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PIXELS AND PERSONALITIES: INVESTIGATING THE RELATIONSHIP BETWEEN PERSONALITY DIFFERENCES, GAMER IDENTITY, VERBAL AGGRESSION, AND RELATIONAL WELL-BEING

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PIXELS AND PERSONALITIES: INVESTIGATING THE RELATIONSHIP BETWEEN PERSONALITY DIFFERENCES, GAMER IDENTITY, VERBAL AGGRESSION, AND RELATIONAL WELL-BEING

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When I think about the experience of finishing a dissertation, I start framing it through metaphors. At this moment, while writing these acknowledgments, the first metaphor I think of is Jonathan Haidt's "the elephant and the rider." The elephant represents our emotional selves, and the rider is the rational self. The rider can plan all that they want, but if the elephant loses control, they both suffer. To contextualize this in terms of my dissertation, I like to think of Dr. Amy Johnson as the rider. She had the monumental task of trying to tame a wild elephant. The elephant wanted to explore every corner of the topic, introduce 75 variables, trample entire cities, and eventually drown in the river of despair (data). I am so grateful that she was willing to take on a student whose interests tangentially intersected hers. I look forward to working on many more publications with Dr. Johnson in the future. Thank you for your best attempts at taming this dumb, old elephant. It looks like I finally made it because of you and despite my scatterbrain nature.

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Abstract

Online gaming environments pose a visible concern given the ubiquity of online gaming and charges of toxic behaviors enacted by players onto other players. This study attempted to discern what personal factors may contribute to such behaviors. Video game research generally does not focus on underlying personality traits that might predict habitual antisocial behaviors. This study examined the relationships between narcissism, competitive orientation, gamer identity, verbal aggression, and relational well-being in a sample of online video game players (N = 154). It also investigated whether time spent playing video games moderates the relationship between narcissism and relational well-being. Data was collected through Prolific and analyzed using hierarchical multiple regression and the PROCESS macro for SPSS. Results partially supported the hypotheses. Narcissism significantly predicted verbal aggression (H1a) and positively predicted general, dominance, affectivity, and personal enhancement competitiveness (H1b), all four subscales of Newby and Klein's (2014) competitive orientation measure. Narcissism positively predicted relational well-being rather than negatively, so H1c was not supported. General competitiveness and personal enhancement significantly predicted gamer identity, offering support for H2. Time spent playing video games did not moderate the relationship between narcissism and relational well-being (H3 was not supported). Findings contribute to communication scholarship by clarifying the role of narcissism in competitive situations, destructive verbal aggression, and their potential effects on relational well-being. Implications for gamer identity formation and gender differences in gaming motives are discussed.

Chapter I – Introduction to the Study

The literature concerning the relationship between personality traits and toxic behaviors is rather nascent and sparse. A few studies, such as Ghavam et al. (2023) and Kircaburun et al. (2018), have linked personality traits such as the Dark Tetrad and problematic gaming. Others have found behavioral and relational problems akin to addiction in video game players who reportedly spend a lot of time playing video games (e.g., Donati et al., 2021; Gentile et al., 2011; Kim et al., 2008). This study aimed to examine the relationship between narcissism, competitive orientation, gamer identity, verbal aggression, and relational well-being in online video game players. Additionally, the study sought to predict verbal aggression in multiplayer gaming contexts, and whether the time spent playing video games moderated the relationship between narcissism and relational well-being. Anti-social behaviors are not simply a product of anonymity but may stem from pre-existing personality dispositions before a video game controller is picked up. While this study is not a true experimental design, the data captured could help social scientists and medical professionals identify potential red flags for gaming. For instance, increasing focus on predispositions to antisocial or toxic behaviors in gaming could lead to preventative measures based on personal assessments that can be instituted before gaming becomes a problem for a person.

Problematic gaming and gaming addiction have been identified in the DSM-5 as internet gaming disorder and there is indication from the American Psychological Association (APA; 2023) that children and adults could be harming their social selves with excessive gaming. These are compelling reasons for further investigation (Gentile, 2009; Gentile et al., 2011; Ivory & Kalyanaraman, 2007; Saleem et al., 2012). The APA (2023) as of this writing, has described internet gaming disorder in the *DSM-5*, but the APA proposes adding diagnosis criteria and

conducting further research on gaming addiction. Furthermore, if video game players and parents of video game players are going to make educated decisions about an activity that also comes with some social benefits such as cooperation and moral reasoning (Passmore & Holder, 2014), then the research (rather than moral panic) should provide guidance to healthy gaming behaviors. Finally, this study will also apply Newby and Klein's (2014) four subscale competitive orientation measure to gaming and gamer identity, something that had not been explored in the literature as of this writing.

Are Video Games Harmful or Beneficial? A Condensed Historical Summary

Video games have captured the attention of social scientists for decades, starting as early as the 1980s. Like other forms of mass media, much of the research has focused on the effects of playing video games, with special attention given to violence and children (Markey & Ferguson, 2017). Just as video game consoles have evolved and matured, so has the research analyzing the complexities of populations logging hours of game play every day. With the ubiquity of video game play, researchers are rightly concerned with the potential for antisocial behaviors that are, at the very least, anecdotally associated with gaming (e.g., Chen et al., 2009; Chesney et al., 2009). On one end of the spectrum of gaming contributions to society, there are prosocial behaviors such as increasing media literacy (Gee, 2003) and prosocial behaviors (Kowert & Oldmeadow, 2015). At the other, extreme, end of the critical spectrum is the frightening possibility that video games may be a root cause of antisocial behaviors (e.g., Sherry, 2001). Markey and Ferguson (2017) noted that, in the years that followed the Columbine tragedy, research on video games increased 300%. If video games are a sort of social Pandora's box, the lid had well been lifted and tossed aside by 2008 as 97% of children between ages 12 and 17 had played video games (Entertainment Software Association, 2022).

In the early 1980s, the Surgeon General of the United States, C. Everett Koop, declared that video games were a threat to children's health (Ellis, 1990). This sentiment was echoed by famed (or notorious) Phillip Zimbardo, who declared to *TV Guide* that most games just fed into "masculine fantasies of power, control, and destruction" (Secunda, 1983, as cited in Dominick, 1984, p. 136). Dominick published a study in the *Journal of Communication* in which they found that, for teenage boys, a weak statistical association between video game play and aggression existed; this relationship became statistically insignificant after controlling for variables such as socioeconomic status. However, they also found that heavy players had lowered self-esteem. A year later, Kestenbaum and Weinstein (1985) proposed that the video game players in their studies were subject to a sort of catharsis, discharging aggression, but also showing that high use video game players had lower frustration tolerance than lower use players. Additionally, Anderson and Ford (1986) found that college students playing highly and mildly aggressive games reported increased hostility. Most of these studies, conducted when video games had nascent graphics abilities, showed that there was concern over how this new medium could alter behaviors to the detriment of society. Researchers like Dominick (1984) concluded that video games were not as damaging as other researchers, like Zimbardo, were claiming.

By 1990, the literature was still sparse. For example, Ellis (1990) published a review of literature on games and aggression, and it only contained 14 references. In 1998, Dill-Shackleford and Dill (add year here) concluded the link between video game play and violence was inconclusive given the scarcity of research and the methodological problems of existing research such as the validity of aggression measures. Nine years later, when Ferguson (2007) included data from unpublished studies in a meta-analysis, the results were also largely inconclusive. Ferguson and Kilburn's (add year here) article in *Psychological Bulletin* was a

direct response to a meta-analysis (Anderson et al., 2010) that argued video games increased aggression and reduced prosocial behaviors in Eastern and Western countries. The general direction of these studies pointed to serious concern over whether video game play causes aggression, especially because it is a medium enjoyed by children. However, many researchers believed the data did not support increased aggression occurred due to playing video games (e.g., Ferguson & Kilburn, 2010; Markey & Ferguson, 2017).

Harvard Health Publishing (2010) weighed in on the debate over whether video games were harmful to children, noting that the research was mostly inconclusive. They argued that video game market penetration had increased, especially among teenagers, as the Federal Bureau of Investigation statistics of teen violence had fallen to historic lows. Citing Ferguson and Kilburn (2010), Harvard Health Publishing posed the argument that the proxies for violence and aggression in lab-based studies do not correlate with real-world violent behaviors vis-à-vis lowering crime statistics among teenagers. In 2015, APA released a statement indicating that there is a link between violent video games and aggressive behavior but stopped short of declaring a causal relationship. Five years later, the language was softened as the APA (2020) announced on their website that there was a link between games and "aggressive outcomes, such as yelling and pushing" but no evidence to support a link between gaming and more violent behaviors such as mass shootings.

In the late 2000s, there appears to be a turn in focus to the benefits of video gaming. Researchers such as Ferguson (2007) and Gee (2003) have noted some benefits from game play in a research landscape that also implicated video games as a social ill. Ferguson noted that video game play was associated with higher visuospatial cognition (abilities in cognitive tasks like voluntary visual memory recall and rotation). Gee argued that much could be learned from video

games such as problem-solving, identity formation, and learning non-verbal cues. Gee's work is of particular interest to this dissertation because of the tacit acknowledgement of social interactions that occur during video game play. When Gee wrote his book in 2003, online gaming was a nascent medium with very few titles; however, the book was published at the introduction of massive multiplayer online role-playing games (MMORPG) such as *Everquest* and *World of Warcraft*. The spirit of cooperation thrived in these games, as objectives and treasures required more friendships forged in game play.

Other potential advantages of video game play have been examined. In 2022, the Entertainment Software Association reported that 77% of parents played video games with their children. Kowert and Oldmeadow (2015) argued that video games provided an outlet for socializing and provided comfort to people with avoidant attachment styles. As we are finding with emerging technologies such as social media and mobile phones, the popularity and market penetration of video games outpace the notoriously sluggish scientific analysis of the social effects and affordances.

Rather than treating all video games as equivalent, other research has focused on the differential effects of prosocial and antisocial video games (e.g., Sestir & Bartholow, 2010; Verheijen et al., 2019). *Prosocial games* typically have players cooperating in-game, without violence toward each other. The description of antisocial games typically involves violence against other players, such as first-person shooter games. Saleem et al. (2012) found that prosocial video games promoted helpful behaviors in children, whereas those who played violent games showed a decrease in helpful behaviors and an increase in hurtful behaviors. Similarly, Sestir and Bartholow (2010) examined the effects of violent and nonviolent games on aggression and found that nonviolent games promoted prosocial outcomes, whereas violent games

contributed to more aggressive cognition, albeit temporary in nature. Similar to the conclusions from Sestir and Bartholow, Gentile et al. (2009) found more helping behaviors and less measured aggression in a three-part study in which children and college students played prosocial games. For example, the college students assigned to prosocial games exhibited more helpful behaviors as opposed to those who played violent/hurtful games. Passmore and Holder (2014) also conducted a meta-analysis of studies examining gaming, prosocial behaviors, and aggression, and found that prosocial behaviors were exhibited during violent video game play *when* the play modality was cooperative or games where the other player is a teammate rather than a rival. When video game players were in direct competition with each other, the players were more likely to engage in hurtful behaviors while their counterparts in cooperative gameplay were more likely to engage in prosocial behaviors. Overall, this body of research suggests the social and behavioral outcomes of video game play depend less on gaming itself but more on the context and content of the game. Prosocial and cooperative gameplay environments tend to encourage helpful and positive behaviors, whereas competitive contexts are more likely to promote antisocial behaviors like aggression.

Researchers have also found that video games contribute many useful skills that are transferable to real life interactions. For instance, Lu et al. (2014) found that video gaming with others fostered the development of leadership skills through “relationship-oriented behaviors" (p. 59). Stephen Gillett, CFO of Starbucks, reported that he learned to manage people by managing a guild online in *World of Warcraft* (Chiang, 2013). In addition, doctors who played three hours or more of video games were less likely to commit surgical errors (Rosser et al., 2007). Beyond entertainment, video game play has prosocial benefits that could transfer to out of game relational skills. The research mentioned above demonstrates the complexity of video games in

society as they provide a prosocial outlet, keeping people connected while also presenting new behavioral challenges such as gaming addiction and potentially hostile states for the players. The next section will discuss how characteristics of small groups may help us distinguish when video games are associated with aggression.

