisions about violent video game play for their child. Surveys and interviews revealed that parents had some knowledge and opinions on the rating systems and often used the internet to amass information. Parents' personal video game experiences, concerns about morals, sexual content and predators, and what they felt were pertinent factors about their child all influenced their decisions.

7.4.1 RATING SYSTEMS

Employing Bronfenbrenner's (1979) ecological systems theory, video game rating systems occur at a macrosystemic level, and they may determine a child's access to video games if parents decide whether to purchase a game for their child based on these rating systems. The political structure of a country in which a person resides has authority over their decisions, whether directly or indirectly. For example, if laws discourage or prohibit buying a video game for a child because of its violent content, a parent might be more reluctant to do so. The United States and the United Kingdom both have rating systems to advise consumers when purchasing video games. In the United Kingdom, legislation regarding children's access to violent video games began with "selective ignorance" in 1985 (Robinson, 2012). Guidelines became stricter in 1994 following developments in the United States, and in 2007, a universal statutory framework was adopted. The video game industry in the United

States has created its own ratings board, the Entertainment Software Ratings Board, or ESRB (Robinson, 2012).

A survey conducted by the Entertainment Software Association in 2021, the same year the survey and interviews for this study were conducted, found that 86% of parents in the United States are aware of the ESRB ratings (Entertainment Software Association, 2021). Results from this study produced lower numbers. Survey data revealed that 72.6% of parents in the United States were aware of the rating system used for video games. Additionally, 17.5% of parents reported that they did not know about a rating system, and 9.9% replied that they were unsure of their rating system knowledge. The ESA survey also concluded that 76% of parents use ESRB ratings regularly when making decisions about acceptable video games for their children to play (Entertainment Software Association, 2021). Data from this study revealed lower numbers on this aspect as well. On this survey, only 51% of parents in the United States reported knowing all the ratings on their child's video games, while 29.4% knew the ratings of some of their child's video games, and 19.6% did not know the ratings of any of their child's games. One can conclude that if 51% of parents know all the ratings on their child's video games, then they are the parents who are using the ESRB ratings regularly when making decisions for their child.

The survey found that parents were less likely to buy a game for their child rated above their age if they were ages five through eight and more likely to buy a game above a child's age level if they were older than nine years old. Among parents who had five-, six-, seven-, or eight-year-olds, less than 46% reported buying a game rated above their child's age level. By age nine, the number of parents who reported buying a game above their child's age level jumped to 58.6%. From this survey data, age nine appears to be a point at which more than half of parents decide it is acceptable for their child to play a game rated for older than their age level.

Rating systems are meant to guide parents in making decisions about games that may or may not be appropriate for their children. However, if only 72.8% of parents knew about a video game rating system and over half of parents were either not using this rating system or only using it occasionally, then the rating system was not effective at reaching all families. For the

parents who were unaware of a rating system, then an approach to publicise the system would be beneficial. For the parents were aware of the rating system but did not find it useful, it would be prudent to revise the system with parental input in a way that will be more beneficial to parents making decisions about video games for their children. Bushman and Cantor (2003) found that parents preferred content-based ratings rather than age-based ratings, as their opinions varied as far as what was appropriate for their children at each age. This study had similar results. Both surveys and interviews revealed that even if parents knew the ratings of their child's games, they did not always abide by ESRB's recommendations.

This study found that parents' knowledge of the rating systems was only a piece of what they used to make decisions for their children about violent video games. On the survey, when asked how they made decisions about violent video game play for their child, many respondents wrote in an answer relating to their "gut feeling" as to whether a game was appropriate for their child.

7.4.2 INTERNET SEARCH

Nearly one-quarter of the survey respondents answered that they looked for information regarding video games on the internet. In interviews, parents also said they turned to an internet search for information if they were not familiar with a game. Many households have easy access to the internet, whether on a mobile phone or a computer, so this is a quick, easy way to investigate video games. Parents spoke about looking at reviews, images, and videos. A couple parents mentioned the website Common Sense Media, a few talked about looking at ratings, and some watched YouTube videos. There was no consensus on one specific location parents utilised to make their decision.

If parents searched the internet for information, including ratings, on games their children requested to play, there were many website options. One game that parents often discussed in interviews was Minecraft. On the main webpage for Minecraft, the only rating information is found by scrolling all the way to the bottom of the homepage (Mojang Studios, 2024). Before seeing the rating information, there are images of different Minecraft games and community-created mods, which are accompanied by the symbols of the

platforms on which they can be played but not ratings (Mojang Studios, 2024). Common Sense Media, another website parents utilised for information, gives Minecraft a rating of 8 and older (Chapman, 2011). Parents and children on the Common Sense Media website, however, view Minecraft as being appropriate for ages 6 and older. The ESRB rated 47 versions of Minecraft, and all versions received a rating of E-10+ for Everyone aged 10 and older due to fantasy violence. Of those 47 versions, 24 of them had no online component and 23 included a potential avenue for online interaction with other users. Both the ESRB and Common Sense Media rated Minecraft for children older than parents and children rated Minecraft. The online component is an important part of the rating system, as parents in interviews often expressed concern about their children interacting with strangers online. It is possible that parents were more likely to allow their younger children, under the age of 10, to play a version of Minecraft that did not contain any online interaction, resulting in their assessment of the game being appropriate for ages 6 and older. Parents also mentioned the game Fortnite. To find the rating on the Fortnite website, one must scroll all the way to the bottom of the homepage, past the plethora of mods, Fortnite news, trending games, and upcoming versions (Epic Games, 2024). There is a rating next to each clickable version, but it is a small white letter on the black background, and there is nothing explaining that it is a rating (Epic Games, 2024). It is unclear if parents would recognize it as such.

Many parents interviewed explained that the information they found online was their first consideration when deciding if a game was appropriate for their child. Sometimes parents would review a game online and decide their child was not allowed to play it. Other times, they would permit their child to play it, possibly on a probationary basis. The websites that parents mentioned: Common sense Media, YouTube, and general searches, provided some information, but the reliability or completeness of the information was inconsistent. To the researcher's knowledge, there are no studies exploring parents' use of the internet when making decisions about their children's access to violent video games. Therefore, it is not possible to compare this study's data to previous research.

7.4.3 PARENT'S EXPERIENCES AND CO-PLAYING

The way in which parents view violence depends on their own cultural context and experiences, including whether an individual has experienced interpersonal, structural, or symbolic violence (Flynn & Mathias, 2023). Vélez-Agosto et al. (2014) argued that culture belongs in the microsystem of the bioecological systems theory (Bronfenbrenner & Morris, 2006), as cultural practices are present in families, neighbourhoods, and schools. The geographical location of a child's home may greatly affect whether they are playing violent video games. Just as how what young people view and understand what they see on the screen varies depending on their own personal cultural contexts (Alloway and Gilbert, 1998, p. 97), the same is true for their parents.

One interesting finding from the survey resulted from the question about parents' experiences. Parents who played video games more often as a child were less likely to place limits on their children's video game time, as parents who played violent video games as children were less likely to place limits on their child's violent video game play. This discovery is similar to a finding by Walker et al. (2018), who discovered that parents' violent video game play positively impacts their child's violent video game play. The opposite was also true; parents who played video games less often as a child were more likely to place limits on their children's video game time. Perhaps this is because parents who played video games have fond memories of playing and wish for their children to have those experiences. It is also possible that that parents who had limits on their video game time as children felt they were fair, thus enacting the same limits for their own children.

However, in the interviews, two parents mentioned becoming "addicted" to video games when they were younger, so they were more cautious about their children's time spent playing video games. There were also two parents in the interviews who did not allow their children to play violent games at all. One parent did not play video games as a child and admitted that she did not see the need for her children to play video games at all. Her children did not play any video games, yet she understood that it was a social aspect of

childhood today. This parent explained how she was struggling with how to safely allow her children to start playing video games.

Some parents discussed playing violent video games with their child, especially if it was a game they had not previously seen or played. This was one aspect of violent video game play that Walker et al. (2018) investigated in their study. The researchers found that when parents and their children play violent video games together, it mitigated a child's desire to play that game at home and thus potential negative effects of a violent video game. However, co-playing did not necessarily decrease instances of a child playing that game at a friend's house. Other research has shown that typically parent-child play occurs during care-giving activities and that the quality of this parent-child play is determined by the parent's and child's personalities (Roopnarine & Davidson, 2015).

Parents who felt most confident operating current gaming systems were the most likely to report knowing the rating on all their child's video games. In contrast, parents who felt the least confident operating current gaming systems were more likely to report not knowing the rating on their child's video games. This indicates that parents who are familiar with gaming systems, including the ones their children use, are also familiar with the video game rating system. It is possible that an understanding of gaming systems can increase a parent's knowledge of the games their children ask to play. Walker et al. (2018) found that parents who have a greater knowledge of the ESRB rating system for video games were more likely to play video games alongside their child. This appeared to mitigate any potential negative effects of violent video games on children's behaviour (Walker et al., 2018).

7.4.4 MORALS, SEXUAL CONTENT, AND UNSAFE ADULTS ONLINE

Many parents were troubled about games that crossed moral lines. Grand Theft Auto (GTA) was mentioned by a few interview participants as being a game that crosses a moral line for them. This game was the most mentioned game that parents would not allow their children to play. As discussed in 2.2.2 *The History of Violent Video Games*, there are many iterations of GTA. In one version, the player is a gang member who commits premeditated crimes using weapons and vehicular violence. In GTA: Vice City, player's avatar may use

drugs or alcohol, and the games involve killing gangsters, civilians, police officers and prostitutes (Morris, 2012). Common Sense Media agrees, as the organization rates these games as being appropriate only for ages 18 and older and explains why. The review for GTA IV on Common Sense Media states, “Murder, sex, drugs, drunk driving. Not for kids” (Saltzman, 2008), and has an ESRB rating of Mature. GTA III’s review tagline on Common Sense Media is, “Ten years after original release, it’s still not for kids” (Morris, 2011). Research on boys’ perspectives of violent video games found that although boys participated in violent acts on screen in GTA, they did not wish to do so in real life, as they knew someone could die or they could go to jail (Olson et al., 2008).

Parents also expressed concern about their child being exposed to sexual content in video games. Again, GTA was discussed as inappropriate due to sexual content. At least one GTA game has a strip club where players can fondle half-naked women’s bodies (Saltzman, 2008), which disturbed parents who mentioned this feature. Olson et al (2008) found that some older teens wanted to protect younger kids from sexual themes in games, including prostitutes in GTA and kissing in The Sims.

Parents also worried more about online interactions in their child’s video games than they did about the violent aspects. They worried about their child being exploited online due to interacting with unsafe, unknown individuals. Neo-ecological theory (Navarro & Tudge, 2022) includes the virtual microsystem in which individuals participate, such as those through chat rooms and online video game play. Parents’ priority concern for their child’s safety reveals a need for effective parental controls on all games, as they appreciated the ability to disable chat rooms and to restrict play to only those whom their child knew.

7.4.5 CHILD FACTORS

In interviews, almost all parents spoke to the idea of “knowing their child.” That included their age, personality, behaviours, and neurodivergent diagnoses such as ADHD or autism. Parents relied on observing their child and making decisions specifically for each child. They also spoke to the idea of some children understanding that video games are fake, and others not being able

to differentiate between real and imaginary worlds and characters. The bioecological systems theory (Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 2006) demonstrates that each child is influenced by a multitude of factors including their innate Person factors. As previously discussed in 2.4.3: *Types of Play*, Carlson (2016) noted that, “Most children are quite adept at recognizing that play fighting is not real fighting” (p. 1187). Parents interviewed for this study believed that this was true, increasingly trusting their children’s ability to distinguish between play and real fighting as they got older.

This survey found that parents were more likely to place limits on their child’s video game time if they were ages five through eight, and fewer parents placed restrictions when their child was nine years old. Nikken and Jansz (2006) also discovered that a child’s age affected a parent’s mediation strategy, as parents were more likely to mediate their child’s video game play if their child was younger. Parents with older children relaxed their rules around gaming as their children got older and more mature.

