Virtual Warfare: Cyberbullying and Cyber-Victimization in MMOG Play

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Abstract

The popularity of massively multiplayer online games (MMOGs) has elicited concern that this is a context for cyberbullying. We used an online survey to examine the prevalence and types of cyberbullying in MMOG play and group differences in bullying behavior. Since most MMOGs are violent and research indicates that electronic mediums have high rates of bullying, we predicted that cyberbullying would be common in MMOG play. The participants ($N = 151$)—a sample of self-selected MMOG players—frequently reported being cyber-victimized (52%) and engaging in cyberbullying (35%) during MMOG play. Rank was the most common motive for cyberbullying. We found that (a) males perpetrate more cyberbullying in MMOGs than females do; (b) heterosexuals perpetrate bullying at higher rates than lesbian, gay, bisexual, and transgender (LGBT) participants do; (c) female and LGBT participants experienced significantly higher rates of sexually related cyber-victimization; and (d) opponents are bullied more than teammates. Rates of victimization and perpetration overlapped substantially.

Keywords

video games, online gaming, cyberbullying, cyber-victimization, gender differences

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Recently, the conceptualization of bullying and the bully–victim relationship has evolved. Bullying is clearly of grave concern. Traditional bullying is pervasive; its negative correlates includes anger, depression, fear, lower life satisfaction, drug abuse, and suicide (Mark & Ratliffe, 2011; Mishna, Cook, Gadalla, Daciuk, & Solomon, 2010; Mishna, Khoury-Kassabri, Gadalla, & Daciuk, 2012; Moore, Huebner, & Hills, 2012; Patchin & Hinduja, 2013). Substantial research has examined bullying in schools, the home, prisons, and the workplace (Monks et al., 2009). Over the last decade—due to the exponential growth of technology and electronic communication—cyberbullying, which is perpetrated via the Internet and cell phones, has become a focus of research (Mishna et al., 2012; Tokunaga, 2010). High rates of cyberbullying occur in e-mail, text messaging, instant messaging, and online chats and blogs (Kowalski & Limber, 2007; Kwan & Skoric, 2013; Nocentini et al., 2010; Vandebosch & van Cleemput, 2008; Ybarra, Boyd, Korchmaros, & Oppenheim, 2012). The current study examines bullying in the context of online gaming.

The expansion of video games to the Internet has created opportunities for social game play and, subsequently, bullying. Several studies have examined negative interpersonal behaviors and bullying during online gaming and found it common (Coyne, Chesney, Logan, & Madden, 2009; Leung & McBride-Chang, 2013; Ross & Weaver, 2012; Yang, 2012). In a study examining the contexts for cyberbullying, Mark and Ratliffe (2011) found that 11% of cyberbully victims reported bullying during online game play. The present study was aimed at examining the prevalence and types of cyberbullying and cyber-victimization during massively multiplayer online game (MMOG) play. In particular, we were interested in examining individual including sex, gender, and sexual orientation as well as examining interactions with teammates and competitors.

Traditional Bullying

Traditional bullying is perpetrated via physical, verbal, and relational aggression (Olweus, 1994, 2010). Bullying is defined as aggressive behavior (a) that is repeated over time, (b) that has intent to harm, and (c) where a power differential exists between the victim and perpetrator (Olweus, 2010). We used this traditional definition of bullying in this study and explicate our rationale subsequently. Research finds that bullying is often motivated by a desire to increase status. Bullies often report that bullying makes them feel funny, popular, and powerful (Mishna et al., 2010). However, bullies are more likely than non-bullies to report being socially rejected, aggressive, and antisocial (Gradinger, Strohmeier, & Spiel, 2010; Solberg & Olweus, 2003). Bullying is often a fluid process. Many adolescents are both bullies and victims (Olweus, 1978, 2010; Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996).