The Importance of Groups: The Social Nature of Video Game Play and its Relationship to Aggression

Playing games with people with whom one never interacts face to face is common throughout gaming. Gaming groups, sometimes known as clans or guilds (Domahidi et al., 2014; Williams et al., 2006), are composed of players who can be friends or acquaintances in real life or who find each other online through many different channels such as Reddit, Discord, and so on. Domahidi et al. (2014) found that German video game players used gaming to socialize with old friends and even recruit new friends in the virtual environment. In addition, it is not uncommon for guild members to meet their online friends in real life (Domahidi et al., 2014; Williams et al., 2006) at social events at restaurants and bars.

Video games have proven to be a pro-social mechanism that facilitated positive interactions in other contexts as well. For many children and teenagers, video games replaced face-to-face interactions during COVID-19 lockdowns as children flocked to their gaming consoles to spend time with classmates from whom they were isolated to curb the spread of disease (Donati et al., 2021). Even before the pandemic, the Pew Research Center (2009) reported that 76% of teens played video games with other people in the room and/or online. Online gaming provides access to millions of gamers worldwide as users can play solo or as a team. Some games provide opponents in the form of “bots,” characters controlled by AI, whereas other games pit users against other users. Overall, video games can serve as a social platform,

enabling connection and collaboration across physical distances. Online engagement can still foster a sense of community, even during socially difficult times such as the COVID-19 pandemic lockdown.

Thus, video games are a source of socialization and community for many players. However, perceived *toxic* gaming communities have been found by researcher to have negative effects such as feeling disconnected from peers. For instance, common gaming communities are centered around video game franchises such as *League of Legends* or *Call of Duty*, both of which are anecdotally known as toxic communities. Frommel et al. (2023) found that just the perception of a gaming community as toxic was negatively associated with relatedness (feeling connected with peers) and social capital (number of friends). According to Frommel and colleagues, the *Call of Duty* community probably experiences higher rates of relational dissatisfaction compared to players of other video games, with friends and many of the intense gamers playing this game reporting less support from peers and lower numbers of trusted friends, as opposed to games with less toxic reputations such as *Animal Crossing.* Frommel and colleagues drew these conclusions based on correlational studies, so it is currently unknown whether perceived toxic games predict feelings of social isolation or if they are explanatory because they are attractive to people already experiencing socialization difficulties. Readers of the literature may be quick to blame a particular modality, such as video games, but Frommel et al. noted that toxic behaviors can occur in any gaming environment. This author believes that there are certain types of players that are predispositionally toxic who are attracted to certain environments and foment the toxic reputations to those communities. Specifically, personality traits such as narcissism can reveal the proclivity of players to engage in anti-social behaviors like verbal aggression (attacking another's character).

What Relationship Does Anonymity Have with Toxic Behavior in Video Game Play?

Some research has attributed online hostility to the anonymity afforded in some MMORPGs and multiplayer online battle arenas (MOBAs; e.g., Chen et al., 2009; Liu & Auger, 2022). For example, Kwak and Blackburn (2015) operate from the assumption that *anonymity* leads to hostility and toxic behaviors. In 2004, Suler (2004) warned of disinhibition effects from certain affordances in online interactions such as anonymity, invisibility, and minimization of authority. In other words, because people feel that they are anonymous and have a minimal chance of being punished, they can act out their hurtful impulses.

It appears that anonymity in online gaming can contribute to bad behavior and hostility, and that could be a plausible explanation for some of the toxic behaviors reported. But what happens when the players are not anonymous? It is important to consider that video game players are, at times, matched with and against strangers, but at other times with people they know. The cover of anonymity no longer applies and the decision to engage in verbal aggression and hostility is now attached to a known identity. In addition, what are we to make of the known Internet streaming gamers with bad reputations – the kinds who garner thousands of followers, broadcast their gaming conquests in the open, and still behave badly for all the Internet to see? It would be incomplete to attribute toxic behaviors only to anonymity.

Personality and Toxic Video Game Behaviors

It is possible that even those players outed as poor sports, or toxic gamers, may be known to behave similarly outside of the gaming context. For example, Selwyn (2008) interviewed Internet users at multiple United Kingdom universities about their misbehavior online and found that there were congruence and correlation between cyber misbehavior and real-life misdeeds. In that study, the author used a questionnaire that captured data on level of Internet competence

(non-expert vs expert), basic demographics (ethnicity, gender), and misbehaviors committed online in the past 12 months (illegal downloads, pornography usage, plagiarizing assignments, misrepresentation of self). Similarly, they asked about misdeeds that happened offline, such as plagiarism, purchasing pornography, and illegal copying of media (DVDs and CDs). They found that university students who misbehaved online were also likely to misbehave in real life, with some subjects even reporting that they did not realize how many misdeeds they were committing in real life until completing the survey instrument. This study established that perpetrators of online mischief and misdeeds also committed misdemeanors in their offline lives.

PopCap Games, a video game developer now owned by EA Games, surveyed 1200 video game players in the United Kingdom and the United States and found that people who admitted to cheating in video games were also 3.5 times more likely to admit to cheating in real life – for example, stealing towels and food from hotels and restaurants, cheating on tests and taxes, and being unfaithful in romantic relationships (Sujka, 2012). In addition, the results of the PopCap Games study suggest offline antisocial behaviors may predict online antisocial behavior, if people's behavior is consistent across multiple situations. This is further evidence that there is a consistent pattern of misdeeds between online and offline behaviors, which means that the medium is not necessarily the only mechanism for anti-social behavior in video games.

Thus, it is possible that every video game player could engage in toxic behaviors at some point in their gaming experience; however, some are more likely to engage in toxicity, even without the auspices of game-induced emotional distress. Toxic behavior may be related to frustrated states, but frustration or anger are not a necessary condition that determine one decision to engage in trolling, griefing, or any subsets of toxic behaviors. Rather, there may be underlying personality differences that exist before the game controller is picked up that give the

player the propensity to speak aggressively, taunt, and cheat others. Thus, one aspect of this study is to examine the personality trait of narcissism and its relationship to verbal aggression in online multiplayer video games.

Furthermore, if traits influence online behaviors, then there may be indications that those bad behaviors also happen offline, thereby affecting the well-being of those players' offline relationships. In nearly five decades of video game research, studies have aimed to discover the relationship between playing video games and aggression. This dissertation aimed to further explore aggression but nuanced the study towards verbal aggression. Rather than attribute anti-social behavior to the medium and anonymity, this study wanted to consider narcissism and competitiveness and their relationship to verbal aggression as well as offline relational well-being. These possible relationships will be explored further in Chapter II.

Chapter II – Literature Review

As previously mentioned, video games are ubiquitous and very popular. Researchers have tried to link video games and behavior in previous works such as Anderson et al. (2020). While Anderson and Ford (1986) concerned themselves with antisocial behaviors such as aggression after playing aggressive video games, others have focused on prosocial behaviors (e.g., Kowert & Oldmeadow, 2015). Recent studies have also indicated that underlying personality traits may predict some of these behaviors, particularly antisocial behaviors such as verbal aggression that are toxic to overall emotional health (Beres et al., 2021; Frommel, 2023; Gentile et al., 2011; Ghavam et al., 2023). The use of taunts and character attacks in video game chats (e.g., Neto et al., 2017) suggests that there is a need to study verbal aggression in video games. Video games are a competitive outlet but there is relatively little research examining individual differences in competitiveness shapes gaming behaviors. Narcissism has been highly correlated with competitiveness (Kjærvik and Bushman, 2021; Luchner et al., 2011) as well and is a logical starting point for investigating competitiveness in gaming. Narcissism also has known associations with aggression (Gerwitz-Meydan & Finzi-Dottan, 2017), tying the construct back to verbal aggression. Narcissism also has implications for relationships given that increased narcissism is associated with increased relationship challenges (Gerwitz-Meydan & Finzi-Dottan, 2017; Kjærvik and Bushman, 2021). Poor relational well-being could be expected as a manifestation of narcissism, creating additional relational challenges.

Verbal Aggression

Gaming research has ample material to discuss the act of verbally berating, harassing, and abusing other players, and often uses different terminology for this concept. For example, Sparrow et al. (2019) describe “verbal harassment” as a toxic behavior. Flaming, or verbal abuse,

is discussed throughout the gaming literature (e.g., Kordyaka et al., 2020; Lapidot-Lefler & Barak, 2011; Liu & Agur, 2022; Türkay et al., 2020). Early research in flaming from Reinig et al. (1998) defined flaming as intentional verbal attacks "to offend either persons or organizations" (p. 45). Liu and Agur (2022) also describe flaming as verbal abuse, harassment, and hate speech, all of which are conceptualized similarly. Hardaker (2010) presents evidence that verbal aggression in online contexts also comes with a necessarily "face-attacking" intention designed to belittle and demean the target in response to a threat (perhaps even an ego threat) or thwart of a goal. Flaming is verbal aggression in the context of multiplayer video games.

Flaming behaviors are ironically often more damaging to the flamer than the intended target. Monge and Laurent (2024) found that, in online contexts, the person doing the flaming was generally judged negatively, as opposed to the target of flaming. It would make sense that the victim of flaming would have strong negative feelings after verbal abuse, but third-party observers of a flaming interaction also report strong negative feelings. It would stand to reason that family and friends observing a verbal attack may also experience negative feelings and anxiousness.

Infante and Wigley (1986) define verbal aggression as attacks on the character, competence, and self-concept of the target. The authors state that there are several reasons for why verbal aggression emerges in an interpersonal relationship including frustration, social learning, and psychopathology. Infante and Wigley conceptualized verbal aggression as a *personality trait* but they also acknowledge it could be a *state,* meaning examine verbal aggression as a temporary reaction, triggered by a specific situation. Specifically, this research will assess state verbal aggression in the gaming context, arguing that gameplay can trigger verbal aggression. A similar tactic was used in Johnson et al. (2007) who adapted the verbal

aggressiveness scale to a specific instance of argumentation. Similarly, in this dissertation, the scale was adapted to capture in-game, situated verbal aggression.

This study is not be the first attempt to capture verbal aggression as a state. Other authors have treated verbal aggression in gaming as a state. For instance**,** Kwak and Blackburn's (2015) linguistic analysis of chats during gameplay suggests that toxic behaviors are fomented by frustration in competitive environments. They argue that, as gameplay moves towards a certain outcome, particularly losing, chats with teammates become more aggressive and hostile. Neto et al. (2017) found a similar association between poor performance and negative chats that involved insults directed at teammates and character attacks on opponents. Although they did not explicitly surmise the cause was frustration, Neto and colleagues' evidence suggests that negative behaviors begin when the game seems tilting towards a loss. In research seven years prior, Ivory and Kalyanaraman (2007) investigated the link between violent video game content and violent behavior, which is not necessarily verbal aggression. Their research did not find support for that link of violence, but they did find evidence that video game players experienced elevated levels of hostility. They concluded during their discussion that this finding could be the result of frustration as video games are often exhilarating, increasing arousal and excitement levels, and challenging enough to frustrate the players as well. As Neto et al. (2017) found, frustrated players express themselves in the form of verbal aggression such as insults (e.g., racist, sexist, and homophobic slurs) hurled at opponents and teammates as well. This means that verbal aggression is not solely a stable personality trait, but that it might be a response to in-game frustrations. As Neto et al. (2017) suggested, hostile communications might be performance-related, which reinforces the notion that verbal aggression should be measured as a state in gaming environments.