Parents of children with ADHD expressed concern about their child playing video games in general, not just those with violent content. These parents were more concerned about their children with ADHD playing video games than they were about their other children without an ADHD diagnosis. They noted differences in how their child reacted to the games, including an inability to control their emotions during game play. Parents were also concerned about their child’s difficulty transitioning to another activity when it was time to turn off the video game. This is an interesting finding. As discussed in 2.5.5 *Mental Health and Neurodiversity*, current research reveals mixed results regarding the effect of video games on individuals diagnosed with ADHD. Mazurek and Engelhardt (2013a) determined that boys with ADHD developed more problematic video game use. Chan and Rabinowitz (2006) also linked an hour or more of video game usage per day to higher instances of intense ADHD symptoms. However, the study was unable to determine if the increase in video game play led to an increase in ADHD symptoms, or if ADHD symptoms led to an increase in video game play. Ferguson and Olson (2014) did not find video game usage to lead to delinquent behaviour of adolescents with ADHD, despite an increase in stress and trait aggression. Kovess-Masfety et al. (2016) did not find a link between ADHD

and video game usage. Although parents in this study raised concerns about their children with ADHD, research has yet to prove that video games, violent or not, are more problematic for individuals with ADHD.

7.5 EXPLORATION OF RESEARCH QUESTION 4: HAS THE COVID-19 GLOBAL PANDEMIC ALTERED PARENTS' PERCEPTIONS OF AND/OR DECISIONS ABOUT VIOLENT VIDEO GAME PLAY?

Survey respondents were asked whether their child's time spent playing video games during the COVID-19 pandemic had increased. Of those who responded, 72.5% agreed that their child's video game playing time had increased during the pandemic. Other studies (Cowan et al., 2021; Ribner et al., 2021) conducted at the time found similar results. However, only 24.1% of respondents felt that their child's *violent* video game playing time had increased during COVID-19. The survey data show that although nearly three-quarters of parents were allowing more video game time during the COVID-19 pandemic, only about a quarter of parents were allowing more violent video game time. This appears to reveal that most parents continued to place restrictions on violent video game play in their homes during the COVID-19 pandemic, despite the increase in game playing time.

Interviews, however, disclosed a different narrative. Parents in this study, particularly those with children over age 9, discussed how their rules around violent video games relaxed during the first part of the COVID-19 pandemic and quarantine in the spring of 2020. Although parents were initially concerned about online interactions and violence in the video games their children wanted to play, those fears became second to the concern that their children needed social interaction. When schools closed their physical doors, seeing friends and family in person was not allowed, and parks became off-limits in March 2020, parents worried about their children. Families struggled to fill their days inside their house, unable to leave. Parents talked about their children asking to play online with their friends, and they hesitantly agreed. At that time, they decided that playing online with friends was better than not

playing with or seeing friends at all, a finding also uncovered by Cowen et al. (2021).

Of the parents who cautiously agreed when their children asked to play violent video games with friends while quarantined, all reported that they observed no negative outcomes. Coyne and Stockdale (2021) note that “longitudinal research is rare, and existing studies have allowed little room for individual variability in the trajectories of violent video game play” (p. 11). In conversations with parents about COVID-19, they reflected solely over the past year. It is unknown if their opinions about violent games affecting their children have changed since their interview.

The COVID-19 pandemic required a different way of thinking about socializing and interacting with peers and engaging with others, as educational institutions and settings shifted to remote teaching and learning (Crick, 2021; Watermeyer et al., 2021). Cowan et al. (2021) discovered that during the COVID-19 pandemic, digital play afforded children “the possibility to connect with others while being physically separated, helping children’s play endure, adapt and respond to restrictions” (p. 14). This study found that parents allowed more screen time during lockdown periods, and some ignored their gut feeling that violent games would be harmful to their children and were surprised to discover they were not. Instead, they discovered that these games enabled their children to play with their friends while safely staying socially distanced. This allowed parents to relax about the content in their children’s games. It also showed parents that online video games are a vehicle for connection among people, no matter the content. Parents reported listening to their children talk to friends, figuring out how to work together in games to defeat the enemy or accomplish a task.

The difference between the survey and interview data could be for several reasons. In the survey, most parents’ youngest school-age child was under the age of 9. In interviews, many parents also talked about their older children. It is possible that restrictions on violent video game play were lifted in many homes for older children, but perhaps not for younger children.

7.6 EXPLORATION OF RESEARCH QUESTION 5: WHAT NARRATIVE DO MEDIA HEADLINES MENTIONING VIOLENT VIDEO GAMES PORTRAY AND WHAT ARE PARENTS' PERCEPTIONS OF MEDIA REPORTS?

When asked specifically about media in interviews, parents often replied that they remembered seeing discussion about violent video games in the media years ago but not recently. This is consistent with what was discovered by both the McKernan (2013) study discussed previously and the content analysis in this study, that very few media articles mentioned violence. The process of finding media content was expanded multiple times to try and capture articles related to violent video games. The keyword terms (“video game” and “computer game” and “children”) were changed nine times, and the NexisUni search did not return many results. When the word “violent” was included in the search, only ten articles were found for the entire year. The search returned very little about violent games in general. The search was expanded by omitting the word violent, and one can conclude that a parent searching online for “violent” video game information would not find much. Even in the final search used for this analysis, out of 431 articles, only 53 were relevant to this study. Out of those 53, only 5 mentioned violence.

The survey revealed that about a third (35.8%) of parents believed that social media portrayed violent video games negatively, and similarly, about a third (34.8%) believed that social media portrayed violent video games positively, and a similar proportion (29.4%) of parents believed that social media portrayed violent video games in a neutral manner. That is nearly a one-third split between negative, positive, and neutral depictions of violent video games on social media, displaying no consensus about the way in which violent video games are portrayed on social media platforms. Regarding the news media, however, 64.4% of parents reported that the media portrayed violent video games negatively, and only 12.1% believed the media portrayed violent video games positively. From this data, the news media appeared to be a negative source of information according to parents' perspectives.

In this analysis, however, the media articles expressing an opinion about video games were 77.8% positive. The authors of those articles had

positive personal experiences with video games and over half wrote articles explaining why opposing research was incorrect. These articles all pointed out how newer research disproved older research that blamed video games for causing violent behaviours. This illustrates that the negative opinion of video games is persistent, though even the media is now leaning towards a positive outlook on video games and attempting to correct previous misinformation.

Only 7.6% of the articles about video games portrayed them as negative. One of the articles that viewed video games unfavourably specifically discussed loot boxes as being the negative aspect; that article did not mention any other facet of video games. There is an ongoing body of research potentially linking loot boxes within games to gambling addiction (Spicer et al., 2022; Zendle et al., 2019; Zendle & Cairns, 2018). Another negative article discussed a research study that linked childhood exposure to gun violence to violent behaviour in adulthood. The author of this article briefly summarized the results of the study, which appeared to combine video game gun violence with real-life gun violence. However, when other researchers have studied those factors separately, they found that video game violence and real-life violence are not comparable (Adachi & Willoughby, 2011; Allen et al., 2018; Anderson & Bushman, 2001; Bushman & Huesmann, 2006; Valadez & Ferguson, 2012).

Nearly one-fifth of the media articles in this analysis directed their information to parents. In both the survey and interviews, nearly all parents mentioned that they searched the internet for advice, so these articles would have potentially caught their attention. Two of these articles advocated for parental choice in creating and enforcing limits on video games as opposed to the government making laws regarding what children can and cannot play or when they can play. One article suggested that parents play video games with their children, which is something many parents in interviews mentioned that they do at their house. Parents also overwhelmingly expressed concern for their children's safety while playing video games online. However, only two (5.66%) of the articles in this analysis focussed on online safety. This is an area of concern for parents, yet that concern is not largely reflected in the news media.

The category of desensitization is of note, even though there was only one article that mentioned it. In interviews, parents frequently stated they were concerned about children becoming desensitized to violence from playing violent video games. Although parents may be worried about desensitizing children to violence, that concern is most likely not influenced by the media. In addition, the research cited in that article does not factor out video game usage separately from gun use in the home or community.

7.7 EXPLORATION OF FINDINGS IN THE CONTEXT OF PLAY

As examined in *2.4.1: What is Play?*, to be defined as play, an activity must be intrinsically motivated, freely decided upon, enjoyable, include elements of make-believe, and actively involve the individual. Violent video games include all five of these elements. Many of the positive outcomes of play examined in *2.4.2: Benefits of Play* were explained by parents, particularly when discussing their choices during COVID-19 lockdown periods. Early childhood experts and practitioners agreed that play experiences were highly important during the COVID-19 global pandemic (Knight et al., 2023). Many of the types of play defined by researchers and considered in *2.4.3: Types of Play* are evident in previous research on violent video games and in parents' understandings of why their children desire to play violent video games (Kutner et al., 2008; Olson, 2010).

Research on play concludes that Rough and Tumble play is an essential form of play for children's healthy development (Carlson, 2016; Humphreys & Smith, 1987; Panksepp, 1993; Pellegrini, 1989). Benefits include the development of social competence (Pellegrini, 1987) and skills such as taking turns, understanding boundaries, and social problem-solving (Pellegrini, 1988). Children of all genders participate in Rough and Tumble play when they are very young, though it may be that boys partake in physical play slightly more frequently than girls (Scott & Panksepp, 2003). Carlson (2016) noted that, "As boys age, the mentoring opportunities available within rough and tumble play are imperative for them, and this play style provides them ways to express needed intimacy in socially acceptable ways" (p. 1187). Rough and Tumble play is often halted in a school setting (Tannock, 2008), where children

spend most of their waking hours. As shown in this study, violent video game play is often halted by parents of young children as well. Parents admitted fearing that it would cause their child to become more aggressive. Some parents, however, did witness changes in their child's behaviour after playing video games that did not contain violence. Although the cause of the change in their child's behaviour was not related to violence in the video games, this amplified their fears.

Just as Rough and Tumble play rarely leads to true aggression (Humphreys & Smith, 1987; Pellegrini, 1988), the same appears to be true for violent video game play. Despite concerns over increasing societal violence as more children play violent video games, violent acts have steadily decreased since violent video game access has increased (Markey, Markey, et al., 2015). Parents in this study who permitted violent video game play did not see a negative effect on their children. They did not experience their children engaging in aggressive behaviour or acting out in any way after playing violent video games. Perhaps violent video game play is a socially acceptable way for children, especially boys, to continue to participate in a version of Rough and Tumble play, as suggested by other research (Bösche, 2010; Olson et al., 2008). Bösche (2010) suggested that "playing violent video games might be construed as engaging in positively valenced playful fighting behavior" (p. 139).

Many other types of play outlined by Hughes (2002, 2013) were evident in this study. The video games mentioned by parents in interviews have features of variety of types of digital play. The level of violence in these games varied greatly, and as previously discussed, parents had different ideas about what constituted a violent video game. All games mentioned are examples of social play, as they are environments where players must follow a set of rules established by either the game developers or other players (Marsh et al., 2015).

Expressions of deep play, mastery play, and role play can be found in games such as GTA and Fortnite. They are examples of mastery play, as both games also involve players mastering the digital landscape to accomplish goals. As discussed in *7.4.4: Morals, Sexual Content, and Child Predators*, GTA was not a game parents wanted their child to play due to moral concerns,

though research has shown that children knew it was not real (Olson et al., 2008). Two popular Fortnite mods mentioned in interviews were Fortnite: Save the World and its spin-off Fortnite: Battle Royale. Save the World requires players to defend the world from zombies, whereas Battle Royale pits players against each other for survival. In both versions, players use guns and other weapons to kill their opponents, though the cartoonish violence is not bloody or gory (Chapman, 2017). The player's GTA or Fortnite avatar, a digital representation of role play, can die, a digital representation of deep play. Call of Duty is another game mentioned in interviews that explores deep play, mastery play, role play, and recapitulative play. A search on Common Sense Media rates 21 Call of Duty games as 18 two are rated 17+ one as 12+, and all versions involve pretending to take part in a war. In addition to those, fantasy play can be seen in Spiderman and Star Wars. Players pretend to be super heroes in both of those, a digital representation of fantasy play (Marsh et al., 2016), and parents mentioned that their children played them "to beat the bad guy." All of these games are also digital representations of war play and weapon play.