Peer culture affects the acceptance and perpetration of bullying. Research on school bullying indicates that most students label themselves as a defender, assistant, reinforcer, or bystander (Salmivalli et al., 1996). These roles are tied to peer norms

that create an atmosphere supportive of bullying (Salmivalli & Voeten, 2004). Normative support for peer aggression in classrooms is linked with increases in aggression across time (Werner & Hill, 2010). Bullying is related to social dominance structures among students (Farmer, Hamm, Leung, Lambert, & Gravelle, 2011). Further, particular types of bullying—including that which is homophobic in nature—are supported by peer culture and masculine norms (Poteat, Kimmel, & Wilchins, 2010; Tharinger, 2008).

Both attitudes toward bullying (Boulton, Lloyd, Down, & Marx, 2012) and associating with aggressive peers (Werner & Crick, 2004) predict both traditional and cyberbullying (Hinduja & Patchin, 2013). Across time, adolescents become more accepting of relational aggression as a tool to gain status, power, and recognition (Cillessen & Mayeux, 2004). Werner and Hill (2010) suggest that when popular students are high in aggression, this encourages and normalizes aggression. Social status moderates victimization, that is, those lower in status are more commonly bullied (Caravita, Gini, & Pozzoli, 2012).

Sexual harassment, which has negative outcomes similar to those described above (Bucchianeri, Eisenberg, Wall, Piran, & Neumark-Sztainer, 2014; Gruber & Fineran, 2008; Miller et al., 2013; Pepler, Jiang, Craig, & Connolly, 2008; Spector, Zhou, & Che, 2014), is considered to be a type of bullying by some (Miller et al., 2013; Pepler et al., 2006) but distinct from bullying by others (Gruber & Fineran, 2008). In this study, we consider sexual harassment to be a type of bullying. Females and lesbian, gay, bisexual, and transgender (LGBT) youth are more commonly the victims of sexual harassment than males and heterosexual youth (Gruber & Fineran, 2008).

Cyberbullying

The definition of cyberbullying is hotly debated (Bauman, 2013). Some definitions of cyberbullying require the same criteria of power imbalance, repetition, and intent as traditional bullying (Gradinger et al., 2010; Nocentini et al., 2010; Olweus, 2010; Vaillancourt et al., 2008; Vandebosch & van Cleemput, 2008). However, some argue that a different term—such as cyber aggression or electronic aggression—would be more useful and/or argue that the factors listed as criteria for traditional bullying must be reassessed when defining cyberbullying (Bauman, 2013; Bauman, Underwood, & Card, 2013; Law, Shapka, Hymel, Olson, & Waterhouse, 2012; Smith, del Barrio & Tokunaga, 2013). Specifically they argue that (a) intent is difficult to determine, (b) repetition is not required due to the large audience, a negative message can reach and the fact that such messages can be viewed repetitively by the victim, and (c) power imbalances can take on a different form in electronic media—such as computer savvy or game rank—and might be readily overcome by reporting the offender to a website or social network (Bauman, 2013; Law et al., 2012; Menesini & Nocentini, 2009; Smith, del Barrio et al., 2013).

Features of digital media, including anonymity and context, further complicate the assessment of the criteria for defining cyberbullying (Bauman, 2013; Law

et al., 2012; Tokunaga, 2010; Walker, Craven, & Tokunaga, 2013). About one half of cyberbullying is perpetrated by someone unknown to the victim (Kowalski & Limber, 2007; Mark & Ratliffe, 2011; Mishna et al., 2010; Walker et al., 2013). Anonymity and disinhibition increase the likelihood of aggression, provide a sense of power, and afford perpetrators a sense of privacy and control (Armstrong & Forde, 2003; Espelage, Rao, & Craven, 2013; Law et al., 2012; Menesini & Nocentini, 2009; Silke, 2003; Vandebosch & van Cleemput, 2008). Also, some perpetrators of bullying acts might not consider the effect they are having on the target of their actions or the broad nature of the act (Law et al., 2012; Leung & McBride-Chang, 2013; Menesini & Nocentini, 2009). Thus, anonymity and an indirect level of contact during electronic interactions make it difficult to assess repetition and intentionality when examining cyberbullying. Given the current controversy regarding the definition of cyberbullying, we took a conservative route and used the rigorous traditional definition in our study. This definition was provided to participants to increase the accuracy of our measurement and to decrease the likelihood that participants would rely on their own interpretation of the term cyberbullying, since this can lead to false reports and higher prevalence rates (Vaillancourt et al., 2008; Ybarra et al., 2012).