An important distinction in the theoretical framework of Infante and Wigley's (1986) argumentativeness-verbal aggression in relation to gaming is that verbal aggression is not constructive like legitimate competition and argumentativeness. Instead, verbal aggression is an attack on a person's character or esteem (Infante & Wigley, 1986) and is a destructive trait. Although Infante and Wigley's (1986) Verbal Aggressiveness Scale included 20 items to measure aggressiveness, other scholars (e.g., Levine et al., 2004) argued that ten items assess verbal aggression whereas the other then reverse coded items actually measure benevolence and support. This study is concerned with the former, verbal aggression, rather than benevolence. In addition, this study is also focused on situated verbal aggression as a state in the context of video gameplay. Therefore, state verbal aggression will be assessed alongside the personality trait of narcissism.

As other studies have confirmed, narcissists are more likely to engage in all types of aggression, including verbal and physical (Kjærvik & Bushman, 2021). Furthermore, Kjærvik and Bushman (2021) found that narcissists are thin-skinned and will act aggressively when provoked through some sort of negative evaluation. In the context of gaming, it stands to reason that wins and losses coupled with criticism from teammates and opponents might trigger verbal aggression to restore a narcissist's inflated self-image. As opposed to argumentativeness or reflection on criticism, narcissists are more likely to attack others (Kjærvik and Bushman, 2021). The stress and strain of self-image preservation, the attacks on other players, and a negative change in mood could lead to ostracism from friends and other witnesses to outrageous behavior. When a game is not going well, people high in narcissism may take it as a threat to their ego and lash out at others, including teammates. This dissertation attempts to link narcissism with situated verbal aggression and relational well-being.

Beres et al. (2021) also suggest that toxic behaviors such as verbal aggression are normalized in online gameplay. They conclude that toxic behaviors are cyclical in that they are perceived as part and parcel of online gaming. Players hesitate to report bad behavior because they deem this behavior as acceptable in the context or not worth the effort of reporting. Beres et al.'s (2021) study supports the idea that verbal aggression is socially learned because players exposed to normalized harassment and verbal abuse in online video games are apt to implement such behaviors in return.

Personality and Verbal Aggression in Video Games

Verbal aggression should be examined from a social science perspective rather than a consumer perspective, concerned with increasing the attractiveness of video games. Verbal aggression constitutes a threat to personal well-being for victims as well as perpetrators (Chen et al., 2009; Frommel et al., 2023; Hussain et al., 2023; Zsila et al., 2022). In consideration of Infante and Wigley's (1986) assertion that verbal aggression is related to psychopathology, coupled with studies suggesting bad behaviors are normal in the gaming environment, the people who commit these behaviors might be different than the rest of the population. For instance, Kircaburun et al. (2018) found the Dark Tetrad traits are directly associated with "problematic gaming behaviors" (p. 300), resulting in detrimental effects to psychological and physical health. Narcissism is amongst the Dark Tetrad traits.

Ladanyi and Doyle-Portillo (2017) found that grief play (hurting others' enjoyment of a game) was associated with narcissism. Such studies suggest that there is something different about the population that commits antisocial acts in gaming. They show narcissistic tendencies and are willing to damage other players' well-being over a video game. By reputation, the profile of a video game player has negative stigmas such as laziness and poor hygienic habits attached

(e.g., Kowert et al., 2014). However, research does not really point to deviance in players, in general. For example, Kowert et al. (2014) tested stereotypes of gamers (unpopular, unattractive, physically idle, and unsociable) and found that people who played online games were statistically no different than offline video game players and non-gaming people. In their study, they found that, statistically, there was no significant difference in online game players from the general population in self-reports of number of friends or idleness – that is, online gamers were not any lazier or less popular than the non-gaming participants. Thus, popular stereotypes of gamers were not supported by their research. The researchers later added:

> However, regression analyses did uncover significant inverse relationships between involvement and frequency of exercise, occupational success, and social support, suggesting that *more involved* online video game players are more unathletic, underachieving in their occupational pursuits in relation to their peers, and less socially supported than the broader video game playing population or the subgroup of offline players. (p. 144)

Furthermore, researchers found a positive relationship between the degree of online gaming involvement and what they described as "problematic gaming behavior," manifested in maladaptive behaviors seen in other online addiction studies (e.g., Charlton & Danforth, 2007; Hussain et al., 2023): salience, tolerance, mood modification, conflict, and behavioral problems. Once again, these studies point to a small minority of players who have behavioral problems such as aggression in video games and who appear to have certain habits (heavy game use) or personality traits (narcissism).

Problematic gaming (gaming that causes undue harm to school, work, and social relationships) (Ferguson et al., 2011) has been compared to other pathologies, such as gambling

addiction. A meta-analysis conducted by Ferguson et al. (2011) found that 3% of video game players meet the criteria for problematic gaming, which constitutes a small minority of players. Thus, while video gaming has a troubling reputation, nonproblematic players outnumber problematic players by a ratio of more than 30:1.

Gentile (2009) described problematic gaming through several negative associations with heavy gaming use. In their analysis, 8% of children ages 8 to 18 played twice as many hours as their peers, had poor performance in school, poor socialization, and attention deficits. Gentile et al. (2011) described problematic gaming use in terms akin to addiction in children due to deterioration of quality of life. These researchers' attention to the amount of time spent playing video games seems to suggest that amount of time, especially in the extremes, has a deleterious effect on healthy relationships. Time spent playing video games warrants investigation because it commonly appears as an underlying variable in problematic gaming. As Beres et al. (2021) indicate, verbal aggression and abuse is normalized in video gaming, which means that those playing video games are exposed to more instances of verbal aggression and they may be more likely to engage in those behaviors.

Effects of Video Game Experience on Likelihood of Using Verbal Aggression in Video Games

Players who are more involved in online gaming are probably also better players than their casual counterparts. When someone is highly involved in a video game, just like any pastime similar to traditional sports, they may be more skilled and/or knowledgeable in that pastime. Kowert et al.'s (2014) findings support research such as Reid et al. (2022) that found abusive communication and disruptive behaviors had a positive correlation with higher rankings; in other words, the better the player, the more likely they would engage in verbal aggression and abuse. Chesney et al. (2009) found 13 years earlier that experienced players often targeted

inexperienced players with persistent griefing behaviors, intentionally ruining the gaming experience for those they perceived as inferior. These studies suggest that time spent playing video games might increase the likelihood of highly involved players getting verbally aggressive with others.

Narcissism, Competitiveness, and Gaming

The field of psychology yields an abundance of research suggesting underlying traits and/or comorbidities contribute to excessive video game play (e.g., Gentile et al., 2011; Kircaburun et al., 2018). For instance, Gentile et al. (2011) suggested lower social competence and impulsivity can contribute to video game addiction. Kim et al. (2008), while also investigating online gaming addiction, found a link between aggression, self-control, addiction, and narcissism. Aggression and addiction were positively correlated with narcissism, suggesting that underlying personality traits such as narcissism could be used to predict problematic gaming behaviors. Kim et al. (2008) suggested that narcissism drives a video game player's desire to be respected through the accumulation of in-game wealth and prestige, thereby contributing to addictive behavior. Narcissism could lead to longer playing times, normalized verbal aggression, higher rates of competitiveness, and poorer relational outcomes.

Ladanyi and Doyle-Portillo (2017) found that grief play (i.e., intentionally ruining another player’s experience with annoying behaviors) had associations with antisocial traits such as the Dark Tetrad (Machiavellianism, narcissism, sadism, and psychopathy). Kircaburun et al. (2018) also support this finding that the Dark Tetrad is strongly related to toxic game play behaviors such as griefing and verbal aggression. In their model, narcissism explained the most variance (12%) for the motive of “competition” participants reported. For many video game players, the medium provides an avenue for competing outside of traditional areas of competition

like live sports such as basketball, track and field, and volleyball. For narcissists, the medium gives them access to competition that could support their egotistical desire to be dominant over others. For example, Grapsas et al. (2020) found that narcissists selected situations in which they could demonstrate higher status. For these individuals, it is about entertainment, but it also stands to reason that wins and losses can have a direct effect on ego gains and losses. Those losses might be a source of verbal aggression and hostility because of thwarted goals and feelings of inferior play. For example, Kjærvik and Bushman (2021) found a link between narcissism and aggression, especially when narcissists were provoked. Provocation can include any sort of criticism or challenges to a narcissist's inflated ego. Losing to "inferior" talent in a videogame can arouse the defense mechanisms available to a narcissist, which likely include some sort of verbal aggression.

Furthermore, Achterbosch et al. (2014) found that players who valued achievements were also highly likely to use griefing behaviors. In a later qualitative study of griefers, Achterbosch et al. (2017) found that those who admitted to griefing other players did so because they wanted to exhibit dominance over lesser players and enjoyed the extracurricular challenge of annoying other players when the regular goals of the game became boring. Furthermore, Grapsas et al. (2020) explain that, when narcissists seek external validation of superiority, their modes of operation entail interpersonal aggression. High use of video games coupled with narcissism could increase instances of verbal aggression, thereby increasing negative relational outcomes.

Relational Well-Being

One of the driving forces of this research was to uncover healthy approaches to a medium that is ubiquitous and popular. Some gaming scholars have argued that there are social benefits to gaming (Passmore & Holder, 2014; Saleem et al., 2012; Verheijen et al., 2019), but others are

very concerned with detrimental behaviors such as aggression (Anderson et al., 2010) and poor performance in school (Gentile et al., 2011). Frommel et al. (2023) found that, when players felt that they belonged to a toxic gaming community, they also felt increased loneliness. Gentile et al. (2011) linked heavy gaming usage with social phobias, depression, and anxiety. At the same time, research on narcissism shows that there is a positive association between narcissism and ostracism (Büttner et al., 2025). There is also a negative relationship between narcissism and relationship satisfaction (Gewirtz-Meydan & Finzi-Dottan, 2017). Narcissists are well known for their relational problems (Gewirtz-Meydan & Finzi-Dottan, 2017) and this conclusion is supported by a recent study in which narcissists self-reported higher levels of ostracism (Büttner et al., 2025). In sum, poor relational outcomes could be compounded by two risk factors of heavy game use and narcissism. The repeated exposure of those high in narcissism to ego threats (including character attacks from other players and thwarted gaming goals) could lead to relational failure as this hostility could spill from the gaming environment to their offline relations.

Video games have visible rankings and accolades for accomplished players (another draw for those high in narcissism), and have been mentioned in studies as a possible reason for players to behave in a toxic manner. For instance, Kwak et al. (2015) mention that competitive games provide an atmosphere that fosters teamwork but also foment toxic environments that are "vulnerable" (p. 3739) to cyberbullying and toxic behaviors. Although Shen et al. (2020) did not mention competition as predictive of verbal abuse in their study of *World of Tanks* gameplay, poor performance in a competitive environment led to higher skilled players verbally aggressing lower skilled players. Verheijen et al. (2019) showed that games played with a competitive modality (versus a cooperative modality) lowered friendship quality in observed gaming

interactions. Competitive environments seem to relate to the behaviors of video game players. Competitive environments foster more hostile communication. Thus, competitiveness appears to be a variable of interest when studying video games. The thread of narcissism binds a proclivity for more competitive situations as well as a penchant for verbally aggressing others in losing situations. It would be expected that game players high in narcissism would have lower social satisfaction and, therefore, report lower relational well-being scores.

Gender, Gamers, and Competitiveness

Throughout this dissertation, this author was careful to avoid using "gamer" to refer to anyone who played video games, no matter how much time they spent playing video games. Shaw (2011) noted that the gamer identity is complicated because of the intersection of gaming stigmas, bad gaming behavior, sexuality, and gender expression. A lot of gaming does not make one a gamer. Kowert et al. (2014) addressed the gamer stigma by surveying people who play video games and examining whether they had poor hygiene, poor performance in school or work, and low social support. Their findings indicate that there were no statistical differences between people who did not play games and most of the game players they surveyed in those categories. However, they did find that stigmas measured (e.g., poor hygiene) were a significant predictor of high use, meaning that players who had poor hygiene and low social support were also more likely to be *highly involved* (more time spent playing games). It appears that some empirical evidence suggests that heavy use of online gaming could be an indicator of a deeper psychological/physiological problem (Gentile et al., 2011). Despite these charges of poorly adjusted video game players, some people still adopt the gamer identity. This paper proposes that there are other factors to consider for understanding gaming identity, specifically the role of competitiveness as a precursor to acceptance of that identity in the gaming community.