Creative play, exploratory play, and imaginative play are evident in sandbox games with open worlds and creative mods, such as Minecraft, Roblox, digital art apps, and Fortnite: Battle Royale, which includes a creative mode (Chapman, 2017). According to Common Sense Media Minecraft is a sandbox-style game where users can create their own worlds and set their own goals, with infinite possibilities in the multiverse. Some worlds are peaceful gardens, while other worlds are plagued by a zombie apocalypse, and all features are customizable. Players must grow and harvest resources, which can include killing non-realistic-looking animals, which also constitutes digital recapitulative play (Chapman, 2011). Parents of boys in this study were more likely to report that their child requested playing games that contained violence. Interview participants with female children remarked that their daughters enjoyed creative games as opposed to violent ones.

Additionally, a common theme of sanctioning more screen time and video games that were previously not allowed in their homes was the idea that during periods of lockdown due to the COVID-19 global pandemic was that children could communicate with their friends online when they were not

permitted to see each other in person. This is a direct example of children engaging in communication play. Parents in this study worried about their children becoming isolated during that period and appreciated that children could use voice chats and in-game texts on online platforms to connect with each other. Many parents resigned to letting their children play new video games, even if they were violent, and communicate online and out of a fear of isolation and declining mental health.

7.8 EXPLORATION OF FINDINGS IN THE CONTEXT OF ECOLOGICAL SYSTEMS THEORY

Just as a child's development is influenced by each of the systems around them, parents' decisions are also influenced by the systems around them. Neo-ecological theory, based on the ecological systems theory (Bronfenbrenner & Ceci, 1994), explains how the systems have evolved to include a digital microsystem, while also acknowledging the importance of Person factors. The findings of the survey and interviews revealed that a child's personality and tendencies, the people in various systems surrounding a child, and changes over time all factor into parents' decisions about violent video games. The following three sections discuss these ideas further.

7.8.1 PERSON FACTORS OF CHILDREN AND PARENTS

If a child is genetically predisposed to exhibit violent tendencies, the environment in which they live may determine whether those violent tendencies are realised. It would be disingenuous to assume that a child prone to violence would immediately become violent after playing a violent video game. It is necessary to consider many other aspects of the child's life and how they interact, as a child's Person characteristics are both an indirect producer and a product of development (Bronfenbrenner & Morris, 1998, 2006). The American Academy of Pediatrics lists "psychosocial factors, neurohormonal imbalances, genetic predisposition, and mental illness such as ADHD and autism" as potential factors that contribute to an individual exhibiting aggressive behaviour (Jeewa, 2017). A child's disposition to be angered easily or to be laissez-faire, their desire to play violent video games,

their skill level playing violent video games, and whether they are passively or actively engaged in experiences affect the proximal processes that influence the child, in accordance with their inherent forces, resources, and demand characteristics.

The American Academy of Pediatrics (2020) also reflected that when determining the degree to which violent video games possibly cause aggressive or violent behaviour, current research has not adequately studied the “potential moderator effects of ethnicity, socioeconomic status, or culture” (p. 2). Consequently, it is unknown how those factors affect a developing individual’s interactions with and reactions to violent content in video games. Li et al. (2020) discovered that parental rearing patterns affect an adolescent’s level of aggression after playing a violent video game.

7.8.2 CONTEXT IN WHICH VIOLENT VIDEO GAMES ARE PLAYED

Attitudes and opinions are affected by where you live, as one interview participant acknowledged. P11 experienced different cultural mindsets between the UK where he lived, and Oklahoma, where he stayed for work. Parents’ attitudes towards violence and gaming affect their child’s opinions and access to violent video games. Gaming systems in the home are often purchased by parents or other adults close to the child, but regardless of who purchases the system, parents ultimately choose whether to have video games in the home. Furthermore, parents’ views of violent material in video games determine the types of games their children are allowed to play. Some children may be introduced to violent video games at a younger age than their older siblings. Parents may not have permitted an older sibling to play a specific violent video game at the age of five, for example, but because they are now playing it at age eight, their younger five-year old sibling may be playing that same violent game.

Another influential microsystem for children is that of peers, who exist within settings directly influencing the child at school, in the neighbourhood, or any other setting identified as one in which the child spends a large amount of time with other people (Bronfenbrenner, 1979). Parents determine their child’s neighbourhood and school, and thus their peers, based on the location of their home. If the other children with whom the child interacts are playing violent

video games, the child may also desire to play these violent video games. If children on the playground are acting out scenes from violent video games, the child may want to play and understand the game to participate with the group. When other children at school are drawing, writing, and talking about a violent video game, the child learns and experiences the game through their peers. For example, if children are not permitted to play violent video games in their own home but a neighbourhood friend brings one over, a child is then permitted to play the violent game. Additionally, they may watch an older sibling play violent video games with friends. P2, P8, P9, P13, P17, and P18 all mentioned their children playing games at a friend's or neighbour's houses that they did not own at home. In these examples, children are exposed to violent video games even though parents are not in favour of the play.

The video games children play at home could also be considered a mesosystem, in that it can involve influencers from different microsystems such as a sibling's friends and neighbourhood friends who attend a different school. Furthermore, when siblings play a video game together, it affects the family dynamic. The interactions between siblings within a video game may be different than their interactions outside of it. Moreover, parents may also join in and play a video game with their children, as many parents interviewed mentioned co-playing as a family activity. Therefore, video games can be a connecting force within a family.

Experiences within a microsystem may also be connected to experiences farther removed from the child. One example of this is the occupations of a child's parents or neighbours. If a neighbour is a reporter or journalist, for example, then the child may overhear conversations about current events about which they may not have otherwise known. A neighbour's job brings the outside world, the exo- or macrosystem, into the child's microsystem.

The decisions that parents make regarding violent video games for their own households are also part of a child's mesosystem. Attitudes about violent video games from outside a family's immediate surroundings interact with ideas within the microsystem of the child's home. Parents will hear opinions from those with whom they work or see at the store. A child's teacher or paediatrician may discuss violent video game play with parents. A decision

that parents would have made without these influences may be changed by what they see and hear around them.

7.8.3 CHANGES IN VIDEO GAMES AND ATTITUDES OVER TIME

In accordance with the bioecological model's chronosystem (Bronfenbrenner & Morris, 1998), attitudes surrounding video game play and violence evolve over time. This includes both beliefs passed down through generations and changes in generational thoughts. The survey found that grandmothers were more likely than mothers or fathers to place limits on a child's video game and violent video game time. Furthermore, 67.7% of survey respondents felt that grandparents viewed video games negatively. Changes throughout time also occur within a family home. Decisions parents make about violent video game play for their children can progress over time. They would most likely not make the same decision for their five-year-old as they would for their fifteen-year-old. Both the survey and interviews revealed that parents permitted more video game time during COVID-19 lockdown periods than before it. Furthermore, video game graphics improve as technology evolves, making the violent content in current video games much more realistic as newer games are created and released.

7.9 SUMMARY OF CHAPTER

The findings of this study revealed that although parents disagreed on what violent aspects in a video game are harmful, concerns of immoral behaviour, sexual content, and internet predators were prominent in interviews. Parents worried about how violent video games could affect children, but many did not see harmful effects on their own children and felt that mitigating factors such as personality and parental mediation were potential explanations. Most parents were aware of a video game rating system, though it was only a fraction of the information they used to make decisions for their children. Parents also relied on their internet searches, childhood experiences, their child's age and temperament, and their personal opinions. Children were allowed to spend more time playing video games during COVID-19 lockdown periods, allowing them to play digitally in many ways. Some children were

permitted to play games previously deemed too violent, and no change in their behaviour was noted by their parents. Media reports on violent video games were prevalent in parents' minds after school shootings, but as parents remembered, more recent reports are neutral on the moral panic that is violent video games. Neo-ecological theory (Navarro & Tudge, 2022) explains why parents have certain perceptions about violent video games and why they make the decisions they do.

8. CONCLUSION

8.1 INTRODUCTION

The following chapter summarizes the study and its implications regarding research on violent video games and potential decisions made by parents, schools, and lawmakers. The strengths and limitations of this study are considered, as well as potential questions and aims for future research. It also includes reflections upon the research and its findings.

8.2 SUMMARY OF RESEARCH

Despite three decades of studies, no definitive conclusion has been reached regarding the impact of violent video games on children (Olson, 2004). Researchers continue to disagree on the terminology, methods, and interpretation of data gathered about the effects of violent video games on behaviour (Gentile & Anderson, 2003). This study therefore focuses on understanding parental perceptions of violent video games and behaviour and the decisions they make for their own children. As explained in *Chapter 5: Methodology and Methods*, the first four research questions—violent aspects of video games, parents' perceptions of the impact of violent video games, their concerns and how they make decisions regarding violent video game play in their home, and the impact of COVID-19 on their perceptions or decisions—were thoroughly answered through the survey and interviews. The fifth question was answered by analysing media reports over the course of a year.

8.2.1 SUMMARY OF RESEARCH QUESTION 1: WHAT ATTRIBUTES OF VIDEO GAMES DO PARENTS CONSIDER VIOLENT?

There was a range of attributes that parents considered violent in video games. Parents considered violence to be related to levels of blood and gore, physical altercations, weapons, and killing and differed on their acceptance of these aspects. Many parents also made a distinction between cartoon and realistic violence. Cartoon violence did not concern most parents, as they felt that their children knew it was not real.

8.2.2 SUMMARY OF RESEARCH QUESTION 2: WHAT ARE PARENTS' PERCEPTIONS OF THE IMPACT OF VIOLENT VIDEO GAMES ON CHILDREN?

Both the survey and the interviews revealed that most parents are apprehensive about children playing violent video games. Parents do fear children imitating aggressive behaviours or becoming desensitized to the violence they see on the screen. One survey respondent added, "I'm a teacher and see the effects it has on children." Nearly all survey respondents and interview participants set limits on violent video game play for their children. Interview participants, however, clarified that there were possible protective factors such supervision, discussion, and co-playing, all of which are forms of parental mediation. Bösche (2010) discovered that after playing a violent video game, players were often both in a good mood and thinking about aggressive concepts. This finding helps explain many parents' confusion on whether violent video games are harmful, as they don't see evidence of violent behaviours but feel as though there should be a negative effect.

8.2.3 SUMMARY OF RESEARCH QUESTION 3: HOW DO PARENTS MAKE DECISIONS REGARDING THEIR CHILDREN'S ACCESS TO VIOLENT VIDEO GAMES AND WHAT ARE THEIR CONCERNS?

When deciding if their child could play a new game, parents consulted the internet, examining YouTube videos, reviews, and video game players' streams. Less than three-quarters of parents in this study were aware of a rating system, and for those who did, ratings were not the only factor used to make final decisions. Parents felt that video game rating systems were a useful source of information but also were potentially unreliable. Many parents wanted to see and experience the game themselves before deciding if their child could play it. They used knowledge of their own children along with their personal feelings about a game to conclude if the game was too violent or not.

In their responses to the interviews and survey, there appears to be a disconnect between parents' perceptions of violent video games and their reality. Parents were overwhelmingly concerned about the violence in games, yet the majority allowed their children to play anyway. Parents of younger

children, ages five to eight, were more restrictive on the violence in video games that their children played. Parents whose children were age nine or older were less restrictive on violent aspects of video games. Despite not witnessing many, if any, ill effects on their children from playing violent games, parents nevertheless did not feel as though violent games were acceptable for children in general. Much of the newer research supports parents' reality, not their perception (Baldaro et al., 2004; Colwell & Kato, 2003; Dorman, 1997; Ferguson, 2007b; Griffiths et al., 2012; Kühn et al., 2019; Lobel et al., 2017; Olson, 2010; Savage & Yancey, 2008; Sherry, 2001; Ybarra et al., 2008).

8.2.4 SUMMARY OF RESEARCH QUESTION 4: HAS THE COVID-19 GLOBAL PANDEMIC ALTERED PARENTS' PERCEPTIONS OF AND/OR DECISIONS ABOUT VIOLENT VIDEO GAME PLAY?