Traditional bullying is more common than cyberbullying, but adolescents who are traditional bullies and/or victims have a higher likelihood of being cyberbullies and/or cyber-victims (Gradinger et al., 2010; Hinduja & Patchin, 2013; Katzer, Fetchenhauer, & Belschak, 2009; Kowalski & Limber, 2013; Kwan & Skoric, 2013; Tokunaga, 2010; Twyman, Saylor, Taylor, & Comeaux, 2009). Cyber-victims commonly report that they often later perpetrate cyberbullying in the same environment where they were previously victimized and the roles of bully, victim, and bystander blur together readily in online contexts (Gradinger et al., 2010; Katzer et al., 2009; Law et al., 2012; Twyman et al., 2009). Finally, cyberbullying, like traditional bullying, often takes place within a larger group context (Jones, Manstead, & Livingstone, 2011; Vandebosch & van Cleemput, 2008). Members of online communities often identify with the norms of the group and may feel pride in their behavior, even if the norms reinforce aggression (Jones et al., 2011).

Cyberbullying occurs across types of electronic media (Mark & Ratliffe, 2011; Tokunaga, 2010; Vandebosch & van Cleemput, 2008; Ybarra et al., 2012). Cyberbullying is a systematic abuse of power using electronic technology. It includes verbal and visual social and relational aggression such as name-calling, rumors, flaming, harassment, denigration, sexting, outing, embarrassing photos or memes, stalking, and impersonation (Crick & Grotpeter, 1995; Kowalski, Limber, & Agatston, 2012; Law et al., 2012; Smith, Steffgen, & Sittichai, 2013). Cyberbullying, like traditional bullying, has serious negative outcomes, including suicide, retaliatory aggression, anxiety, depression, social anxiety, and alienation (Bauman, Toomey, & Walker, 2013; Gámez-Gaudix, Orue, Smith, & Calvete, 2013; Kowalski et al., 2012; Kowalski & Limber, 2013; Mishna et al., 2012). Kowalski, Limber, and Agatston (2012) argue that the public nature of cyberbullying may exacerbate the negative impact of the bullying on victims compared to traditional bullying. Further,

while a victim's reaction to most traditional bullying is immediate, a victim might not see or respond to cyberbullying until a later point in time. Cyberbullying is more difficult to escape than traditional bullying, given the constant availability of electronic communication (Walker et al., 2013).

Bullying and Video Games

Most theories of bullying do not explicitly address the potential impact of video games. Many theorists suggest that social dominance or power is a primary motivation for aggression across contexts, including cyberbullying (Espelage et al., 2013; Kowalski et al., 2012; Law et al., 2012). We view game rank—an indicator of dominance and power—as a potential motivating force in bullying during MMOGs. On the other hand, Monks and colleagues (2009) take a social learning theory approach to explain traditional bullying. They argue that children learn to bully others via modeling and that particular environments and scripts encourage bullying (Espelage et al., 2013; Monks et al., 2009). Anderson and Bushman (2002) incorporate social learning theory into the general aggression model (GAM) and argue that violent video games provide models of aggression that increase the likelihood of aggressive behavior both inside and outside of the gaming context by (a) providing aggressive models and reinforcement of violence within the game, (b) increasing negative affect and physiological arousal following game play, (c) priming aggressive scripts, and (d) desensitizing players to violence (Anderson & Bushman, 2002). Some have found that exposure to violent video games is related to higher levels of hostility and aggression (Ballard & Lineberger, 1999; Barlett, Harris, & Baldassaro, 2007; Bartholow, Sestir, & Davis, 2005). In particular, Ross and Weaver (2012) found evidence of observational learning in a study of negative behavior (''griefing'') during online game play.