Even when considering heavy use, the gaming identity does not rely solely on amount of time spent playing video games. Stigmas may cause reluctance to self-identify as a gamer (see Kowert et al., 2014), but it could also be a self-assessment of trait competitiveness; rather than someone declaring themselves repugnant from poor hygiene and social skills, it is more likely that someone adopts the gamer identity because it distinguishes them from the casual player – the ability and desire to compete at a higher level. The gaming identity might be more closely related to competitiveness, which would distinguish people who play games frequently from people who call themselves gamers. Shaw (2011) also noted that women were less likely to refer to themselves as gamers.

In terms of competition, there are noted gender differences in competitiveness in other contexts. Niederle and Vesterlund's (2011) found that the literature outside of gaming suggests that women are less likely to enjoy competition, men are more likely to overestimate their abilities compared to others, and women tend to underperform in competitive situations. Kivikangas et al. (2014) found that, in video game play, men were more likely to respond positively to competitive play rather than cooperative play. There were no differences for women. As there are expected gender differences in competitiveness, gender should be considered when assessing expressions of competitiveness. Gender differences might also influence positive gamer identity through the noted differences in competitiveness, but also the known reluctance of women to adopt this identity (Shaw, 2011). Therefore, gender should be controlled in a study on competitiveness and gamer identity such as this dissertation.

Newby and Klein’s (2014) competitive orientation scale measures people’s proclivity for competition through four subscales: general, dominance, affectivity, and personal enhancement. General competitiveness is a drive to outperform others and has been used to discriminate

between people who choose to engage in or refrain from competition (Newby & Klein, 2014). Dominance competition has been described as a method of "self-aggrandizement" (Newby & Klein, 2014, p. 880) and also as "hypercompetitiveness" (p. 880). This could potentially be the motivating factor for narcissists and their competitive tendencies (Luchner et al., 2011). It also provides an avenue for verifying their superiority over others. Competition affectivity describes people who enjoy competitive situations without the need to dominate their opponents. Personal enhancement competition measures people's desire to compare themselves with others and find motivation to improve themselves (cite author).

Competitiveness has been rather difficult for Newby and Klein (2014) who expressed dissatisfaction with previous competitiveness scales, citing "several operational definitions [prior to 1992] …however, no psychometrically sound questionnaire to measure this construct." Newby and Klein addressed some of the psychometric issues by separating the construct into the four above-mentioned subscales to account for nonspecific competition (general competitiveness), competition for self-aggrandizement (dominance competitiveness), emotional charges from competition (affective competitiveness), and motives for self-improvement (self enhancement). People can choose to compete (general) and the motivations to compete are parsed out in the other three subscales of dominance, affectivity, and personal enhancement.

The context of gaming offers several avenues for those different approaches to competition. Because of the many facets of gaming, and, in particular, motivations for gaming, using all four subscales allows the researcher to capture competitions, no matter the motivation. As a social activity, players can choose to engage in competition (general), establish themselves as better than others (dominance), delight in the thrill of competition (affectivity), and gain more

skill in hand-eye coordination or see themselves improve every day in the activity the way a bowler would see mastery after many bowling frames of experience (personal enhancement).

In the online gaming realm, some games are cooperative in nature, pitting teams against an environment or computer opponents rather than other players, such as titles like *Helldivers 2* and *Valheim*. It would be advantageous to capture that data when analyzing competitiveness and gaming because competitiveness and motives seem inextricably linked. Newby and Klein (2014) identified motives for competition in their Competitive Orientation Measure, which they argued created a much better assessment of competitiveness because of that nuance.

Gender can also be a confound as there are differences in the way that men and women approach competition as suggested by previous research (Kivikangas et al., 2014; Niederle & Vesterlund, 2011). Men appear to experience more enjoyment from competitive situations (Niederle & Vesterlund, 2011), so it stands to reason that they would score higher on a general competitiveness scale which does not necessarily account for a motive to compete, just that people believe that competition is positive. Therefore, research should account for gender in any models and consider all four subscales to capture more information about gaming motives. Though the Newby and Klein (2014) subscales have existed over a decade, there is no literature connecting these four subdimensions to gaming or gamer identity, nor to well-being. This is a fertile ground for novel investigation. In this study, competitiveness will be investigated as a predictor variable for gamer identity.

Time Spent Playing Video Games

There is evidence that the amount of daily time playing video games has a deleterious effect on social health on heavy users. For instance, in 2011, Gentile and colleagues found that pathological gamers had patterns of comorbidities such as depression, increased hostility, and

poor grades in school. Their longitudinal study found that pathological game players in 3rd and 8th grade averaged 31 hours of playing time per week as opposed to non-pathological game players who averaged 19 hours. They also found that lower social competence and impulsiveness acted as at-risk factors for becoming a pathological game player. The suggestion here is that there are predispositions for who becomes a pathological game player, as supported by Kim et al. (2008) who also found a relationship between narcissism, aggression, self-control, and game addiction. Furthermore, Kestenbaum and Weinstein (1985) found in the early days of video games diffusion that adolescent males who were heavy video game users had lower frustration tolerances. Similarly, Kowert et al. (2014) reported that there were no differences in hygiene, work performance, and psychological well-being in gamers and the general population, but with a caveat. They started to see differences in gamers that they considered "more involved" (heavy users) who started to exhibit the negative stereotypes of gamers (poor hygiene, poor performance at work, and toxic gameplay). Thus, all these studies support that time spent playing video games may moderate for the poorer outcomes observed in research. For those with personality traits that lend them to hypercompetitiveness (such as narcissism), increased competitive situations, coupled with their proclivity for dominance, might increase their frustrations with others, demonstrating their verbal aggression and resulting in soured relationships.

The gaps in the literature warrant several investigative questions. While Kircaburun et al. (2018) and Ghavam et al. (2023) linked the Dark Tetrad to antisocial behaviors in gaming, narcissism is rarely investigated on its own. Because narcissism has its known associations with competitiveness, it seemed a natural choice for competitive environments like online gaming. Competitiveness as a variable in the context of gaming has not been investigated as well. Furthermore, from previous research, time spent playing video games seems to come with a

social cost (Gentile et al., 2011; Kowert et al., 2014). This idea has not really been investigated in the context of relational well-being, so there are several questions that emerge. Therefore, this dissertation poses the following:

Research Question: What is the relationship between narcissism, competitiveness, time spent playing video games, and relational well-being, if any?

Hypothesis 1: When controlling for gender, narcissism will positively predict (a) self-reported flaming/verbal aggression (b) and self-reported competitiveness (general, dominant, affectivity, and personal enhancement) and (c) will negatively predict relational well-being.

Hypothesis 2: When controlling for gender, gamer identity will be positively predicted by competitiveness (general, dominant, affectivity, and personal enhancement).

Hypothesis 3: Time spent playing video games will moderate the relationship between narcissism and relational well-being.

Chapter III – Method

The study's research question was answered, and the hypotheses were tested through a quantitative analysis of the relationships between narcissism, competitiveness, gamer identity and relational well-being. The approach was used to investigate precursory traits that may predict toxic behaviors in online gaming such as verbal aggression and whether these relationships are moderated by time spent playing video games.

Participants

A power analysis was conducted using G*Power 3.1.9.7 (Faul et al., 2009) to determine the minimum sample size required to detect a medium effect size (Cohen's $f^2 = 0.15$) with .95 power and $\alpha = 0.05$. The analysis indicated that a minimum sample of $N = 74$ participants was needed. However, to account for possible erroneous and/or unusable data, the sample size was increased to a goal of 150.

Participants were adults over 18 years old who played online multiplayer video games and resided in the United States. The crowdsource platform Prolific was used to recruit participants. Prolific is particularly advantageous because of the wide availability of participants. Prolific also has their own safeguards against fraudulent or hastily produced survey responses. Several pre-screens available on the platform were used and the research opportunity was then presented only to individuals who met all four of the study's eligibility conditions: 1. They reported they spent three hours per week of video games. 2. They resided in the United States. 3. They were 18 years of age or older. 4. They had successfully completed 99% or better of their previous tasks.

Many of Prolific's users were not eligible for the study, which limited the pool of available respondents. Within the survey, a secondary prescreening question was asked: "Do you

play online multiplayer games?" If the selection was "no," individuals were immediately redirected to the end of the survey and were compensated $0.14 for their participation. Twenty-nine participants did not pass this pre-screening process.

In addition, eleven other participants either "timed out" after excessive inactivity (over 60 minutes) or withdrew from the survey before completion. One participant's data was excluded for repeated failure of attention checks and their survey was rejected. Eight participants answered "No" to the online consent form and no data was collected from them.

The final tally for accepted surveys was 154, and these responses were used for analyses. Respondents' ages ranged from 19 years to 62 years, with a mean of 35.17 years and a median age of 34 years (SD = 9.06 years). Most respondents identified as male (n = 111), whereas 39 identified as female, three as non-binary or third gender, and one answered "Prefer not to say." In terms of ethnicity, 88 identified as White, 23 as Asian/Pacific Islander, 13 as Hispanic or Latino/a/x, 18 as Black or African American, 11 as Bi-racial/Mixed race, and one as "Ethnicity not listed here." Respondents were very diverse in terms of education levels. There were representatives in each category: less than high school (n = 2, 1.3%), high school graduate (n = 39, 25.3%), some college (n = 30, 19.5%), two year degree or trade school (n = 23, 14.9%), four year degree (n = 53, 34.4%), professional or master's degree (n = 6, 3.9%), and doctorate (n = 1; 0.6%). Thirty-one respondents reported income between 0 and $19,999; 40 reported $20,000 to $39,999; 31 reported $40,000 to $59,999; 23 reported $60,000 to $79,999; nine reported $80,000 to $99,999; finally, 20 reported $100,000 and above.

Procedures

Participants logged into Prolific and were redirected to Qualtrics to begin the study. The first form they encountered was the informed consent. In the consent form, participants were

informed of the purpose of the research, how many participants would take part, what tasks they were to complete, risks and benefits, compensation schedules, who would have access to their data, how that data will be used, assurances of confidentiality, and contact information for the researchers and the campus Institutional Review Board. Afterwards, they entered their Prolific ID solely for compensation purposes.

In the first part of the survey, respondents answered basic demographic questions such as ethnicity, gender, and income as well as hours spent playing video games per week. Next, the survey asked questions meant to assess whether respondents identified as gamers. The next block of questions assessed levels of narcissism (with the Short Narcissism Subscale; Paulhus et al., 2021) and competitiveness (with the Competitiveness Orientation Measure; Newby & Klein, 2014). Between the narcissism questions and competitiveness, the respondents encountered the first attention check. Three questions were worded to instruct respondents to answer "neutral" for all three. Respondents who failed attention checks or failed to complete the survey were rejected (n = 1). After that block of questions, respondents completed the Verbal Aggressiveness Scale (Infante & Wigley, 1986). The following block was another set of three attention checks, before respondents completed the Relational Well-Being scale (Gaines, et al., 2024).

Respondents were given a maximum response time of 60 minutes after which the survey "timed out" and, if they did not complete it within this interval, they were not compensated. Each successful survey respondent was compensated $4.00 for their participation. The anticipated length of time to complete the survey was approximately 20 minutes (M = 12.51 minutes, SD = 10.27 minutes). Prolific IDs were collected for compensation purposes but were not attached to any other data in the final data set used by the researcher. Data was stored on a university

password-protected cloud storage. The research was approved by the Institutional Review Board at the author's university.