This study found that the COVID-19 pandemic increased the amount of time that most parents allowed their children to play video games, though it did not necessarily change the type of games that they permitted their children to play. In several households, however, parents did decide to allow their children to play violent video games that they previously prohibited. These parents decided that during a time of physical isolation due to a global pandemic, the social aspects of playing the violent video games with friends outweighed the violent aspects. To their surprise, they discovered no ill effects on their children after playing the violent games.

8.2.5 SUMMARY OF RESEARCH QUESTION 5: WHAT NARRATIVE DO MEDIA HEADLINES MENTIONING VIOLENT VIDEO GAMES PORTRAY AND WHAT ARE PARENTS' PERCEPTIONS OF MEDIA REPORTS?

Concerning the media's perception of violent video games, interviews revealed that parents remembered a time around the Columbine school shooting of 1999 when there was a plethora of negativity in the media about violent video games. In 2020 and 2021, however, parents often searched the internet for advice and did not come across many articles from the media criticizing or discouraging the play of violent video games. The media analysis conducted

for this study found this to be true. Previous research found a shift in the media from negative to neutral or even positive (McKernan, 2013), and results from this study perpetuate the finding that current media reports are not largely negative towards violent video game play.

Over one-third of the articles published online during the period of this study focused on COVID-19, and nearly twenty percent explained China's new video game law. Many articles about COVID-19 discussed the positive uses of video games during lockdown periods. Almost one-third of the articles explored video games as a way to connect with others, with many of those articles also mentioning COVID-19. Less than ten percent of the articles considered violent aspects of video games to be a potential issue. These results show that media topics on video games focused more on how they relate to current events, not the violence in the games. Less than a quarter of the video game articles mentioned research. Therefore, general internet searches did not provide parents with reliable facts regarding violent video games. This lack of guidance led those few parents with knowledge to use specific websites such as Commonsensemedia.com or Reddit.com to help them make decisions.

8.3 IMPLICATIONS OF THIS STUDY

Findings of this study have implications for parents, schools, and for anyone making policies surrounding violent video games, at various levels. This study revealed a juxtaposition between parents' perceptions and reality, their concerns, and how they make decisions regarding violent video game play for their children. To aid parents in making decisions and schools in supporting children and families, it is pertinent to provide abundant access to accurate information. The key implications are:

- Addressing parents' concerns
- Rating clarifications and visibility
- Reliable information
- Supporting parents and schools

Each of these will be addressed below in detail.

8.3.1 ADDRESSING PARENTS' CONCERNS

This study showed a need for addressing parents' concerns more directly and completely, beginning with what information they seek about violent video games and where to find that information. Parents need access to all information, not just random pieces they find in an internet search. However, parents who are looking for facts about violent video games do not all know of a reliable source. This study revealed that violence is not parents' primary concern when making decisions about video games. They also worried about scary images, online predators, sexual content, and profanity.

8.3.1.1 RATING CLARIFICATIONS AND VISIBILITY

Video game rating systems, although well-intended, are not used in all households nor are they used consistently. Though 80.0% of parents in this study used the rating systems as a guide when making decisions, only 51% of parents knew all the ratings of their child's video games. Additionally, 61.2% of parents with children nine years of age or older disclosed that they previously bought a game rated above their child's age. Although many parents acknowledge the ratings, they do not necessarily abide by the recommendations. If every time a video game was advertised, companies were required to include the rating by the game title, parents would be more aware of the system and immediately see the game's rating. Research has found that parents with knowledge of ESRB ratings are more likely to co-play with their children, and that co-playing can mitigate negative effects of violent video games (Walker et al., 2018).

Furthermore, parents' concerns about scary images, online predators, sexual content, and inappropriate language are not explicitly clear on the rating in the ESRB system. Bushman and Cantor (2003) uncovered that parents' preferred content-specific ratings over those with an age limit. Results of this study support that notion, as parents frequently mentioned content-specific concerns and did not rely solely on age-related ratings. Current ESRB video game ratings in the United States include descriptors that a T (Teen) game *may* contain suggestive themes or strong language, an M (Mature) game *may* contain sexual content or strong language. Only a rating of A (Adult) explains

that a game does include graphic sexual content. Parents are required to research on their own as to whether a particular T or M game does, in fact, include sexual content or strong language. More descriptive explanations of why a particular game received a T (Teen) or M (Mature) rating would streamline this process for parents as they investigate video game content and its suitability for their child. As reviewed in *2.7.2: Rating Systems*, the PEGI rating system already accomplishes this. Like Wilson and McGill (2018) recommended for VR games, the ESRB would be more useful to parents if it did the same and included content descriptors alongside age ratings for all video games.

Parents were overwhelmingly concerned with their child potentially interacting with online predators. Although the PEGI ratings include if a game contains in-app purchases, it does not include online chat access in their content descriptors. In 2012, the ESRB initiated their Interactive Elements feature for digital games and apps to inform parents and players if the game provided an avenue to interact online with other players, share location, or if the app facilitated unrestricted internet access. The Interactive Elements feature was not added to boxed games in 2018, two years before this study began, and was not added to in-app purchases until 2020, so it is unclear if this new change will aid parents in their decisions about games with online components.

8.3.1.2 RELIABLE INFORMATION

As discussed in *2.10: Gap in the Literature*, the split in research, as well as the lack of research on young children, revealed that there was no consensus on whether violent video games cause aggressive behaviour in children. Results from this research show that parents are also not in agreement as to whether violent video games negatively affect children's behaviour, though most of them are initially hesitant to allow their own children to play. Nevertheless, those who did allow their older children to play violent video games during the COVID-19 pandemic periods of lockdown did not notice any detrimental effects on their children's levels of aggression or violent behaviour. Parents were relieved to see first-hand that their children could distinguish between fantasy

and reality and not bring video game violence into real life. This information may assuage parents' fears about violent video game play.

Parents use the internet as their primary source for finding information. Algorithms show each person who performs an internet search a different list of items in a different order. Reliable information about violent video games needs to be displayed on the first internet results search page. Moreover, parents would benefit from a website dedicated to violent video games, linking parents to relevant research and literature. A few parents interviewed for this study used Common Sense Media, which they found helpful, but not all parents were aware of this resource, nor does it link to research studies on video games.

8.3.2 SUPPORTING PARENTS AND SCHOOLS

This study began with wondering if violent video games were causing children to be violent. Many children play violent video games at home (Entertainment Software Association, 2022), or at a friend's or neighbour's house. They come to school and interact with others, sharing their experiences. Parents worry about what occurs in other children's homes and if their video game play is being monitored. Parents in this study who were teachers and psychologists expressed concern about what they have witnessed in schools or research they had read. When a child behaves in a way that is viewed as anti-social or violent, society looks for a cause. School professionals look at a child's home life and outside influences because they know that what is happening at home can affect the manner in which a child acts at school, as Bronfenbrenner and Morris (2006) elucidate in their bioecological systems model of human development. There is no one cause of violent behaviour, as the American Academy of Pediatrics points out:

Tackling aggressive behavior in children requires pediatricians to be knowledgeable about the causes of aggression, be aware of risk assessment strategies, and become partners in the therapeutic plan that often can involve the community, schools, mental health specialists, child protective services, and even law enforcement. (Jeewa, 2017)

Concern about a child's behaviour must explore all avenues and influences, as it cannot be explained by violent video game play. As discussed in *2.4.3.2 Sixteen Types of Play in a Digital Context* and *7.7 Exploration of Findings in the Context of Play*, video game play, even with violent features, provides an opportunity for children to participate in multiple other types of play.

8.4 KEY FINDINGS AND RECOMMENDATIONS

In conclusion, below are the key findings and recommendations for parents, schools, video game creators, video game ratings boards, and anyone who has a vested interest in children's well-being and video game play.

- As evidenced by work on digital play (as discussed in *2.4.3.1: Digital Play*), rather than being the antithesis of play, video game play is a form of play that can be valuable. It is necessary for parents to recognize that there are benefits to video game play, even violent games, and they do not need to feel guilty if they allow their child to play them.
- The COVID-19 pandemic altered some parents' opinions on violent video games. Those who previously banned video games due to their violent content but allowed them during periods of lockdown did not notice any negative effects on their children's behaviour. Many parents continued to allow their children to play these games after lockdown restrictions were lifted.
- Video game ratings must be more visible and clearer, with specific content descriptors explaining exactly why the game received its rating. Parents in this study often did not know ratings existed or felt they were unclear. Ratings would be utilised more often if they were more detailed and tailored to each particular game.
- Those who work with children should remember the whole child. As discussed in *2.6: Do Violent Video Games Cause Violence*, research does not uphold the idea that if a child witnesses violence in a video game, then they will elicit violent behaviour in real-life interactions. A child's time spent playing a violent video game does not explain their violent or aggressive behaviour. Violent video game play is one aspect of a child's life, as there are many more components that can influence their behaviour, as described in *Chapter 4: Theoretical Framework*.

- It is imperative to better empower parents in facilitating their children’s technological exploration through video games. Interviews with parents in this study revealed that parents understand their children are unique individuals and that games acceptable for one child may not be acceptable for another. Parents need access to outcomes from the latest research so they can make more informed decisions on which games their children are permitted to play. Conversations between parents and their children, as well as co-playing in the household, may mitigate any potential concerns.

8.5 DISSEMINATING THE RESULTS OF THIS STUDY

The following are methods through which the results of this study will be disseminated. Practitioners such teachers, early childhood specialists, and educational leaders, as well as parents, researchers, and technology experts will all benefit from knowing and understanding the results of this study.

The mechanisms for dissemination below will be undertaken:

- A summary report of the findings will be made available to school districts in the state of Oklahoma.
- Online handouts will be created for parents about how they can support their child’s video game interests while also mitigating potential risks.
- A presentation of the key findings will be given at the Oklahoma Early Childhood State Consortium, which is held monthly during the school year and attended by leaders from school districts and the Oklahoma State Department of Education.
- An overview of the findings will be presented to the Cooperative Council for Oklahoma School Administrators (CCOSA).
- A professional development session will be created for teachers, administrators, and other educational leaders in local school districts, highlighting the importance of examining video games in context of a child’s home life. This will be offered to school districts and organizations through both an in-person and an online video format.

Conference presentations will be submitted to the following organisations:

- The Alliance for Early Success
- The National Association for the Education of Young Children (NAEYC)
- The American Institute of Research (AIR)
- American Educational Research Association (AERA)
- International Play Association (IPA)

Academic papers, policy briefings, and articles discussing the importance of including parents in the conversations about children's violent video game play and the role of virtual video game play in children's lives will also be submitted to relevant high-quality academic journals across this interdisciplinary domain.

These articles, presentations, policy briefings, summary reports, and academic papers will ensure that the results of this study are circulated among multiple audiences, all of whom have a vested interest in children's education and development.

8.6 LIMITATIONS

This study began with a survey that was distributed by social media and email, therefore all parents who participated in this study had internet access. This narrowed the group of potential survey respondents and therefore interview participants. This is a general problem that cannot be avoided when distributing a survey via email. Most participants in this study lived in the United States, and over half of the survey respondents and interview participants from the United States lived in Oklahoma. Despite attempting to reach parents worldwide, the lack of many international participants restricts the application of this study to countries outside the United States, and possibly outside of the state of Oklahoma.

To limit respondents not completing the survey because of too many questions or questions they were uncomfortable answering; most questions were marked as not required. The result was many questions only had 300-400 responses instead of 509. Therefore, the survey data is not fully representative of the entire pool of survey respondents.

Interviews were conducted via Zoom, which potentially impacted the relationship between the primary researcher and interview participant. Conducting interviews face-to-face may have altered the conversations, depending on the interview participant's preference and comfort level.

The scope of articles analysed for the media content analysis was much smaller than anticipated. Despite many attempts to refine the search terms, it was difficult to get an exhaustive, accurate sample. A more extensive content analysis search of media, perhaps extending the time frame of the search, might provide different results.

8.7 FUTURE RESEARCH: WHERE DO WE GO FROM HERE?

The findings of this study provided some answers but has also uncovered other questions and important lines of inquiry. It revealed that a child's age affects their parents' decisions, but there is not enough research to conclude if violent video games affect younger children differently than older children, as parents may inherently suspect. This study also speculated that gender may affect their parents' decisions and exposed that a child's or parent's race may be an important factor. This study only included parents, so expanding it to consider children and teachers would afford a more comprehensive view of violent video games and decisions made by and for children.