However, many studies have also failed to support the GAM (Ballard, Visser, & Jocoy, 2012; Ferguson, 2007; Ferguson & Olson, 2014; Williams & Skoric, 2005). The GAM has also been criticized on empirical and theoretical grounds (Ferguson & Kilburn, 2010). For example, violence among youth has declined across cultures, as video game play has increased, which argues against a ''real-world'' impact of violent video games on youth aggression (Ferguson & Kilburn, 2010).

Some correlational studies (Lam, Cheng, & LuI, 2013; Olson et al., 2009) found a significant positive relationship between violent video game play and bullying. Konijn, Bijvank, and Bushman (2007) found that players who identified with their violent character were more likely to be aggressive, but the direction of this effect is unclear. Williams and Skoric (2005) did not find that violent game play was related to increased aggression. Williams (2006) argues that aggressive play could create a normative effect for some players. However, most players view video games as a make-believe context where you can do things—like fight or kill—that you cannot do in real life (Olson, Kutner, & Warner, 2008). Overall, there is vast disagreement among scholars regarding the impact of violent game play. For example, while

Anderson and Bushman (2002) see violent games as directly culpable in aggressive behavior, Adachi and Willoughby (2011, 2013) suggest that game competition is more likely to result in aggression than game violence, Ferguson and Olson (2014) argue that violent video game play is not associated with aggression—even among at-risk youth—and Granic, Lobel, and Engles (2014) argue that there needs to be a greater focus on the psychosocial benefits of game play.

Online Gaming

Video games have evolved into realistic, elaborate worlds where hundreds of thousands of players can interact—cooperating and competing—to achieve game goals (Jordan, 2010). Game rank—an important aspect of the gaming context—is tied to points earned by killing enemies, completing quests, and so on. Games differ in how many points it takes to progress to a higher level, and within games the number of points required to advance varies based on the prestige gained by advancing. Higher rank signals that a player has the experience and ability to be successful in the game. Those with higher rank are recognized by other players as successful and are viewed as both valued partners and worthy opponents (Jordan, 2010). Social dominance theories of aggression suggest that higher rank or status supports aggressive behavior in a group (Espelage et al., 2013), which suggests that rank in a game would be correlated with the perpetration of cyberbullying in the context of MMOGs.

Most online genres allow for social interaction. Within each game, there are cultural norms that affect interactions between players. Within many games, there are organized guilds and clans that allow for close interaction with a smaller subset of players. These groups often exist outside of a particular game, since people often play multiple games together and communicate outside of game play (Jordan, 2010).

Most (62%) gamers play with others in person or online (Entertainment Software Association, 2012). Players report that online gaming gives them another venue to make friends and that this is important to their gaming experience (Olson et al., 2008; Torres, 2008). Players' social connection to other players is correlated with increased game enjoyment (Ryan, Rigby, & Przybylski, 2006). Granic and colleagues (2014) emphasize the social benefits of online game play and argue that it is valuable for developing prosocial skills. However, although MMOGs allow friendships to develop and positive interactions to occur, they are also a context where people can be cruel to one another.

Yang (2012) examined cyberbullying among Taiwanese adolescents and found that preference for violent games predicted hostility, which in turn predicted cyberbullying and cyber-victimization. Similarly, Leung and McBride-Chang (2013) examined online victimization and psychosocial adjustment among children in Hong Kong. They found that bullying and victimization were more common at school than online and that victimization was more common than bullying across both contexts.

Victimization was tied to poorer adjustment and decreased satisfaction with friendships. Neither of these studies specifically examined cyberbullying in the context of MMOG play.

Riggio (2010) suggests that cyberbullying during MMOG play is likely since characters can win rewards for aggressing against other players. However, the prevalence of cyberbullying during has not been investigated directly. Yang (2012) and Leung and McBride-Chang (2013) considered aspects of MMOG play but did not explicitly examine cyberbullying during MMOG play. There are studies of griefing (i.e., unacceptable or antisocial behavior in the game context) during MMOG play (Coyne et al., 2009). Griefing can include bullying, but it is typically used to refer to strategic behaviors such as raiding the camps of other players or interfering with communication lines (Ross & Weaver, 2012). Griefing is common, decreases player enjoyment, and increases frustration and state aggression (Coyne et al., 2009; Ross & Weaver, 2012). Players report that their least favorite aspect of online game play is antisocial behavior perpetrated by others (Griffiths, Davies, & Chappell, 2004; Torres, 2008).