Measures

Basic demographic information was collected: age (open-ended, integer entered), gender (multiple choice), ethnicity (multiple choice), education (multiple choice), and income (multiple choice). Participants also entered estimations of how many hours they played video games per week, on average. They also entered an estimate of how many hours they played the previous week. These two integers were added together to create a composite score for analysis. See Appendix A.

Gamer identity, narcissism, competitive orientation, and relational well-being statements were rated on a 5-point Likert type scale ranging from 1 = *strongly disagree* to 5 = *strongly agree.* Verbal aggression statements were rated on a 5-point Likert scale ranging from 1 = *almost never true* to 5 = *almost always true*. See Table 1 for descriptive statistics for all variables.

Gamer Identity

To what extent video game players assumed the gamer identity was assessed with four questions developed by the researcher for this study such as, "Other people would describe me as a gamer." See Appendix B for all items. The items were summed and that composite score was used for analyses.

Narcissism

Narcissistic personality level was measured with seven items of the Short Narcissism Subscale, refined by Paulhus et al. (2021). See Appendix C for all items. The seven items (e.g., "I know that I am special because people keep telling me so.") were summed and used for analyses. Over the course of four studies (Paulhus et al., 2021), including a confirmatory factor

analysis and replicated surveys across student and community sample, narcissism has showed consistently high reliability (α = .83 and .80).

Competitiveness

Levels of competitiveness were assessed using 37 items from the Competitive Orientation measure refined and tested by Newby and Klein (2014). There are four subscales for *general competitiveness* (12 items, e.g., "I love to compete."), *dominance competitiveness* (13 items, e.g., "I like to be better than others at most everything."), *affectivity competitiveness* (eight items, e.g., "Being the best makes me feel powerful."), and *personal enhancement competitiveness* (four items, e.g., "I can improve my competence by competing."). See Appendix D for all items used. The general competitiveness and dominance competitiveness subscales have been highly reliable, reporting α = .94 and .95 respectively in Newby and Klein's (2014) scale validation studies. The remaining two subscales (affectivity and personal enhancement) have also been reliable reporting α = .89 and .88 respectively. For analyses, each subscale was summed to create a composite for that variable.

Verbal Aggression

Verbal aggression was assessed with 20 items from Infante and Wigley's (1986) Verbal Aggressiveness Scale, adapted for this study. Specifically, respondents were asked to consider only the gaming context for this study. For instance, the item, "When others do things I regard as stupid, I try to be extremely gentle with them" was converted to "In a video game, when others do things I regard as stupid, I try to be extremely gentle with them." The scale notably has ten items that measure verbal aggression or anti-social verbal aggressiveness and ten items that measure benevolence (Levine et al., 2004) or pro-social verbal aggressiveness. The main concern in this study is verbal aggression; however both variables were captured for analysis. See

Appendix E for all items. The scale has been shown to be reliable (α = .81) as demonstrated in Infante and Wigley (1986) when both variables were used to create an overall composite score. A more recent study in the context of video games (Howe & Cionea, 2021) found higher reliability when the variables were reported separately and as a state (anti-social verbal aggressiveness α = .92; pro-social verbal aggressiveness α = .90).

Relational Well-Being

To assess the quality of the participants' interpersonal relationships the eight item Relational Well-Being Scale (Gaines et al., 2024, e.g., "If something goes wrong, I know people who can help me sort it out") was used in this study's survey. Gaines et al. (2024) examined the construct validity and criterion-related validity of an eight-item measure of relational well-being across multiple countries (UK, India, and Greece). For the UK and Greece, reliability was adequate when excluding one problematic item in the scale (item seven; α = .79 and .76 respectively). The scale was less reliable in India (α = 0.66). See Appendix F for the seven items used in this study. The least reliable item (item seven, reverse coded, "I feel that there are few people in my life who really care about me") was not used in this study as suggested by Gaines et al. (2024).

Table 1

Descriptive Statistics and Reliability Scores for Study Variables

	Minimum	Maximum	Mean	Std. Deviation	*α*
Gamer Identity	1	5	3.25	0.56	.84
Narcissism	1	5	2.80	0.86	.86
General Competitiveness	1	5	3.63	1.05	.97
Dominance Competitiveness	1	5	3.08	1.07	.96
Affectivity Competitiveness	1	5	3.21	0.98	.89
Personal Enhancement Competitiveness	1	5	3.80	0.96	.88
Relational Well-Being	1	5	3.67	0.98	.90
Verbal Aggression (Destructive)	1	5	2.23	0.97	.93

Verbal Aggression (Benevolent)	1	5	3.47	0.94	.92

Notes.
$N = 154$
Competitive orientation subscales (general, dominance, affectivity, personal enhancement) were converted from the original measurement ranging from -2 to +2 to 1 to 5 for analyses in SPSS.

Chapter IV - Results

The study's research question asked, "What is the relationship between narcissism, competitiveness, verbal aggression, time spent playing video games, and relational well-being?". A bivariate correlation matrix was created to examine the relationships between the above variables.

The correlation matrix (see Table 2) suggested that narcissism was moderately and positively associated with three sub-dimensions of competitive orientation: general competitiveness, dominance competitiveness, and personal enhancement competitiveness. Narcissism had a weak, positive correlation with affectivity competitiveness. Second, time spent playing video games had a weak, positive correlation with narcissism. Third, narcissism showed a weak, positive correlation with relational well-being. Fourth, relational well-being had a weak, positive correlation with general competitiveness, dominance competitiveness, and personal enhancement competitiveness.

Table 2

Bivariate Correlations Among Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Age	—										
2. Hours Played/Week	−.07	—									
3. Gamer Identity	.03	.35**	—								
4. Narcissism	.07	.14	.17*	—							
5. General Comp.	.05	.01	.18*	.51**	—						
6. Dominance Comp.	.03	-.00	.15	.54**	.80**	—					
7. Affectivity Comp.	-.04	-.09	-.01	.25**	.58**	.71**	—				
8. Personal Enhance.	.02	-.03	.15	.43**	.76**	.71**	.57**	—			
9. Verb. Aggr. (Dest.)	-.15	.20*	.27**	.22**	.31**	.46**	.39**	.35**	—		

10. Verb. Aggr. (Const.)	.17*	-.06	.00	.10	-.10	-.18*	-.33**	-.09	-.61**	—
11. Relational Well-Being	-.08	.05	.20*	.38**	.34**	.23**	-.02	.20*	−.09	.11	—

Notes.
$N = 154$.
Comp. = competitiveness. Personal enhance. = personal enhancement competitiveness.
Verb. Aggr. (Dest.) = Destructive verbal aggression; Verb. Aggr. (Const.) = Constructive verbal aggression
*$p < .05$ (two-tailed). **$p < .01$ (two-tailed).

Hypothesis 1 proposed that, when controlling for gender, narcissism would positively predict (a) verbal aggression, (b) competitiveness (general, dominant, affectivity, and personal enhancement), and (c) negatively predict relational well-being offline. To investigate this hypothesis, a hierarchical regression was conducted for each part (a, b, and c) of the hypothesis. For each analysis, gender was entered into the first step of each regression to control for it. Gender was dummy coded into 0 for all participants identifying as male ($n = 111$) and 1 for all identifying as female ($n = 39$). Non-binary and "prefer not to say" respondents were excluded from all regression analyses ($n = 4$). Given the focus of this study, only the destructive verbal aggression sub-dimension was examined in analyses that tested verbal aggression.

For Hypothesis 1a, a hierarchical regression showed that gender was a not significant predictor of destructive verbal aggression (see Table 3 for coefficient values and model fit statistics), and the regression model was not significant. When narcissism was added to the model, the model was statistically significant, and narcissism was a significant predictor of verbal aggression as well. The model with both gender and narcissism as predictors showed that gender was not a significant predictor of verbal aggression, but narcissism was. Thus, narcissism significantly predicts verbal aggression when controlling for gender. Therefore, Hypothesis 1a was supported. See Table 3.

Table 3

Hierarchical Regression Analyses for Hypothesis 1a: Narcissism Predicting Verbal Aggression While Controlling for Gender

Predictor Variable	B	β	*t*	*p*	R^2_{adj}	ΔR^2_{adj}	*F*(2,147)	Δ*F*
Verbal Aggression (Destructive)								
Step 1								
Model				.27	.00		1.24	
Gender	-2.01	-0.09	-1.11	.27				
Step 2								
Model				<.01**	.04	.04	4.02**	6.75**
Gender	-2.23	-0.10	-1.26	.21				
Narcissism	0.34	0.21	2.60	<.01**				

Notes.
N = 150.
Step 1 includes gender only; Step 2 adds narcissism.
B = unstandardized regression coefficient.
***p* < .01.

For Hypothesis 1b, all four competitive orientation sub-dimensions showed statistically significant results across four separate hierarchical regression analyses (one for each sub-dimension of competitive orientation). In each regression, narcissism was entered as the criterion variable, while controlling for gender.

The first hierarchical regression employed *general competitiveness* as the dependent variable (See Table 4 for coefficient values and model fit statistics). Gender, entered in the first step of the regression, was not a significant predictor of general competitiveness. After entering narcissism as a second predictor in the second step of the analysis, the model was significant and narcissism significantly predicted general competitiveness. Narcissism helped explain 24% of the variance in general competitiveness, while controlling for gender (which was not significant

in this step either). Narcissism's coefficient was positive, suggesting that higher levels of narcissism predicted higher levels of general competitiveness.

The second hierarchical regression employed *dominance competitive orientation* as the dependent variable (See Table 4 for coefficient and values and model fit statistics). In step one, gender was added as a predictor of dominance competitiveness but was not significant and neither was the regression model. When adding narcissism in step two as a second predictor, the regression model was significant. The predictors explained 27% of the variance in dominance competitive orientation, when controlling for gender. Narcissism was significant and its positive coefficient suggested that higher levels of narcissism predicted higher levels of dominance competitive orientation. Gender was not a significant predictor of dominance competitive orientation.

For the hierarchical regression analysis with *affectivity competitive orientation* as the dependent variable, gender was added to the model as a predictor in step one (See Table 4 for coefficient values and model fit statistics). It was not statistically significant. When narcissism was also added as a predictor in step two (controlling for gender), the model was significant and the predictors explained 4% of the variance in affectivity competitive orientation. Gender was not significant, but narcissism was statistically significant and positive, suggesting that higher levels of narcissism predicted higher affectivity competitive orientation.

For the hierarchical regression analysis with *personal enhancement competitiveness* as the dependent variable, gender was added to the model as a predictor in the first step. It was not significant as a predictor of personal enhancement competitiveness (See Table 4 for coefficient values and model fit statistics). Once narcissism was added in step two (controlling for gender), the model was significant and the predictors explained 19% of the variance in personal

enhancement competitiveness. Narcissism significantly and positively predicted personal enhancement competitiveness, suggesting that higher levels of narcissism predicted higher levels of personal enhancement competitiveness. Gender as a predictor variable was not significant.

Based on these results, Hypothesis 1b was supported. Narcissism positively predicted all four subdimensions of competitive orientation, while controlling for gender.