8.7.1 AGE

The APA (2020) acknowledged that research has not adequately studied children younger than the age of 10, considered a potential difference in gender, is not representative of all demographics, nor has it examined the possibility of moderating effects due to ethnicity, culture, or socioeconomic status. This study demonstrated a difference in parental decisions about violent video games once children reached the age of nine, but it did not specifically investigate parents' observations of potential effects of violent video game play on children at any age. It is possible that there are differences in how children interact through video games depending on their age. Interviewing or holding focus groups with children would determine if parents' fears about younger children were valid. Previous research discovered that

young children's understanding of fictional characters on television changed as they got older (Howard, 1993, 1994). Research that explored children's perceptions of violence in video games at different ages and whether they could differentiate between reality and fantasy in video games would be a useful addition to these studies.

8.7.2 GENDER

The survey results from study did not show a difference between the way parents made decisions for their children with regard to their child's gender, but interview participants mentioned gender often. P10 wondered if society reacted differently to boys than it did to girls, if it was more acceptable for boys to play violent video games, commenting:

I feel like, again, it's a gender thing, maybe because I feel like the boys are more playing ...my daughter and my son, my friends who have boys, the boys are the one who've been playing a bit more than the girls....what people see more acceptable...I think it's society, right, yeah, for boys to be playing these kinds of games while maybe not girls....Are we letting the boys play the violent ones because 'boys will be boys'?...when the girls do it, more parents will stop them?

Another interview participant, P11, felt that violent video games could be an issue for other kids, "especially boys," and P16 remarked that "boys can't be boys" at school and participate in games such as "cops and robbers." Limited research has been conducted on potential gender differences as they relate to violent video games. Gender differences have been found in the way children participate in rough and tumble play (Scott & Panksepp, 2003), of which violent video games may be a digital representation, so it is possible that their experiences with violent video games differ as well.

8.7.3 RACE

P8 observed, "when a school shooter is white, the public is more likely to blame violent video games." Research supports this phenomenon, as society is prejudiced towards school shooters who are not white, accepting this behaviour from minorities but looks for another reason why a white shooter would enact violence in a school (Markey et al., 2020). P8 spoke a lot about

growing up in an Indian household and offered her perspective as an Indian woman. She mentioned that she was more cautious about her children playing violent video games because she understands society's views on minorities, which causes her to be extra vigilant about what they play with and experience. Additionally, video games can sometimes promote harmful stereotypes. Frequently, Arabic video game characters are terrorists within the game, and female video game characters are often created with unrealistic body proportions (Olson, 2010). Expanding this research to include racial factors might provide more insight into parents' decisions.

8.7.4 COMMUNITY

Research into the gaming communities of different games may show a growing acceptance for specific populations. According to the news media article from Wired magazine, "How Fighting Games Became a Haven for LGBTQ Players," two games mentioned in this thesis, Street Fighter and Mortal Kombat, have incredibly diverse populations of gamers, accepting and welcoming queer gamers. The Fighting Games Community (FGC) is more diverse than most other esports gaming communities, and players suspect this is partially a result of the diversity of characters in fighting games (Livingston, 2023). Another aspect of the FGC is the in-person casual events and tournaments, as this "has helped queer people, particularly those transitioning to new identities with potentially new names and pronouns, feel safer and more comfortable than they might otherwise feel in a competitive gaming space" (Livingston, 2023, para. 3). Parents allowed their children to spend more time online during the COVID-19 pandemic so they could communicate with their friends. Research including children's perspectives would offer understanding into why they ask to play violent video games.

8.7.5 TEACHERS

Expanding this study to include teachers' perceptions would help understand the perspectives of teachers and their struggles in the classroom. School shootings in the US were part of the impetus for this research. To decrease the possibility of a child yielding a weapon in a school, advice that includes limiting violent video games is inaccurate, as they are not a factor in whether a

child brings a weapon to school (Wike & Fraser, 2009). Research has shown that teachers believe video games can improve learning (Pozo et al., 2022), yet some teachers are reluctant to include them in their curriculum (Kenny & McDaniel, 2011). This research would be expanded upon by interviewing or holding focus groups with teachers.

8.8 CONCLUDING REMARKS

Violent video games are a moral panic of the 21st century. Prior research is often inconsistent, low-quality, or contradictory and has both supported and disproved the notion that violent on-screen content in video games incites violent off-screen behaviour in players. This study revealed that parents also hold conflicting views on violent video games, with no consensus on what type of violence in video games is harmful, if any. Most parents see cartoon violence as acceptable, but many are much more worried about their children interacting with unsafe individuals online or encountering sexual, scary, or immoral scenes in video games than they are about the potentially violent content. Video games are digital play, a form of play that often allows children to also experience other types of play (Marsh et al., 2016). It is a type of play that was vital during the COVID-19 pandemic when families were in lockdown situations. Parents saw online gaming as a way for their children to interact with peers and extended family members in a form of communication play. Children spent more time playing video games during the COVID-19 pandemic than they did prior to 2020 (Entertainment Software Association, 2021), and parents in this study who permitted previously banned violent video games did not observe any negative behaviour effects on their children. This study shows that like the potential impact of violent video games on their children, parents' decisions on violent video games are also influenced by personal factors as well as those in their micro, meso, and macrosystems. Neo-ecological theory's digital microsystem (Navarro & Tudge, 2022) was a key player during the COVID-19 pandemic as children spent more time online for both school and gaming with friends. There's still some truth in this quote from nearly twenty years ago:

concerns about media's influence—especially on violence and social isolation—can be mitigated by addressing issues known to affect children's healthy development, such as day care, educational opportunities, after-school activities, adequate health care, access to mental health services, and protection from violence in the home. (Villani et al., 2005, p. 549)

Previous worries about media isolating children are the opposite of what parents experienced during the COVID-19 pandemic, but the rest of that still holds true. The multitude of factors that affect a child are innumerable, and we cannot point to one culprit for violent behaviour (American Psychological Association, 2020). Families and schools must evaluate all aspects of a child's life and development to make decisions that support their well-being.

9. APPENDICES

9.1 APPENDIX 1 - SURVEY CONSENT

Informed Consent Form - Survey

Researcher (s): Keri A. Knutson

A. Purpose of this research:

This research is being conducted through the University of Central Oklahoma in the United States, in partnership with Swansea university in Wales. It will explore parents' perspectives on violent video games, especially in the context of the covid-19 pandemic and quarantine. It will also compare media headlines to current research on violent video games to see if and how they are intertwined with parents' perceptions. This study will take place in both the US and the UK in order to get a broader perspective. This research may aid in the potential creation of interventions for families to help parents mitigate the possible challenges - either perceived or real - presented by their children playing violent video games.

B. Procedures/treatments involved:

Participants will be invited to complete an online survey. The survey will collect demographic information, their perceptions of their own digital literacy skills, information about their children playing video games, and ask about their own experiences regarding video game play.

C. Expected length of participation:

5-10 minutes

D. Potential benefits:

By taking part in this study, participants will learn valuable information about and for their families regarding violent video games and children.

E. Potential risks or discomforts:

There are no more than minimal risks or foreseeable risks above what would occur in any situation where a person learns and grows. We think these may include being uncomfortable with the topic or bringing up painful or disturbing memories.

F. Contact information for researchers:

Keri Knutson, [REDACTED]
Janette Wetsel, [REDACTED]

G. Contact information for UCO IRB:

UCO office of research integrity and compliance
NUC 341
campus box 132
(405) 974-5497
irb@uco.edu

H. Explanation of confidentiality and privacy:

All participation will be confidential, and I may refuse to answer any question by skipping it. Your responses will remain anonymous, and no direct identification will be known or retained by the researcher without my further consent. No identifying information will be used in the final report of data. The survey will ask for your email address at the end; however, this is not required. If provided, email addresses will be kept in a digital file on the researcher's private laptop, separate from the survey responses. Responses will be randomized during data analysis so email addresses will not be connected to survey responses.

I. Assurance of voluntary participation:

Only volunteers who proceed and take the survey will participate in this study. You have the right to withdraw for any reason at any time without penalty. You can decline to participate, decide to stop at any time, or refuse to answer any questions without penalty.

Affirmation by research subject

By completing this survey, I hereby voluntarily agree to participate in the above listed research project and further understand the above listed explanations and descriptions of the research project. I also understand that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty. I acknowledge that I am at least 18 years old. I have read and fully understand this informed consent form. **My participation constitutes my consent.**

If you are concerned about how your personal data is being processed, please contact Swansea University's data protection officer at dataprotection@swansea.ac.uk. If you remain unsatisfied, you may wish to consider the processes available to you if you wish to exercise a right. This information can be accessed at <https://www.swansea.ac.uk/about-us/compliance/data-protection/>

9.2 APPENDIX 2 - SURVEY QUESTIONS

Survey Questions - Imported from Qualtrics

1 Do you consent to answering this survey?

- Yes (1)
- No (2)

Skip To: End of Survey If 1 = No

2 What is your age?

- Under 20 (1)
- 20-29 (2)
- 30-39 (3)
- 40-49 (4)
- 50+ (5)

3a Do you live in the United States?

- Yes (1)
- No (2)

Display This Question:

If 3a = Yes

3b What is your zip code?

Display This Question:

If 3a = No

3b What is your country of residence?

4 What is the highest level of school you have completed or the highest degree you have received?

- Less than high school degree (1)
- High school graduate (high school diploma or equivalent including GED) (2)
- Some college but no degree (3)
- Associate degree in college (2-year) (4)
- Bachelor's degree in college (5)
- Master's degree (6)
- Doctoral degree (7)
- Professional degree (JD, MD) (8)

5 How many children do you have?

- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5+ (5)

6 How old are your children? (choose all that apply)

- 6. Infant-2 years (1)
- 7. 3-4 years (2)
- 8. 5-6 years (3)
- 9. 7-8 years (4)
- 10. 9+ years (5)

7 Which best describes your children's relationship to you? (choose all that apply)

- 11. Biological (2)
- 12. Adopted (1)
- 13. Foster (3)
- 14. Stepchildren (6)
- 15. Grandchildren (4)
- 16. Other (5)

End of Block: Demographics

Start of Block: Digital Literacy

For the purposes of this research, "video game" refers to any game on a digital platform, including but not limited to an app on a tablet or phone, or a game on a gaming system such as Nintendo, Playstation, or Xbox.

8 How often did you play video games as a child?

- Daily (1)
- Weekly (2)
- Monthly (3)
- Yearly (4)
- Never (5)

Q54 Following are some possible definitions of violence as it pertains to video games. Choose the one that best aligns with your opinion, and use that for the remainder of the survey when questions refer to **violent** video games.

- any game in which harm can be inflicted upon another character, whether realistic or not (1)
- any game in which a player can shoot or kill other players or animated characters (4)
- any game that allows the player to be a first-person shooter (3)
- any game that has realistic-looking injury or death, NOT necessarily including blood (5)
- any game that has realistic-looking injury or death with blood/gore (6)
- or, write your own definition here: (7)

9 How often did you play **violent** video games as a child?

- Daily (1)
- Weekly (2)
- Monthly (3)
- Yearly (4)
- Never (5)

10 How competent do you feel operating current gaming systems (XBOX, Playstation, etc.)?

- Extremely competent (1)
- Somewhat competent (2)
- Somewhat incompetent (3)
- Extremely incompetent (4)

11 How informed do you feel about the impact of **violent** video games on children?

- Very well-informed (1)
- Somewhat well-informed (2)
- Not informed at all (3)

End of Block: Digital Literacy

Start of Block: Video Games in Your Home

12

For the remainder of this survey, please answer the following questions with regard to your **youngest school-aged** child (between the ages of 5 and 18). For example, if you have three children ages 3, 6, and 8, please answer the following questions about your 6-year old.

13 How old is your youngest school-aged child?

- 5 (2)
- 6 (3)
- 7 (4)
- 8 (5)
- 9+ (6)

Q53 What is your child's gender?