Gender, Bullying, and MMOGs

There are inconsistent findings regarding gender and bullying (Walker et al., 2013). Males are typically more accepting of bullying than females, and females are more likely to side with victims (Boulton et al., 2012; Werner & Hill, 2010). Some studies (Caravita et al., 2012; Topcu & Erdur-Baker, 2012) find that males bully others more both in real life and/or via electronic means, while other studies have found that females cyberbully at higher rates than males do (Low & Espelage, 2013; Moore et al., 2012). There is also evidence that most bullying is perpetrated on those of the same sex (O'Brien, 2011).

Homophobic comments are common in traditional bullying (Formby, 2013; Poteat et al., 2010; Tharinger, 2008). Anecdotal evidence suggests that racial, sexual, and homophobic slurs are common in MMOGs as well (O'Leary, 2012; Smith, Steffgen et al., 2013; Tan, 2011). Online gaming has been characterized as a misogynistic culture (O'Leary, 2012; Pinchefsky, 2012). The recent #GamerGate scandal—where female game developer Zoe Quinn was targeted with death threats, threats of rape, and a variety of harassing comments after an ex-boyfriend accused her of trading sexual favors for positive game reviews—brought these issues to a head (Kaplan, 2014). But even before #GamerGate, female and gay players reported sexually suggestive comments, threats, and stalking during online game play (Fletcher, 2012; Meunier, 2010; Riggio, 2010; Salter & Blodgett, 2012). In addition, players report that less experienced/lower ranking players, women, and gay players often receive a hostile reaction from male gamers (Fletcher, 2012; Meunier, 2010; Riggio, 2010; Salter & Blodgett, 2012). Thus, homophobia and misogyny might play a role in bullying during MMOG play (Prati, 2012; Toomey, Ryan, Diaz, Card, & Russell, 2010).

Masculine norms are tied to misogynistic and homophobic attitudes and behavior (Poteat et al., 2010; Steinfeldt, Vaughan, LaFollette, & Steinfeldt, 2012). Adherence to masculine norms predicts heterosexism, homophobia, aggression, and bullying among adolescent males, particularly when they perceive that male role models and peers are supportive of bullying (Formby, 2013; Poteat et al., 2010; Steinfeldt et al., 2012). Homophobic taunts are used to enforce masculine norms in adolescence and adulthood (Poteat et al., 2010; Tharinger, 2008).

In terms of MMOGs, Salter and Blodgett (2012) argue that males, as the dominant group, are likely to act out toward weaker or minority players to maintain their power. Thus, rank—or status in the game—is one factor that might predict bullying, while gender and sexual orientation are others. In fact, bullying of LGBT youth is common (Formby, 2013). Tharinger (2008) points out that homophobic bullying is not about being gay but about boys using homophobic speech as a mechanism for bullying. She also argues that—like bullying in general—peer norms support homophobic speech and bullying. Similar to the findings on traditional bullying, Fox and Tang (2013) found that masculine norms were positively correlated with scores on a video game sexism scale. In regard to MMOG play, many male players (51.9%) report that they intervene to try to stop sexist comments but are concerned that this might make them a target of aggression or result in being labeled a ''White Knight''—a player who defends women for sexual favors (Matthew, 2012).

Some researchers (Jansz, 2005; Olson et al., 2008) argue that video games provide a context for adolescent males to explore their masculine identity, challenging others in competitive—and sometimes aggressive—ways. Tharinger (2008) asserts that idealized masculinity is tied to bullying and to exerting power over females and other males, particularly males who don't meet the ideal standard of masculinity. Of course, most young men who adopt hypermasculine roles in the fantasy world of video games do not let this spill over into reality (Jansz, 2005). In the only empirical study examining this issue, Ballard and Lineberger (1999) found that males punished female competitors more strongly than male competitors. They suggest that the male player's masculinity was challenged by competent female competitors. This seems plausible since men have lower implicit self-esteem when faced with a woman's success (Ratliff & Oishi, 2013).