Table 4

Hierarchical Regression Analyses for Hypothesis 1b: Narcissism Predicting Competitiveness While Controlling for Gender

Variable	B	β	*t*	*p*	R^2_{adj}	ΔR^2_{adj}	$F(2, 147)$	ΔF
General Competitiveness (DV)								
Step 1								
Gender (IV)	-0.37	-0.01	-.16	.88	-.01		0.3	
Step 2								
Model				< .001***	.24	.25	24.88***	49.73***
Gender (IV)	-1.08	-0.04	-0.54	.59				
Narcissism (IV)	1.04	0.50	7.05	< .001***				
Dominance Competitiveness (DV)								
Step 1								
Gender (IV)	-1.67	-0.05	-0.65	.52	.00		0.42	
Step 2								
Model					.27	.27	29.01***	57.45***
Gender (IV)	-2.51	-0.08	-1.14	.26				
Narcissism (IV	1.22	0.53	7.58	< .001				
Affectivity Competitiveness (DV)								
Step 1								
Gender	0.36	0.02	0.25	.81	-.01		0.06	

Step 2								
Model				< .01**	.04	.05	4.14**	8.22**
Gender	0.15	0.01	0.11	.91				
Narcissism	0.29	.23	2.89	< .01**				
Personal Enhancement Competitiveness (DV)								
Step 1								
Gender (IV)	0.00	0.00	0.00	.99	.00		0.00	
Step 2								
Model				< .001***	.17	.17	16.10***	32.20***
Gender (IV)	-0.18	-.02	-.28	.78				
Narcissism (IV)	0.26	.42	5.68	< .001***				

Notes.
N = 150.
Step 1 includes gender only; Step 2 adds narcissism.
B = unstandardized regression coefficient.
*$p < .05$. **$p < .01$ ***$p < .001$.

For Hypothesis 1c, a hierarchical multiple regression was used to analyze narcissism as a negative predictor of relational well-being, while controlling for gender (see Table 5 for coefficient values and model fit statistics). In the first step, with gender only as a predictor, the model was not significant, and gender did not significantly predict relational well-being. After entering narcissism in the second step, this variable significantly predicted relational well-being and helped explain 15% of the variance in relational well-being, while controlling for gender. Gender as a predictor variable was not significant. Narcissism was significant, however, the coefficient was positive, suggesting that higher levels of narcissism were associated with higher levels of relational well-being. The result was opposite than predicted; therefore, Hypothesis 1c was not supported.

Table 5

Narcissism Predicting Relational Well-Being While Controlling for Gender

Predictor Variable	B	β	*t*	*p*	R^2_{adj}	ΔR^2_{adj}	$F(1, 148)$	ΔF
Step 1								
Model				.58	-.01		0.31	
Gender	-0.71	-0.05	-0.56	.58				
Step 2								
Model				< .001***	.16	.17	15.26***	30.16***
Gender	-1.03	-0.07	-0.88	.38				
Narcissism	0.47	0.41	5.49	< .001***				

Notes.
$N = 150$.
Step 1 includes gender only; Step 2 adds narcissism.
B = unstandardized regression coefficient.
***$p < .001$.

Hypothesis 2 proposed that gamer identity would be predicted by the four competitiveness variables (general, dominance, affectivity, and personal enhancement). For Hypothesis 2, four separate hierarchical linear regressions were conducted to test whether each competitiveness sub-dimension would predict gamer identity, while controlling for gender. In all hierarchical regressions testing Hypothesis 2, gamer identity was entered as the dependent variable. Gender was entered as a predictor in the first step of the analysis. The model was not significant, and gender was not a significant predictor of gamer identity (see Table 6 for coefficient values and model fit coefficients). When *general competitiveness* was added in step two as a predictor, the model was significant and *general competitiveness* significantly predicted gamer identity. Gender was not significant as a predictor variable. When *dominance competitive orientation* was added to step two of the hierarchical regression analysis (See Table 6), the model was not significant. Gender was not a significant predictor variable as well. When testing *affectivity competitiveness* as a predictor variable for gamer identity, model was not significant. Gender did not result in statistical significance in explaining the model's variance (Table 6). When *personal enhancement competitive orientation* was added to step two for predicting gamer

identity, controlling for gender, it was significant and it explained 3% of the variance (Table 6). Gender did not result in statistical significance in explaining the model's variance. The data suggests that people who use competition to enhance themselves are more likely to identify as gamers.

Table 6

Hierarchical Regression Analysis for Hypothesis 2: Competitiveness Subscales Predicting Gamer Identity While Controlling for Gender

Predictor Variable	B	β	*t*	*p*	R^2_{adj}	ΔR^2_{adj}	$F(1, 148)$	ΔF
General Competitiveness								
Step 1								
Model				.16	.01		2.00	
Gender	-0.59	-0.12	-1.42	.16				
Step 2								
Model				< .05*	.03	.03	3.52*	4.98*
Gender	-.58	-0.11	-1.41	.16				
General Comp.	0.03	0.18	2.23	< .05*				
Dominance Competitiveness								
Step 1								
Model				.16	.01		2.00	
Gender	-0.59	-0.12	-1.42	.16				
Step 2								
Model				.07	.02	.02	2.68	3.32
Gender	-.55	-.11	-1.33	.19				
Dominance Comp.	0.02	.15	1.82	.07				
Affectivity Competitiveness								
Step 1								
Model				.16	.01		2.00	
Gender	-0.59	-0.12	-1.42	.16				
Step 2								

Model				.37	.00	.00	1.01	0.3
Gender	-0.59	-0.12	-1.41	.16				
Affectivity Comp.	0.00	0.01	0.16	.88				
Personal Enhancement								
Step 1								
Model				.16	.01		2.00	
Gender	-0.59	-0.12	-1.42	.16				
Step 2								
Model				< .05*	.03	.03	3.27*	4.50*
Gender	-0.59	-0.12	-1.43	.15				
Pers. Enhance. Comp.	0.10	0.17	2.12	< .05*				

Note. $N = 150$.
DV = Gamer Identity for all models.
*$p < .05$.

Although Newby and Klein (2014) argued that the creation of the competitive sub-dimensions provides a more nuanced investigation into the construct of competitiveness than previous work, other researchers such as Reese et al. (2022) have utilized all four subscales together into one multiple regression model. The author of this dissertation followed the same approach as well and conducted a hierarchical linear regression. In Step 1, gender was added to the model as a predictor variable for gamer identity but the model was not significant, nor was gender a significant predictor of gamer identity. In Step 2, all four sub-dimensions of competitive orientation (general, dominance, affectivity, and personal enhancement) were added as predictor variables, while controlling for gender. The overall model explained 7% of the variance, but was not significant ($p = .07$). None of the predictor variables were significant either when all competitive subscale variables were added. See Table 7 for all coefficients and model fit statistics.

Table 7

Hierarchical Regression Analysis for Hypothesis 2: All Competitiveness Subscales Predicting Gamer Identity While Controlling for Gender

Variable	B	β	*t*	*p*	R^2_{adj}	ΔR^2_{adj}	$F(1, 148)$	ΔF
Step 1								
Gender	-0.59	-0.12	-1.42	.16	.01		2.00	
Variable	**B**	**β**	**t**	**p**	R^2_{adj}	ΔR^2_{adj}	**F(5, 144)**	**ΔF**
Step 2								
Overall model				.07	.04	.03	2.09	2.10
Gender	-0.53	-0.10	-1.28	.20				
General Comp.	0.02	0.12	0.82	.42				
Dominance Com.	0.02	0.12	0.74	.46				
Affectivity	-0.06	-0.20	-1.71	.09				
Personal Enhancement	0.06	0.11	0.84	.40				

Note. $N = 150$.
DV = Gamer Identity for all models.

Finally, Hypothesis 3 proposed that time spent playing video games moderated the relationship between narcissism and relational well-being while controlling gender. A moderation analysis using Model 1 in the PROCESS macro for SPSS (Hayes, 2022) was used to test this hypothesis. Gender was entered as a covariate, narcissism was entered as the independent variable, time spent playing video games was the moderator, and relational well-being was the dependent variable. The overall model was not significant. The interaction between narcissism and time spent playing video games was also not significant. Time spent playing video games did not moderate the interaction between narcissism and relational well-being. See Table 8 for all coefficients and significance values.

Table 8

Spent Playing Video Games as Moderator of Narcissism and Relational Well-Being While Controlling for Gender (PROCESS Model 1)

	b	SE	t	p	95% CI
Predictor					
Narcissism (X)	.05	.07	.71	.48	[-.09, .18]
Time Spent Playing (W)	-.03	.03	-.95	.34	[-.08, .03]
Gender	.39	.50	.78	.44	[-.60, 1.39]
Overall model			.08		.05 2.13
X × W	.001 .001	0.88	.38	[-.001, .001]	

Note. N = 150. DV = Relational Well-Being.
b = unstandardized coefficient.
SE = standard error.
CI = confidence interval.
Interaction term (X x W) reflects moderation effect.

Chapter V – Discussion

The aim of this study was to analyze the relationship between a personality precursor (narcissism), competitive orientation, time spent playing video games, verbal aggression, and relationship well-being. The study also investigated the link between competitive orientation and gamer identity. As a widely popular medium, video games warrant serious investigation to minimize mental health risks and socially detrimental behavior.

Narcissism, Competitiveness, Verbal Aggression, and Relational Well-Being

The study's research question asked what the relationship between narcissism, competitiveness, time spent playing video games, and relational well-being may be. The correlation matrix of these variables revealed that several significant relationships between these variables. Narcissism was strongly and positively associated with all subscales of competitiveness, including general ($r = .51$, $p < .01$), dominance ($r = .54$, $p < .01$), affectivity ($r = .25$, $p < .01$), and personal enhancement ($r = .43$, $p < .001$). These results support previous research that narcissism is positively associated with competitiveness (Luchner et al., 2011). Narcissism also had a weak, positive correlation with destructive verbal aggression ($r = .22$, $p < .01$). Furthermore, the relationships between the various competitive subscales and destructive verbal aggression were positive and significant as follows: general competitiveness ($r = .31$, $p < .01$), dominance ($r = .46$, $p < .01$), affectivity ($r = .39$, $p < .01$), and personal enhancement ($r = .35$, $p < .01$). The correlation matrix suggests that narcissism, competitiveness, and verbal aggression are associated. It then stands to reason that highly competitive situations would suggest more destructive verbal aggressions in gaming.

Curiously, narcissism was positively associated with relational well-being, despite research demonstrating that narcissism is very challenging in interpersonal relations (Gewirtz-

Meydan & Finzi-Dottan, 2017). There was no statistically significant relationship between destructive verbal aggression and well-being. Because the measurement was a state-based assessment of verbal aggression, perhaps situated verbal aggression does not affect offline relationships.

Another interesting note is the positive association between narcissism and all four competitiveness variables on the one hand and relational well-being on the other hand. As mentioned above, narcissism would not necessarily be associated with relational well-being, but, in this study, narcissism appears to have a weak, positive association with well-being. One potential explanation is that narcissism encourages being in competitive situations such as gaming. During those competitions, especially in multiplayer online environments, players are in contact with other players, especially teammates. The regular convening with other players might promote comradery and possibly practice in socializing with others. Perhaps the gaming environment is providing practice at cooperation and increasing the communicative abilities of those high in narcissism.

A similar association was found for competitiveness. Competitiveness also had a positive relationship with relational well-being. One potential explanation, similar to the relationship with narcissism, is that video game players, in particular the multi-user players in this study, convene regularly with friends and family members in these competitive environments. In light of research such as Gentile et al.'s (2011) study that worried about the social detriments of gaming, results from this dissertation challenge notions of loneliness for video game players. The survey instrument used in the current study does not p online relationships apart from face-to-face relationships. The survey administered in this study instructed participants to consider offline relationships for the relational well-being portion, but they might not have limited their responses

to just offline friends with whom they do not game. For instance, a video game player may have online-only relationships while also having friends that they game with online, who work or attend school with them. In this situation, when asking about their relationships outside of gaming as the relational well-being portion did, there will probably be overlap when thinking about having community support and good friends. Similarly, players may consider their community to be their gaming community and the support network that they have built online, not just in one gaming environment. Given that many online relationships blossom into offline relationships as well (Williams et al., 2006), this might be a challenge to self-reports of relational well-being.

The correlational findings above indicate that there is a pattern where narcissism and competitiveness are positively associated and competition and verbal aggression are also positively linked. However, there are many more complexities to this gaming environment, verbal aggression, competitiveness, narcissism, and relational well-being. The gaming environment might be acting as a social buffer, complicating any assumptions that narcissism and competitiveness directly damage relationships.