- Male (1)
 - Female (2)
 - Other (please describe) (4)
-

14 What is your relationship to the child?

- Mother (1)
- Father (2)
- Grandmother (3)
- Grandfather (4)
- Other legal guardian (5)

15 What is your child's position in the family?

- Youngest child (1)
- A middle child (2)
- Oldest child (3)
- Only child (4)

16 In the past week, how many days did your child attend in-person school?

- 0 (1)
- 1-2 (2)
- 3-4 (3)
- 5 (4)

17 In the past week, how many days did your child attend in-person child care outside of the home?

- 0 (1)
- 1-2 (2)
- 3-4 (3)
- 5 (4)

18 How often does your child play video games?

- Daily (3)
- Weekly (4)
- Monthly (5)
- Yearly (6)
- Never (7)

Skip To: 27 If 18 = Never

Display This Question:

If 18 = Daily

*

18b How many hours each day does your child play video games?

Display This Question:

If 18 = Weekly



18c How many hours each week does your child play video games?

Display This Question:

If 18 = Monthly



18d How many hours each month does your child play video games?

Display This Question:

If 18 = Yearly



18e How many hours each year does your child play video games?

19 Do you know about the rating systems used for video games? (i.e. the ESRB in the US)

- Yes (3)
- No (4)
- Not sure (5)

20 Do you know the ratings of the video games that your child plays?

- Yes, all of them (1)
- Yes, some of them (2)
- No (3)

21 Have you ever bought a video game for your child that was rated above his/her age level?

- Yes (1)
- No (2)
- Not sure (3)

22 How would you rate the violence in the video games that your child plays?

- Extremely violent (1)
- Very violent (2)
- Moderately violent (3)
- Slightly violent (4)
- Not violent at all (5)

23 Do you place limits on the amount of time your child can spend playing video games?

- Yes (1)
- No (2)

Display This Question:

If 23 = Yes

24 What information did you use to make your decision regarding limits on video game play? (Select all that apply.)

- 17. Information from friends (1)
- 18. Information from family members (2)
- 19. Information from your child's pediatrician (3)
- 20. Information from media (4)
- 21. Information from personal internet research (5)
- 22. Other (please describe) (6)

25 Do you place limits on the amount of time your child can spend playing violent video games?

- Yes (1)
- No (2)

Display This Question:

If 25 = Yes

26 What information did you use to make your decision regarding limits on violent video game play? (Select all that apply.)

- 23. Information from friends (1)
- 24. Information from family members (2)
- 25. Information from your child's pediatrician (3)
- 26. Information from media (4)
- 27. Information from personal internet research (5)

28. Other (please describe) (6)

27 Click the best response for each question

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
I am concerned about the amount of time my child spends playing video games. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am concerned about the amount of time my child spends playing violent video games. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Violent video games affect my child's behavior. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Violent video games cause children to exhibit more violent behaviors. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Violent
video
games
cause *MY*
child to
exhibit
more
violent
behaviors.
(5)



The
COVID-19
global
pandemic
has
increased
the amount
of time my
child
spends
playing
video
games. (6)



The
COVID-19
global
pandemic
has
increased
the amount
of time my
child
spends
playing
violent
video
games. (7)



28 In your experience, how are **violent** video games portrayed or viewed...

	all negative (1)	mostly negative (2)	neutral (3)	mostly positive (4)	all positive (5)
on social media? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
in the news? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
by other parents? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
by adults without children? (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
by your child's grandparents? (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
by your child's pediatrician? (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
by your child's teacher? (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

29 Is there anything else you would like to mention about your child and/or violent video games?

End of Block: Video Games in Your Home

Start of Block: Interview

30 Would you be interested in a follow-up interview with the researcher?

- Yes (1)
- No (2)

Skip To: 30b If 30 = Yes
Skip To: End of Survey If 30 = No

Display This Question:
If 30 = Yes

30b Please type your email address in the box below, and the researcher will contact you.

End of Block: Interview

9.3 APPENDIX 3 - SURVEY DATA TABLES

Tables 1 and 2 correlate with Figure 6.1: Survey Respondents' Geographic Location.

Table 1

Do you live in the United States?

	N	%
Yes	454	89.2%
No	44	8.6%
Missing System	11	2.2%

Table 2

What is your country of residence?

	N	%
	469	92.1%
Canada	1	0.2%
England	3	0.6%
England, UK	1	0.2%
Germany	1	0.2%
India	1	0.2%
Japan	1	0.2%
Portugal	1	0.2%
uk	1	0.2%
Uk	6	1.2%
UK	11	2.2%
United Kingdom	12	2.4%
Wales	1	0.2%

Table 3 correlates with Figure 6.2: Survey Respondents' Age.

Table 3

What is your age?

	N	%
Under 20	11	2.2%
20-29	61	12.0%
30-39	173	34.0%
40-49	207	40.7%
50+	46	9.0%
Missing System	11	2.2%

Table 4 correlates with **Figure 6.3: Survey Respondents' Relationship to Child.**

Table 4

What is your relationship to the child?

	N	%
Mother	309	60.7%
Father	42	8.3%
Grandmother	9	1.8%
Other legal guardian	5	1.0%
Missing System	144	28.3%

Table 5 correlates with **Figure 6.4: Age of Survey Respondents' Youngest School-Age Child.**

Table 5

How old is your youngest school-aged child?

	N	%
5	51	10.0%
6	53	10.4%
7	41	8.1%
8	42	8.3%
9+	166	32.6%
Missing System	156	30.6%

Table 6 correlates with Figure 6.5: Youngest School-Age Child's Position in the Family.

Table 6

What is your child's position in the family?

	N	%
Youngest child	217	42.6%
A middle child	36	7.1%
Oldest child	50	9.8%
Only child	62	12.2%
Missing System	144	28.3%

Table 7 correlates with Figure 6.6: Survey Respondents' Definition of a Violent Video Game.

Table 7

Following are some possible definitions of violence as it pertains to video games. Choose the one that best aligns with your opinion, and use that for the remainder of the survey when questions refer to violent video games. – Selected Choice

	N	%
any game in which harm can be inflicted upon another character, whether realistic or not	122	24.0%
any game that allows the player to be a first-person shooter	17	3.3%
any game in which a player can shoot or kill other players or animated characters	80	15.7%
any game that has realistic-looking injury or death, NOT necessarily including blood	99	19.4%
any game that has realistic-looking injury or death with blood/gore	57	11.2%
or, write your own definition here:	15	2.9%
Missing System	119	23.4%

Table 8 correlates with **Figure 6.7: Survey Responses to the Statement: Violent Video Games Cause Children to Exhibit More Violent Behaviours.**

Table 8

Click the best response for each question – Violent video games cause children to exhibit more violent behaviors.

	N	%
Strongly agree	71	13.9%
Somewhat agree	106	20.8%
Neither agree nor disagree	71	13.9%
Somewhat disagree	37	7.3%
Strongly disagree	43	8.4%
Missing System	181	35.6%

Table 9 correlates with **Figure 6.8: Survey Responses to the Statement: Violent Video Games Cause MY Child to Exhibit More Violent Behaviours.**

Table 9

Click the best response for each question – Violent video games cause MY child to exhibit more violent behaviors.

	N	%
Strongly agree	19	3.7%
Somewhat agree	42	8.3%
Neither agree nor disagree	86	16.9%
Somewhat disagree	47	9.2%
Strongly disagree	133	26.1%
Missing System	182	35.8%

Tables 10 and 11 correlate with Figure 6.9: Correlation Between Survey Respondents' Responses to Violent Video Games Cause Children to Exhibit More Violent Behaviours and Violent Video Games Cause MY Child to Exhibit More Violent Behaviours.

Table 10

Click the best response for each question – Violent video games cause children to exhibit more violent behaviors. * Click the best response for each question – Violent video games cause MY child to exhibit more violent behaviors. Crosstabulation

		Click the best response for each question – Violent video games cause MY child to exhibit more violent behaviors.										Total	
		Strongly agree		Somewhat agree		Neither agree nor disagree		Somewhat disagree		Strongly disagree			
		N	%	N	%	N	%	N	%	N	%	N	%
Click the best response for each question – Violent video games cause children to exhibit more violent behaviors.	Strongly agree	15	78.9%	16	38.1%	16	18.8%	7	14.9%	17	12.9%	71	21.8%
	Somewhat agree	3	15.8%	22	52.4%	35	41.2%	17	36.2%	26	19.7%	103	31.7%
	Neither agree nor disagree	1	5.3%	4	9.5%	32	37.6%	10	21.3%	24	18.2%	71	21.8%
	Somewhat disagree	0	0.0%	0	0.0%	2	2.4%	12	25.5%	23	17.4%	37	11.4%
	Strongly disagree	0	0.0%	0	0.0%	0	0.0%	1	2.1%	42	31.8%	43	13.2%
Total		19	100.0%	42	100.0%	85	100.0%	47	100.0%	132	100.0%	325	100.0%

Table 11

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	155.115 ^a	16	<.001
Likelihood Ratio	162.967	16	<.001
Linear-by-Linear Association	89.636	1	<.001
N of Valid Cases	325		

a. 5 cells (20.0%) have expected count less than 5. The minimum expected count is 2.16.

Table 12 correlates with **Figure 6.10: The Percentage of Survey Respondents Who Placed Limits on the Amount of Time Their Child Played Video Games.**

Table 12

Do you place limits on the amount of time your child can spend playing video games?

	N	%
Yes	267	52.5%
No	60	11.8%
Missing System	182	35.8%

Tables 13 and 14 correlate with Figure 6.11: The Percentage of Survey Respondents Who Placed Limits on the Amount of Time their Child Played Video Games by Age of Their Youngest School-Age Child.

Table 13

Do you place limits on the amount of time your child can spend playing video games? * How old is your youngest school-aged child?
Crosstabulation

		How old is your youngest school-aged child?										Total	
		5		6		7		8		9+			
		N	%	N	%	N	%	N	%	N	%	N	%
Do you place limits on the amount of time your child can spend playing video games?	Yes	35	92.1%	43	93.5%	34	89.5%	35	89.7%	108	70.1%	255	81.0%
	No	3	7.9%	3	6.5%	4	10.5%	4	10.3%	46	29.9%	60	19.0%
Total		38	100.0%	46	100.0%	38	100.0%	39	100.0%	154	100.0%	315	100.0%

Table 14

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	23.188 ^a	4	<.001
Likelihood Ratio	24.412	4	<.001
Linear-by-Linear Association	18.196	1	<.001
N of Valid Cases	315		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.24.

Tables 15 and 16 correlate with Figure 6.12: Survey Respondents Who Placed Limits on the Amount of Time Their Child Played Video Games by Geographic Location.

Table 15

Do you place limits on the amount of time your child can spend playing video games? * Do you live in the United States? Crosstabulation

		Do you live in the United States?				Total	
		Yes		No			
		N	%	N	%	N	%
Do you place limits on the amount of time your child can spend playing video games?	Yes	246	83.1%	21	67.7%	267	81.7%
	No	50	16.9%	10	32.3%	60	18.3%
Total		296	100.0%	31	100.0%	327	100.0%

Table 16

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.423 ^a	1	.035		
Continuity Correction ^b	3.456	1	.063		
Likelihood Ratio	3.869	1	.049		
Fisher's Exact Test				.049	.037
Linear-by-Linear Association	4.409	1	.036		
N of Valid Cases	327				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.69.

b. Computed only for a 2x2 table

Table 17 correlates with **Figure 6.13: The Percentage of Survey Respondents Who Placed Limits on the Amount of Time Their Child Played Violent Video Games.**

Table 17

Do you place limits on the amount of time your child can spend playing violent video games?

	N	%
Yes	234	46.0%
No	89	17.5%
Missing System	186	36.5%

Tables 18 and 19 correlate with Figure 6.14: The Percentage of Survey Respondents Who Placed Limits on the Amount of Time Their Child Played Violent Video Games by Age of Their Youngest Child.