Hypothesis 1 was segmented into three distinct parts. In the first part (Hypothesis 1a), narcissism was expected to predict verbal aggression while controlling for gender. The data supported this hypothesis. These findings are in congruence with previous studies as verbal aggression has been found to be associated with narcissism in multiple studies (Gewirtz-Meydan & Finzi-Dottan, 2017; Kjærvik & Bushman, 2021). Narcissists are more likely to bully and belittle people, especially with provocation (Kjærvik & Bushman, 2021). This research anticipated the video gaming environment to be full of provocative situations, especially in the face of competition. The sample obtained for this study showed that increased levels of

narcissism predicted increased levels of destructive verbal aggression while controlling for gender.

In the second part of Hypothesis 1 (b), narcissism was posited to predict competitive orientation while controlling for gender. The hypothesis was supported. All four dependent variables (general, dominance, affectivity, and personal enhancement) were predicted by narcissism. These findings support prior research (e.g., Luchner et al., 2011) suggesting that narcissists find ways to reaffirm their self-concept with competition. As mentioned above, narcissism has been strongly associated with competitiveness and being competitive allows them to show superiority over others. However, the fact that narcissism predicted all four competitive variables suggests that narcissism is a broad competitive motivator rather than just one variable like dominance. The competitive gaming environment is well-suited for those high in narcissism as it allows personal performance metrics and ongoing social comparisons.

In the third part of Hypothesis 1 (c), narcissism significantly predicted relational well-being. Unfortunately for this study, the direction was surprisingly positive, as narcissism was a positive predictor of relational well-being. Although other studies (Gewirtz-Meydan & Finzi-Dottan, 2017; Kjærvik & Bushman, 2021; Luchner et al., 2011) have shown narcissists feeling ostracized and relationally challenged, this research does not support that claim. As research evolves around video games, so has our understanding. Although some researchers (Anderson & Ford, 1986; Anderson et al., 2010) see video games as a pathway to anti-social behavior, many researchers are pointing to video games as a way for people to stay connected (Passmore & Holder, 2014; Verheijen et al., 2019). It is possible that the competitive nature of video games allows narcissists to channel their competitive energies to a video game and spare their offline relationships their constant need of personal validation. For instance, Gewirtz-Meydan and

Finzi-Dottan (2017) suggested that those high in narcissism will seek out personal validation in their personal relationships and, if the validation is not delivered, it can lead to poor interpersonal outcomes such as infidelity and aggression. The video game environment provides ample opportunity for ego affirmations and for relinquishing this imposition from significant others and close friends.

There may be several confounds with the relational well-being scale, though. Self-reporting relational well-being may be problematic in two ways. The first could be that prestige bias could influence a narcissist to evaluate themselves as popular and supported. The second concern with this method of data collection is that a narcissist's self-report on relational well-being might not reflect an accurate assessment of their relationships. Even without prestige bias, narcissists might insist that they have a good social support system. That might not be the case, though. Higher narcissism predicted higher relational well-being, but that does not mean that relational well-being is, indeed, an externally valid scale.

Gamer Identity

Hypothesis 2 was partially supported by the data. The general competitive and personal enhancement competitive orientations significantly and positively predicted gamer identity. Rather than simply attributing time spent playing as a predictor of gamer identity, this data showed that there are other facets to the gamer identity. Finding enjoyment in competition or using competitive situations to better oneself seems to contribute to whether someone assumes the gamer identity or not. Prior research has suggested a reluctance of people who play video games to associate with the gamer identity because of negative stigmas and stereotypes (Kowert et al., 2014; Shaw, 2011). Furthermore, Shaw (2011) found that women were more reluctant to adopt the gamer identity because not only were stereotypes of gamers repulsive outside of video

games, but also their in-game behavior was reprehensible and toxic. Stereotypically, gaming spaces have been dominated by males and have a reputation for misogyny (Lopez-Fernandez et al., 2019; Shaw, 2011). For many female video game players, the spaces feel unwelcoming. At times, women have also been relegated to "not real gamers" by the community. Women and other gender minorities are very much visible in the gaming community, yet they are treated as though more casual and less skilled than "gamers" (Lopez-Fernandez et al., 2019) This dissertation showed that participants were likely to adopt a gaming identity so long as they had a general competitive orientation or wanted to get better through competition.

This study controlled for gender because the competitiveness literature suggests that women are not as motivated or excited by competition as men (Kivikangas et al., 2014; Niederle &Vesterlund, 2011). In this study, it appears that people who are competitive in nature and who also play video games, would be more likely to adopt the gamer identity. When game developers consider their audience, it might be in their best interest to avoid stereotypes as Shaw (2011) suggested. Although many competitive environments might be geared towards the masculine gamer stereotype, there are women who enjoy competition, and are clearly drawn to the gaming environment. Establishing what traits define a gamer can challenge those who act as gatekeepers for this identity in the gaming community.

Time Spent Playing as a Moderator

Another disappointing result of this study was that time spent playing video games did not moderate the relationship between narcissism and relational well-being. While other researchers are worried about excessive amount of time accounting for antisocial behavior (e.g., Gentile et al., 2011; Kestenbaum & Weinstein, 1985; Kowert et al., 2014), this research did not find time to be a predictive factor of relational well-being. Time spent playing video games did

have a significant positive correlation with verbal aggression but did not show significant associations with relational well-being. In consideration of the fact that many video game players do frequently game with friends and family, their use of video games may have supplanted other prosocial behaviors such as going to the movies. Because they spend a lot of time gaming, it is not viewed as antisocial behavior because they spend time with others, developing bonds and enjoying each other's company.

One of the more surprising results was the positive, moderate relationship between narcissism and relational well-being ($r = .38$, $p < .01$). Many variables influence relational well-being such as feeling part of a community (Gaines et al., 2024; McCubbin et al., 2013) or familial commitment (McCubbin et al., 2013), but typically narcissism is not one of them. That being said, this researcher expected some sort of effect from high uses of gaming, especially in a model that accounted for narcissism and gender. The gaming context might be giving access to a community of people with similar interests (gaming, competition) and providing a scaffold to prosocial interactions or at least more practice at effective communication. The gaming environment allows those high in narcissism to embrace who they are, competitive and driven to be better, while being around others with a similar disposition.

Implications for Theory or Practice

This study was inspired by previous research and concerns that video games were potentially harmful to players, such as the aggression studies in the late 20th century (Anderson & Ford, 1986; Dill-Shackleford & Dill, 1998) and the research comparing heavy video game use to other known addictions, such as compulsive gambling or drug use (Gentile et al., 2011; Kim et al., 2008). Narcissism and the desire to dominate others seemed like a natural path towards competitive environments such as video games. Online multiplayer games have duality to them;

they are popular, engaging, and immersive but, at the same time, notorious for sour interactions with other players (Beres et al., 2021; Shen et al., 2020). At the center of this research were competitiveness and verbal aggression, which seemed to the author to be two defining features of narcissism.

A surprising result seems to suggest that video gaming might be a particularly pro-social activity for those high in narcissism because of its positive relationship with relational well-being. This study suggests that those higher in narcissism seem to enjoy better relationships as video game players based on the surprising results of Hypothesis 1c and the correlation between narcissism and relational well-being. In terms of the personality trait of narcissism, gaming could be a context in which the motives and behaviors of narcissists provide more insight into ways of reducing anti-social outcomes for video game players who are high in narcissism. Video gaming might mediate the relationship between narcissism and relational well-being, offering some sort of protections to offline relations. The video game environment may offer a condition in which those high in narcissism can thrive and find relationships with other people just as motivated by competition. The gaming environment might also neutralize the unsavory characteristics of narcissism by normalizing verbal aggression and making it less shocking to the targets.

Another finding that could guide future investigations into theory is that the gamer identity does not entail only frequency of video game play, but also motivations behind playing video games. In this study, gender was treated as a control variable because previous research (Shaw, 2011) found a reluctance for women to identify as gamers due to the stigma attached to gaming identities. However, the findings in this study suggest that gaming identity, no matter the gender, was significantly predicted by a general competitive orientation. Gaming has had a misogynistic past and women have difficulties finding community in those spaces because they

are seen as less capable and as intruders to the space (Lopez-Fernandez et al., 2019; Shaw, 2011). The motive of competition seems pertinent to the acceptance of the gamer identity despite the threat of stigmas.

In practice, gaming moderators might need to focus on gaming situations that have highly competitive and high stakes moments in games that could foster verbal aggression in players. It might not be that personality types that are prone to verbal aggression are playing video games; it could be that the competitive environments breed hostility. At times, many popular titles earn reputations as "toxic environments." These games might attract competitively oriented people and not just narcissists. It is possible that competition and hypercompetition prompt verbal aggression through overstimulation. Verbal aggression is a trait *and* a state. The association of competitiveness and the state verbal aggression captured in this study supports the notion that competitive environments are more than likely hotbeds of character attacks and insults. As e-sports are gaining popularity on college campuses and various streaming services, this could be a point of emphasis for coaching – managing emotions during intense competition.

Another practical implication is that video games might be a legitimate source of social support. The gamer identity was weakly associated with relational well-being in the correlation matrix of this study ($r = .20$, $p < .05$). Game players might feel connected to others through their gaming identity, and people who play video games often do so with family members and friends. Domahidi et al. (2014) and Williams et al. (2006) found that gaming relationships do migrate from online to offline, which means that gaming is prosocial and is a pathway to healthy relationships. Mental health practitioners might consider gaming environments for people with social phobias or insufficient social support systems.

Limitations

The limitations of this study are numerous. The first issue is that the population sampled was composed only of participants who had played online multiplayer video games. Therefore, the findings can only be generalized to video gamers in this group and not all gamers or the population at large. Furthermore, eligibility required that participants had played at least two hours of video games in the past week, which means they were choosing to engage in competitive situations. There were several measures that had a higher than expected mean. For instance, many web pages indicate that the average amount of hours per week spent on video games in the United States is around seven hours (Games Learning Society, 2025; StatCrunch, 2025). The mean hours of video games played for this study's sample was 20.77 hours (*SD* = 13.07), nearly three times the reported average amount. This is an anticipated issue with a purposive sample asking for experienced video game players, so the sample in this study is skewed compared to the population at large. Participants were recruited from an online pool of people who are probably more likely to use computer technology more frequently for their regular daily routines of work and play. Playing video games is not much of a departure for people who are already comfortable with technology.

The use of self-reports for the bulk of this survey also created a lot of opportunities for threats to internal validity. Because the survey did not have ways to triangulate items such as self-reports of relational well-being through other methods (observation, partner reports), the survey likely captured *perceived* relational well-being, not actual relational well-being. Participants may believe that they have genuine social support, but they have not genuinely assessed their relationships in meaningful ways. Self-reports are very cost-effective but have many issues. Although participants may have had their best intentions to be honest, people may have poor self-awareness when considering how much time they spent gaming. Accurate self-

concepts are going to be prone to social desirability bias (Holtgraves, 2004). Furthermore, the construct of gamer identity was captured with four questions and has not been validated through other testing. The gamer identity data captured in this study has not been triangulated or retested to verify its reliability, though it was reliable in this study. The scale has not been tested for external reliability yet and the correlations discovered in this study are a brand new contribution to the field. The four items appear to have strong face validity, measuring what they are supposed to measure, but this is only the surface of validity. Construct validity requires a much more rigorous process than one study with four items.

The study also did not control for video game play as a group or as solo play. It is possible for video game players to participate in online multiplayer games as an individual rather than with a team. The study did not distinguish "lone wolves" who might already be prone to antisocial behavior or sentiments, nor did it account for individuals who gamed with the same group of people repeatedly. Both types of gaming behaviors could confound the findings, in particular in respect to the relational well-being construct. The people gaming in a group are socializing and building bonds with others as they take on other teams or environments. The lone wolf gamer is not necessarily socializing. These are two distinct types of video game players and their experiences with gaming are very different, especially since the social player has a built-in network of friends and acquaintances. The lone wolf gamer might already have some antisocial proclivities, so averaging them out in this study without accounting for that difference might be concealing the variable variances of these two distinct groups.

This study also did not account for various communication preferences of the participants. Many video game players disable chat, especially lone wolf gamers, to avoid any negative interactions with other players or to keep their own foul language private to avoid being

banned in certain gaming communities. This study did not ask partiicpants to provide any of these details about their gameplay.

Finally, the sample in this study had nearly three times as many males (n = 111) as it did females (n = 39), which means conclusions about female participants should be interpreted cautiously. Future studies can rectify this limitation with stratified random sampling or a non-probability sampling method such as quota sampling. This is especially crucial since there are noted gender differences in competitiveness.

Future Directions for Research

Many of the limitations pointed out above could be addressed through different study designs, which future research could adopt. For instance, observational studies could be used to correct the self-report issues mentioned in the limitations of this study. Rather than relying on self-reported verbal aggression, researchers in the future could use in-game chat logs or transcripts to identify instances of verbal aggression. Researchers could also embed themselves in gaming chats and rate verbal aggression present in the game. The advantage is that prestige bias and selective recall would no longer contribute to possible errors in reporting; however, rater bias would supplant these other confounds. It would be expected that there would be several raters and coders to compare notes for intercoder reliability.

This researcher was hopeful that there would be more statistically significant relationships for the relational well-being construct. The Relational Well-Being scale (Gaines et al., 2024) is relatively new as of the publication of this dissertation. More studies should attempt to validate the scale further, with other methodologies such as observations. Future researchers should also consider other ways to evaluate the offline relationships of video game players. Participants in future studies could ask a close confidant to evaluate other aspects of relationships

such as frequency of interpersonal conflicts, intensity of those conflicts, and how conflicts are managed. These types of observations can provide more insight to interpersonal relationships of video game players than can be ascertained through survey.

Competitiveness also seems to drive verbal aggression, without seemingly creating relational issues. If competitiveness predicts verbal aggression, what are the implications of competition and berating others? When considering the social activities of children, it could be helpful to consider competitive activities might yield some verbal aggression between children. Teacher and/or coach interventions could include teaching better communication skills while frustrated about a loss. Making people aware that their competitive drives could also lead to verbal aggression is the first step in addressing it through their own cognitive-behavioral interventions. Knowing that competitive situations bring out the potential for verbal aggression, could teach people to self-regulate their "trash talk" or angry outbursts.

Another interesting direction for research would be to examine the gamer identity further. A longitudinal study could be conducted to establish temporal primacy of the gamer identity in relation to competitiveness. Competitiveness has been treated as a personality trait in this study and was used as a predictor variable for gamer identity. Over time, perhaps we could ensure that competitiveness exists before the gamer identity is developed and not that gaming activities lead to competitive personalities. This possibility presents another way of controlling desired or undesired personality outcomes. For instance, there could be practical applications of using video games to increase competitiveness within individuals, particularly in environments where competitiveness is rewarded such as sales and sporting environments. Within this study, the gamer identity was positively associated with destructive verbal aggression, competitiveness, narcissism, relational well-being, and time spent playing video games. Other research has

suggested that amount of time playing video games does not constitute a gamer identity. However, these variables have an association in this study. The gamer identity is much more complex than one or two factors, but this research has shown that competitiveness is a predictor of this identity. Future research could perform a factor analysis to determine what really matters for the conceptualization of the gamer identity, particularly given that this research has only captured a few aspects of this identity, with four items in the survey. This study produced a novel measure of gamer identity, but identity is very complex, and warrants additional psychometric analysis. Future studies can develop and refine the gamer identity measure proposed in this dissertation so that it is a reliable, complex measure.

There is also a performative component to identity (Burke & Reitzes, 1981). When someone adopts the gamer identity, there might be some expectations on how to act within the gaming context. What are the social norms for a gamer? Future research could investigate whether gamers are expected to be misogynistic or verbally aggressive to players with lesser skills. Such studies could answer some of the questions surrounding gamer identity and gender.

The Competitive Orientation Measure (Newby & Klein, 2014) also uncovered a potential relationship between gaming and motivations. Kircaburun et al. (2018) used uses and gratifications theory as the theoretical basis for their analysis of problematic gaming. They assert that gaming motives are another variable to consider when predicting behavioral outcomes. Newby and Klein (2014) developed the subscales for dominance, affectivity, and personal enhancement to account for motives in competition. Gamer identity was predicted by the motivation of personal enhancement. It is important to consider the outcomes of video game usage, but there is also fertile ground for understanding why people play video games. Those high in narcissism have a motivation to dominate others and to show mastery. Other researchers

have shown that cooperative and competitive modalities (Verheijen et al., 2019) and even genre preferences (Howe & Cionea, 2021) are related to behavioral outcomes such as verbal aggression. This study does not consider those modalities or genres, but those choices could be examined in future research. For instance, why would a gamer choose a more cooperative game and defeat an environment rather than defeat an opponent? Why would someone choose a war simulation over something like auto racing?

Conclusion

This study set out to investigate whether underlying personality differences (narcissism and competitive orientation) could predict verbal aggression and relational well-being. The results showed that narcissism was a reliable predictor of competitiveness, confirming that competition provides an outlet for a narcissist's pursuit of self-aggrandization and validation. Narcissism predicted verbal aggression, which was positively associated with relational well-being. Competitive orientation had significant, positive relationships with verbal aggression, while simultaneously having a significant, positive relationship with narcissism. Competition was also a statistically and significantly predictive factor for gaming identity. Although the limitations and potential confounds of this study are numerous, nevertheless, the study challenges moral panic narratives, and invites other researchers to take a more nuanced view of gaming as not just a promulgator of toxicity, but also a place where personality, identity, and community intersect.

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Appendix A

Demographics Included in the Survey Instrument

1. What is your age? (Enter number)
2. What is your gender? (male, female, non-binary, I prefer not to answer)
3. Which of the following best describes you? (White or Caucasian, Asian or Pacific Islander, Hispanic or Latino, Black or African American, Native American or Alaskan Native, Multiracial or Biracial, Race/Ethnicity not listed here).
4. What is your highest level or educational attainment? (Less than high school, High school or equivalent, Trade school, Bachelor's degree, Advanced degree)
5. What is your annual income?
6. How many hours, on average, do you spend playing video games in a week? (Enter number)
7. How many hours did you spend playing video games last week?

Appendix B

Gamer Identity Questions

1 Strongly disagree 2 Disagree 3 Neutral 4 Agree 5 Strongly agree

1. I identify as a gamer.
2. Other people would describe me as a gamer.
3. I would tell someone I have just met that I am a gamer.
4. I play a lot of games, so that makes me a gamer.

Appendix C

Short Narcissism Subscale (Paulhus et al., 2021)

1 Strongly disagree 2 Disagree 3 Neutral 4 Agree 5 Strongly agree

1. People see me as a natural leader.
2. I have a unique talent for persuading people.
3. Group activities tend to be dull without me.
4. I know that I am special because people keep telling me so.
5. I have some exceptional qualities
6. I'm likely to become a future star in some area.
7. I like to show off every now and then.

Appendix D

Newby and Klein (2014) Competitive Orientation Measure

The Newby and Klein (2014) Competitive Orientation Measure has four subscales

-2 Strongly disagree -1 Disagree 0 Neutral +1 Agree +2 Strongly agree

1. I like to be better than others at almost everything.
2. I get a lot of enjoyment out of competition.
3. Other people comment on how competitive I am.
4. I enjoy setting and beating goals through competition.
5. I don't care if other people are better at things than I am.
6. No matter what, I try to be better than others at things.
7. I am a competitive person.
8. I view almost every situation as a way to prove that I am better at things than others.
9. I can improve my competence by competing.
10. I put a lot of effort into beating others at things.
11. I love the thrill of competition.
12. Being the best makes me feel powerful.
13. I don't really care if I get beat in a competition.
14. Competition motivates me.
15. For as long I can remember, I have wanted to outperform others.
16. Competition allows me to judge my level of competence.
17. I do not find competition self-fulfilling.
18. I think a lot about ways to win.
19. I love to compete.

20. I enjoy beating others in almost every area in life.

21. Losing in a competition wouldn't bother me.

22. I enjoy competing against others.

23. It is important for me to outperform others.

24. I wouldn't mind finishing in last place in a competition.

25. I use competition as a way to prove something to myself.

26. I think about competition a lot.

27. Winning makes me feel superior to others.

28. I like to challenge others.

29. Other people notice how much I have to dominate others in a competition.

30. I like being the best compared to other people.

31. Competing doesn't really matter to me.

32. Competition allows me to measure my own success.

33. I would rather not compete.

34. I perform better when I compete against others.

35. I try to be the best person in the room at almost anything.

36. Winning does not make me feel superior to others.

37. Others notice that I am competitive.

Reversed Items *5 *13 *17 *21 *24 *31 *33 *36

General competitiveness: 2, 4, 7, 11, 14, 17, 19, 22, 28, 31, 33, 34.

Dominance competitiveness: 1, 3, 6, 8, 10, 15, 18, 20, 23, 26, 29, 35, 37.

Competitive affectivity: 5, 12, 13, 21, 24, 27, 30, 36.

Personal enhancement competitiveness: 9, 16, 25, 32.

Appendix E

Verbal Aggression (Infante & Wigley, 1986)

The Verbal Aggression trait scale was modified to measure state verbal aggression in the context of online multiplayer gaming.

1 Almost never true 2 Rarely true 3 Occasionally true 4 Often true 5 Almost always true

For the following section, think of your communication style while gaming online.

1. When I play games online, I am extremely careful to avoid attacking individuals' intelligence. (R)

2. When gaming and individuals are very stubborn, I use insults to soften the stubbornness.

3. I try very hard to avoid having other people feel bad about themselves when I try to influence them in game. (R)

4. When people refuse to do a task I know is important in a game, without good reason, I tell them they are unreasonable.

5. When others do things in game I regard as stupid, I try to be extremely gently with them. (R)

6. If individuals I am trying to influence in game really deserve it, I attack their character.

7. When people behave in ways that are in very poor taste, I insult them in order to shock them into proper behavior.

8. In games, I try to make people feel good about themselves even when their ideas are stupid. (R)

9. When people simply will not budge on a matter of importance while gaming, I lose my temper and say rather strong things to them.

10. When people criticize my shortcomings in game, I take it in good humor and do not try to get back at them. (R)

11. When individuals insult me in game, I get a lot of pleasure out of really telling them off.

12. When I dislike other players greatly, I try not to show it in what I say or how I say it in game. (R)

13. I like poking fun at players who do things which are very stupid in order to stimulate their intelligence.

14. When I attack another players' ideas, I try not to damage their self-concepts. (R)

15. When I try to influence other players, I make a great effort not to offend them. (R)

16. When other players do things which are mean or cruel, I attack their character in order to help correct their behavior.

17. I refuse to participate in arguments with other players when they involve personal attacks. (R)

18. When nothing seems to work in trying to influence other players, I yell and scream in order to get some movement from them.

19. When I am not able to refute another player's positions, I try to make them feel defensive in order to weaken their positions.

20. When an argument in online gaming shifts to personal attacks, I try very hard to change the subject. (R)

Appendix F

Relational Well-Being Scale (Gaines et al., 2024)

1 Strongly disagree 2 Disagree 3 Neutral 4 Agree 5 Strongly agree

1. I do not feel that I really belong in this community. (R)
2. If something goes wrong, I know people who can help me sort it out.
3. I feel like I have a good social life.
4. If something happens, I am one of the last to get to know. (R)
5. I have someone I can turn to if I feel stressed or low.
6. I often feel isolated and alone. (R)
7. I feel that there are few people in my life who really care about me. (R)
8. I have people whom I can count on, whatever happens.