Table 18

Do you place limits on the amount of time your child can spend playing violent video games? * How old is your youngest school-aged child? Crosstabulation

		How old is your youngest school-aged child?										Total	
		5		6		7		8		9+			
		N	%	N	%	N	%	N	%	N	%	N	%
Do you place limits on the amount of time your child can spend playing violent video games?	Yes	33	86.8%	40	87.0%	31	81.6%	30	76.9%	90	59.2%	224	71.6%
	No	5	13.2%	6	13.0%	7	18.4%	9	23.1%	62	40.8%	89	28.4%
Total		38	100.0%	46	100.0%	38	100.0%	39	100.0%	152	100.0%	313	100.0%

Table 19

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	23.537 ^a	4	<.001
Likelihood Ratio	24.540	4	<.001
Linear-by-Linear Association	20.856	1	<.001
N of Valid Cases	313		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.81.

Tables 20 and 21 correlate with Figure 6.15: Survey Respondents Who Placed Limits on Their Child's Violent Video Game Time and Their Relationship to the Child.

Table 20

Do you place limits on the amount of time your child can spend playing violent video games? * What is your relationship to the child? Crosstabulation

		What is your relationship to the child?									
		Mother		Father		Grandmother		Other legal guardian		Total	
		N	%	N	%	N	%	N	%	N	%
Do you place limits on the amount of time your child can spend playing violent video games?	Yes	195	73.9%	20	51.3%	9	100.0%	3	75.0%	227	71.8%
	No	69	26.1%	19	48.7%	0	0.0%	1	25.0%	89	28.2%
Total		264	100.0%	39	100.0%	9	100.0%	4	100.0%	316	100.0%

Table 21

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	12.228 ^a	3	.007	.007		
Likelihood Ratio	13.861	3	.003	.003		
Fisher-Freeman-Halton Exact Test	11.701			.005		
Linear-by-Linear Association	.240 ^b	1	.624	.692	.340	.067
N of Valid Cases	316					

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is 1.13.

b. The standardized statistic is .490.

Table 22 correlates with Figure 6.16: Survey Respondents' Knowledge of Video Game Rating Systems.

Table 22

Do you know about the rating systems used for video games? (i.e. the ESRB in the US)

	N	%
Yes	244	47.9%
No	58	11.4%
Not sure	33	6.5%
Missing System	174	34.2%

Table 23 correlates with **Figure 6.17**: Survey Respondents in the US and Their Knowledge of Video Game Rating Systems.

Table 23

Do you know about the rating systems used for video games? (i.e. the ESRB in the US)

	N	%
Yes	220	48.5%
No	53	11.7%
Not sure	30	6.6%
Missing System	151	33.3%

Table 24 correlates with **Figure 6.18**: Percentage of Survey Respondents Who Knew the Ratings of Their Child's Video Games.

Table 24

Do you know the ratings of the video games that your child plays?

	N	%
Yes, all of them	173	34.0%
Yes, some of them	94	18.5%
No	60	11.8%
Missing System	182	35.8%

Table 25 correlates with **Figure 6.19: Percentage of Survey Respondents in the US Who Knew the Ratings of Their Child's Video Games.**

Table 25

Do you know the ratings of the video games that your child plays?

	N	%
Yes, all of them	151	33.3%
Yes, some of them	87	19.2%
No	58	12.8%
Missing System	158	34.8%

Tables 26 and 27 correlate with Figure 6.20: Survey Respondents Who Knew the Rating on Their Child's Video Games and Age of Their Child.

Table 26

Do you know the ratings of the video games that your child plays? * How old is your youngest school-aged child? Crosstabulation

		How old is your youngest school-aged child?										Total	
		5		6		7		8		9+			
		N	%	N	%	N	%	N	%	N	%	N	%
Do you know the ratings of the video games that your child plays?	Yes, all of them	22	57.9%	24	52.2%	19	50.0%	25	64.1%	75	48.7%	165	52.4%
	Yes, some of them	9	23.7%	8	17.4%	11	28.9%	6	15.4%	59	38.3%	93	29.5%
	No	7	18.4%	14	30.4%	8	21.1%	8	20.5%	20	13.0%	57	18.1%
Total		38	100.0%	46	100.0%	38	100.0%	39	100.0%	154	100.0%	315	100.0%

Table 27

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	17.492 ^a	8	.025	.	. ^b	
Likelihood Ratio	17.641	8	.024	. ^b	. ^b	
Fisher-Freeman-Halton Exact Test	. ^b			. ^b	. ^b	
Linear-by-Linear Association	.238 ^c	1	.625	.639	.321	.017
N of Valid Cases	315					

- a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.88.
- b. Cannot be computed because there is insufficient memory.
- c. The standardized statistic is $-.488$.

Tables 28 and 29 correlate with Figure 6.21: Survey Respondents' Competence with Gaming Systems and Knowledge of the Ratings for Their Child's Video Games.

Table 28

Do you know the ratings of the video games that your child plays? * How competent do you feel operating current gaming systems (XBOX, Playstation, etc.)? Crosstabulation

		How competent do you feel operating current gaming systems (XBOX, Playstation, etc.)?								Total	
		Extremely competent		Somewhat competent		Somewhat incompetent		Extremely incompetent			
		N	%	N	%	N	%	N	%	N	%
Do you know the ratings of the video games that your child plays?	Yes, all of them	46	78.0%	47	48.0%	41	51.2%	39	43.3%	173	52.9%
	Yes, some of them	10	16.9%	37	37.8%	18	22.5%	29	32.2%	94	28.7%
	No	3	5.1%	14	14.3%	21	26.3%	22	24.4%	60	18.3%
Total		59	100.0%	98	100.0%	80	100.0%	90	100.0%	327	100.0%

Table 29

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	27.228 ^a	6	<.001	<.001		
Likelihood Ratio	28.638	6	<.001	<.001		
Fisher-Freeman-Halton Exact Test	27.542			<.001		
Linear-by-Linear Association	15.299 ^b	1	<.001	<.001	<.001	.000
N of Valid Cases	327					

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.83.

b. The standardized statistic is 3.911.

Tables 30, 31, and 32 correlate with Figure 6.22: Child's Age and Percentage of Survey Respondents Who Have Bought a Game Above Their Child's Age Level.

Table 30

Have you ever bought a video game for your child that was rated above his/her age level? * How old is your youngest school-aged child?
Crosstabulation

		How old is your youngest school-aged child?											
		5		6		7		8		9+		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Have you ever bought a video game for your child that was rated above his/her age level?	Yes	11	31.4%	8	20.0%	15	45.5%	16	44.4%	82	58.6%	132	46.5%
	No	24	68.6%	32	80.0%	18	54.5%	20	55.6%	58	41.4%	152	53.5%
Total		35	100.0%	40	100.0%	33	100.0%	36	100.0%	140	100.0%	284	100.0%

Table 31

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	22.764 ^a	4	<.001	<.001		
Likelihood Ratio	23.809	4	<.001	<.001		
Fisher-Freeman-Halton Exact Test	23.259			<.001		
Linear-by-Linear Association	18.818 ^b	1	<.001	<.001	<.001	.000
N of Valid Cases	284					

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 15.34.

b. The standardized statistic is -4.338.

Table 32

Symmetric Measures

		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance	Exact Significance
Ordinal by Ordinal	Kendall's tau-c	-.280	.061	-4.620	<.001	<.001
	Spearman Correlation	-.261	.056	-4.531	<.001 ^c	<.001
Interval by Interval	Pearson's R	-.258	.056	-4.482	<.001 ^c	<.001
N of Valid Cases		284				

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Tables 33, 34, and 35 correlate with Figure 6.23: How Often Parents Played Violent Video Games as a Child and Whether They Have Bought a Video Game for Their Child Rated Above Their Child's Age Level

Table 33

Have you ever bought a video game for your child that was rated above his/her age level? * How often did you play violent video games as a child? Crosstabulation

		How often did you play violent video games as a child?											
		Daily		Weekly		Monthly		Yearly		Never		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Have you ever bought a video game for your child that was rated above his/her age level?	Yes	12	75.0%	29	65.9%	11	39.3%	10	37.0%	73	40.1%	135	45.5%
	No	4	25.0%	15	34.1%	17	60.7%	17	63.0%	109	59.9%	162	54.5%
Total		16	100.0%	44	100.0%	28	100.0%	27	100.0%	182	100.0%	297	100.0%

Table 34

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16.357 ^a	4	.003
Likelihood Ratio	16.560	4	.002
Linear-by-Linear Association	12.271	1	<.001
N of Valid Cases	297		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.27.

Table 35**Symmetric Measures**

		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Ordinal by Ordinal	Kendall's tau-c	.180	.058	3.086	.002
	Spearman Correlation	.179	.057	3.121	.002 ^c
Interval by Interval	Pearson's R	.204	.056	3.572	<.001 ^c
N of Valid Cases		297			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Tables 36, 37, and 38 correlate with Figure 6.24: How Often Survey Respondents Played Violent Video Games as a Child and Whether They Agreed or Disagreed That Violent Video Games Cause Children to Exhibit More Violent Behaviour.

Table 36

VVGCauseChildViolence2 * How often did you play violent video games as a child? Crosstabulation

		How often did you play violent video games as a child?											
		Daily		Weekly		Monthly		Yearly		Never		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
VVGCauseChildViolence2	3.00	12	48.0%	12	22.6%	14	35.9%	10	27.0%	102	40.3%	150	36.9%
	12.00	5	20.0%	19	35.8%	20	51.3%	20	54.1%	113	44.7%	177	43.5%
	45.00	8	32.0%	22	41.5%	5	12.8%	7	18.9%	38	15.0%	80	19.7%
Total		25	100.0%	53	100.0%	39	100.0%	37	100.0%	253	100.0%	407	100.0%

Table 37

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	29.526 ^a	8	<.001
Likelihood Ratio	27.664	8	<.001
Linear-by-Linear Association	13.419	1	<.001
N of Valid Cases	407		

a. 1 cells (6.7%) have expected count less than 5. The minimum expected count is 4.91.

Table 38**Symmetric Measures**

		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Ordinal by Ordinal	Kendall's tau-c	-.115	.043	-2.709	.007
	Spearman Correlation	-.141	.052	-2.857	.004 ^c
Interval by Interval	Pearson's R	-.182	.055	-3.721	<.001 ^c
N of Valid Cases		407			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Tables 39 and 40 correlate with Figure 6.25: Percentage of Survey Respondents Who Placed Limits on the Amount of Time Their Child Played Violent Video Games by How Often They Played VVGs as a Child.

Table 39

Do you place limits on the amount of time your child can spend playing violent video games? * How often did you play violent video games as a child? Crosstabulation

		How often did you play violent video games as a child?											
		Daily		Weekly		Monthly		Yearly		Never		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Do you place limits on the amount of time your child can spend playing violent video games?	Yes	9	50.0%	31	63.3%	28	87.5%	25	89.3%	141	71.9%	234	72.4%
	No	9	50.0%	18	36.7%	4	12.5%	3	10.7%	55	28.1%	89	27.6%
Total		18	100.0%	49	100.0%	32	100.0%	28	100.0%	196	100.0%	323	100.0%

Table 40

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	14.248 ^a	4	.007	.006		
Likelihood Ratio	15.059	4	.005	.006		
Fisher-Freeman-Halton Exact Test	14.249			.006		
Linear-by-Linear Association	1.998 ^b	1	.157	.166	.087	.013
N of Valid Cases	323					

a. 1 cells (10.0%) have expected count less than 5. The minimum expected count is 4.96.

b. The standardized statistic is -1.414.

Table 41 correlates with **Figure 6.26**: Where Survey Respondents Got Information About Imposing Limits on Violent Video Games.

Table 41

		Statistics					
		What information did you use to make your decision regarding limits on violent video game play? (Select all that apply.) - Selected Choice Information from friends	What information did you use to make your decision regarding limits on violent video game play? (Select all that apply.) - Selected Choice Information from family members	What information did you use to make your decision regarding limits on violent video game play? (Select all that apply.) - Selected Choice Information from your child's pediatrician	What information did you use to make your decision regarding limits on violent video game play? (Select all that apply.) - Selected Choice Information from media	What information did you use to make your decision regarding limits on violent video game play? (Select all that apply.) - Selected Choice Information from personal internet research	What information did you use to make your decision regarding limits on violent video game play? (Select all that apply.) - Selected Choice Other (please describe)
N	Valid	45	34	29	40	126	72
	Missing	464	475	480	469	383	437

Table 42 correlates with **Figure 6.27: Survey Respondents' Thoughts on Whether COVID-19 Increased the Amount of Time Their Child Spent Playing Video Games.**

Table 42

Click the best response for each question – The COVID-19 global pandemic has increased the amount of time my child spends playing video games.

	N	%
Strongly agree	158	31.0%
Somewhat agree	82	16.1%
Neither agree nor disagree	30	5.9%
Somewhat disagree	17	3.3%
Strongly disagree	44	8.6%
Missing System	178	35.0%

Table 43 correlates with **Figure 6.28: Survey Respondents' Thoughts on Whether COVID-19 Increased the Amount of Time Their Child Spent Playing Violent Video Games.**

Table 43

Click the best response for each question – The COVID-19 global pandemic has increased the amount of time my child spends playing violent video games.

	N	%
Strongly agree	40	7.9%
Somewhat agree	39	7.7%
Neither agree nor disagree	54	10.6%
Somewhat disagree	52	10.2%
Strongly disagree	143	28.1%
Missing System	181	35.6%

Tables 44, 45, 46, 47, 48, 49, and 50 correlate with Figure 6.29: How Survey Respondents Felt Others Viewed Violent Video Games

Table 44

In your experience, how are violent video games portrayed or viewed... – on social media?

	N	%
all negative	18	3.5%
mostly negative	100	19.6%
neutral	97	19.1%
mostly positive	104	20.4%
all positive	11	2.2%
Missing System	179	35.2%

Table 45

In your experience, how are violent video games portrayed or viewed... – in the news?

	N	%
all negative	51	10.0%
mostly negative	178	35.0%
neutral	61	12.0%
mostly positive	36	7.1%
all positive	4	0.8%
Missing System	179	35.2%

Table 46

In your experience, how are violent video games portrayed or viewed... – by other parents?

	N	%
all negative	17	3.3%
mostly negative	153	30.1%
neutral	127	25.0%
mostly positive	32	6.3%
Missing System	180	35.4%

Table 47

In your experience, how are violent video games portrayed or viewed... – by adults without children?

	N	%
all negative	25	4.9%
mostly negative	65	12.8%
neutral	112	22.0%
mostly positive	105	20.6%
all positive	23	4.5%
Missing System	179	35.2%

Table 48

In your experience, how are violent video games portrayed or viewed... – by your child's grandparents?

	N	%
all negative	111	21.8%
mostly negative	112	22.0%
neutral	101	19.8%
mostly positive	5	1.0%
Missing System	180	35.4%

Table 49

In your experience, how are violent video games portrayed or viewed... – by your child's pediatrician?

	N	%
all negative	52	10.2%
mostly negative	110	21.6%
neutral	162	31.8%
mostly positive	1	0.2%
all positive	1	0.2%
Missing System	183	36.0%

Table 50

In your experience, how are violent video games portrayed or viewed... – by your child's teacher?

	N	%
all negative	42	8.3%
mostly negative	110	21.6%
neutral	169	33.2%
mostly positive	4	0.8%
Missing System	184	36.1%

9.4 APPENDIX 4 - INTERVIEW CONSENT

Informed Consent Form - Interview

Researcher (s): Keri A. Knutson

A. Purpose of this research:

This research is being conducted through the University of Central Oklahoma in the United States, in partnership with Swansea University in Wales. It will explore parents' perspectives on violent video games, especially in the context of the Covid-19 pandemic and quarantine. It will also compare media headlines to current research on violent video games to see if and how they are intertwined with parents' perceptions. This study will take place in both the US and the UK in order to get a broader perspective. This research may aid in the potential creation of interventions for families to help parents mitigate the possible challenges - either perceived or real - presented by their children playing violent video games.

B. Procedures/treatments involved:

After completing the survey, participants can choose to also take part in an interview to further discuss this topic. Interviews will include questions surrounding the specifics of what violent video game play looks like in their household and whether or not the Covid-19 pandemic and resulting quarantine have affected this in any way. Interviews may take place in person or using a digital platform such as Zoom.

C. Expected length of participation:

Interviews may take up to one hour.

D. Potential benefits:

By taking part in this study, participants will learn valuable information about and for their families regarding violent video games and children.

E. Potential risks or discomforts:

There are no more than minimal risks or foreseeable risks above what would occur in any situation where a person learns and grows. We think these may include being uncomfortable with the topic or bringing up painful or disturbing memories.

F. Contact information for researchers:

Keri Knutson, [REDACTED]

Janette Wetsel, [REDACTED]

G. Contact information for UCO IRB:

UCO Office of Research Integrity and Compliance, NUC 34, Campus Box 132
(405) 974-5497 irb@uco.edu

H. Explanation of confidentiality and privacy:

All participation will be confidential. In the final report, pseudonyms will be assigned to any participants' quotes. No identifying information will be used in the final report. A Master Code Sheet will be kept to organize the collection of

data. Paper data will be stored in a locked office filing cabinet on the UCO campus. Electronic data will be kept on the PI's personal computer, which is fingerprint and password protected. All paper data will be shredded and all electronic data will be deleted 3 years following the close of the study. The only attendees at interviews will be the PI and the research subject. If interviews take place via Zoom, the meeting link will be emailed directly to the research subject and will be password protected. If the participant also agrees to a recording of the Zoom interview, it will be stored in the PI's Zoom account with additional password protection. The PI will be the only one with the passwords and the only one who may view the recording. The recording will be deleted 3 years after the close of the study.

I. Assurance of voluntary participation:

Only volunteers who complete the Informed Consent Form will participate in this study. You have the right to withdraw for any reason at any time without penalty. You can decline to participate, decide to stop at any time, or refuse to answer any questions without penalty.

AFFIRMATION BY RESEARCH SUBJECT

I hereby voluntarily agree to participate in the above listed research project and further understand the above listed explanations and descriptions of the research project. I also understand that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty. I acknowledge that I am at least 18 years old. I have read and fully understand this Informed Consent Form. I sign it freely and voluntarily. I acknowledge that a copy of this Informed Consent Form has been given to me to keep.

Research Subject's Name: _____

Signature: _____ Date _____

Audio/Visual Consent:

If this interview is taking place via Zoom, I also give consent for the researcher to record the interview. I understand that agreeing to recording has no impact on this interview, and I may ask to stop the recording at any time without penalty. I understand that I may continue the interview without recording.

Research Subject's Name: _____

Signature: _____ Date _____

If you are concerned about how your personal data is being processed, please contact Swansea University's Data Protection Officer at dataprotection@swansea.ac.uk. If you remain unsatisfied, you may wish to consider the processes available to you if you wish to exercise a right. This information can be accessed at <https://www.swansea.ac.uk/about-us/compliance/data-protection/>

9.5 APPENDIX 5 - INTERVIEW QUESTIONS

Interview Questions

1. Tell me about yourself and your family.
2. Do you have limits/rules/guidelines in your home regarding video games and/or violent video games? If so, what are they?
3. How did you come to these?
4. Where do you look for information/advice regarding violent video game play, who do you ask?
5. Do you think playing violent video games affects children in any way?
6. Do you think playing violent video games affects your children in any way? If so, how?
7. If you have multiple children, do you feel that playing violent video games affects them differently?
8. Have your thoughts about violent video games changed at all at any point throughout your life? If so, how? Before kids?
9. If your child asked to play a video game that you had never heard of before, what would you do?
10. If your child plays violent video games, why do you think that is? What do you think they like about it?
11. What do you read on social media about video games?
12. What media headlines do you see about video games?
13. What do you know about current research surrounding violent video games?
14. Has the COVID-19 pandemic and quarantine affected your child(ren)'s video game play and/or violent video game play? If so, how?
15. Has the COVID-19 pandemic changed your perspective on violent video games at all?
16. Is there anything else you wish I'd asked or that you'd like to tell me?

9.6 APPENDIX 6 - INTERVIEW NOTES EXAMPLE

Coding System:

Not my kid

Parent involvement

Depends on my kid

Scary

Sexual themes

Neurodiverse

Benefits

Language/cursing

Decisions

Strangers

Covid

Ratings

Media

P17 - 30 August 2021

- Son 7yo, daughter 4yo
- Admin specialist, just started MBA program
- Played Nintendo a lot as a kid, “obsessed”
- Message was “video games are bad”
- Single mom, “iPad became my best friend” when going through a rough divorce
- like to give kids a say in the structure
- SiL very structured - 25 mins on iPad
- Kids need a break after school- scooters, board games, don’t say electronics but feel like it counts
- As I get less strict, the less they want it
- No electronics before school
- Hasn’t been an issue yet, no real limits on content
 - A few scary videos for daughter
- Son more sensitive, doesn’t like blood/fighting
 - Doesn’t want to eat meat b/c doesn’t like the idea of killing animals
 - No super hero animals
 - Friends have Fortnite, will play at their house
 - Plays Hide n Seek in it, adapted play
- Violence:

- Mortal Kombat
 - Played w/bro as a kid
- Grand Theft Auto
 - Prostitutes - run over, more points
 - MORAL problem
 - Yes & no, not straightforward (???see transcript)
- Try to have open conversation with kids
 - Encourage conversation
 - “do you think that’s a good way to treat people?”
- Violent games can be a replacement for family time, outside factors
- If kid wants to play:
 - Play together “let’s give that a try”
 - If know it’s scary/bloody, ask “why”
 - Want OWN opinion
 - Help set the tone w/him
- No ratings
 - Yes for movies sometimes i.e. Jumanji
 - Kid afraid of being scared
 - Try to push him a little
 - Read reviews to see if scary
 - Daughter not scared of anything
- Moms will text each other “movie ok?”
- Montessori school - nothing specific about games, but not before school or in carpool
 - Teachers said screen in AM impairs wake-up, need social interaction
 - Kids on iPad have a harder time adjusting
 - Daughter adjusted easier but also personality and divorce
 - “wacky time”
- COVID
 - shut down March-May, Montessori difficult online
 - in person all 20-21, small school, in pods

- more screen time March-May
 - never want them to sit on iPad or watch TV all day
 - “do that at their dad’s and it drives me crazy”
 - Son needed eye surgery last year, eye turned out, common at 6-7 years old, when eyes are tired, “exotropia” - hereditary, lots of factors
 - Media:
 - Columbine - media message blamed video games
 - In my head, if a kid is going to pick up a gun and shoot a school, issues with parental supervision, family dynamic, mental health
 - Nothing recently
 - Technology, media coverage sways
 - Don’t believe vvg are the cause
 - Do I think young kids need to be playing? That’s a different story.
 - Undergrad and developmental psych for nursing - kids can’t imagine something they haven’t seen
 - Kids will experience horrible things so why start early?
 - Roblox, Minecraft 0 friends with family and friends and will play online together
 - Don’t want him to play with strangers
 - NO to strangers always
-
- After pregnancy and babies, things seem more violent and gory
 - Grandparents have no opinion on violent games but NO iPad allowed at their house

9.7 APPENDIX 7 - CONTENT ANALYSIS SEARCHES

Search Terms	Dates Searched	Number of Articles
“Violent video games” <i>and</i> “children”	1 Oct 2020 - 30 Sept 2021	10
“Violent video games” <i>and</i> “children”	1 Jan 2010 - 31 Dec 2021	428
“video games” <i>or</i> “computer games” <i>and</i>	1 Oct 2020 - 30 Sept 2021	2,250

“[violent or shoot or kill]”		
“video games” <i>or</i> “computer games” <i>and</i> “[violent or shoot or kill]” <i>and</i> “children”	1 Oct 2020 - 30 Sept 2021	506
“video games” <i>and</i> “children” <i>and</i> “[violent or violence or shoot or kill]”	1 Oct 2020 - 30 Sept 2021	218
“video games” <i>and</i> “children” <i>and</i> “[violent or violence or shoot or kill]”	1 Jan 2010 - 31 Dec 2021	2,029
“video game” <i>or</i> “computer game” <i>and</i> “children”	1 Jan 2010 - 31 Dec 2021	4,603
“video game” <i>or</i> “computer game”	1 Oct 2020 - 30 Sept 2021	5,910
“video game” <i>or</i> “computer game” <i>and</i> “children”	1 Oct 2020 - 30 Sept 2021	431

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