Hypotheses

The rapid growth of MMOGs has elicited concern that MMOGs are a venue for the perpetration of cyberbullying, particularly given the competitive nature of MMOGs (Jordan, 2010). This study examined (a) prevalence rates of cyberbullying during MMOGs, (b) perceptions as to why cyberbullying occurs during MMOGs, and (c) the demographics of the cyberbullies and cyber-victims during MMOG play. Based on the high prevalence rates of cyberbullying on other electronic mediums and the available data regarding verbal and relational aggression occurring in online gaming communities, we expected that:

Hypothesis 1: Cyber-victimization and cyberbullying would be common during MMOG play.

Hypothesis 2: Females would report higher rates of cyber-victimization than males, particularly in terms of behaviors with sexual intentions.

Hypothesis 3: Males would report higher rates of cyberbullying than females.

Hypothesis 4: Cyber-victims would report higher levels of bullying by male perpetrators.

Hypothesis 5: LGBT participants would report higher rates of cyber-victimization than heterosexual participants.

Hypothesis 6: Participants would report game ranking—a source of status and power differential—as a common reason for cyberbullying and cyber-victimization.

Hypothesis 7: Cyber-victimization and cyberbullying would be strongly correlated.

Method

Participants

We administered an online survey—via Qualtrics (2014) software—to self-selected participants aged 18 years and older. Participants were recruited through a psychology research pool and e-mail list serves at a southern liberal arts university, Facebook, and gaming forums on Reddit. All participants had played MMOGs in the 2 to 3 months prior to taking the survey. Most (81%) participants reported that they played MMOGs at least once a week. Participants reported playing the following MMOGs most often: *Call of Duty* (18.6%), *World of Warcraft* (15.3%), *League of Legends* (13.3%), *Guild Wars* (9.3%), *Runescape* (6%), *Startwars: The Old Republic* (4%), *Eve online* (2%), and other (31.5%). One hundred and fifty-one (110 males, 36 females, and 5 transgender/others) individuals completed the survey. Participants were from the United States and were Caucasian (83%), Black (1.3%), Hispanic (3.3%), Asian (3.3%), Multiracial (5.3%), and other (3.3%). The mean age of participants was 21 (range 18–52). Most (81%) were heterosexual, and the remainder were LGBT (19%). Most participants (81%) played MMOGs at least once a week.

Material and Measure

Since none of the extant surveys of cyberbullying fit our needs, we adapted the Olweus Bully/Victim Questionnaire (Olweus, 1996) for use in this study. The Olweus (1996) questionnaire is a self-report measure that examines situational instances of bullying. It has been adapted for other studies of cyberbullying (Kowalski & Limber, 2013). Consistent with previous use of the questionnaire,

we provided a traditional definition of cyberbullying to increase the reliability of the measure (Vaillancourt et al., 2008; Ybarra et al., 2012).

> Cyberbullying, like traditional bullying, must happen repeatedly with intent to inflict harm and have an imbalance of power, either physically or psychologically. It is not cyberbullying if the behavior is done in a friendly, playful, or competitive way. It is not bullying when two individuals of equal strength or power argue or fight. (Olweus, 1996)

The first question of the survey prompted participants to report the frequency of their MMOG play in the 2–3 months prior to taking the survey. Individuals who reported that they had not played MMOGs within the last 2–3 months were automatically directed to the end of the survey via skip logic. Data were collected and analyzed only for those participants who had played MMOGs in the past 2–3 months.

Some of the Olweus (1996) questions were altered for syntax or to examine cyberbullying in the context of MMOGs. Global questions included "how often have you been cyberbullied during MMOG play in the past 2–3 months" and "how often have you cyberbullied during MMOG play in the past 2–3 months?" Situational questions included "I was called mean names, was made fun of, or teased in a hurtful way," "other players left me out of things on purpose, excluded me from a game, or completely ignored me," and "other players told lies or spread false rumors about me and tried to make others dislike me." The answer format was as follows: it hasn't happened in the past 2–3 months, only once or twice in the past 2–3 months, 2 or 3 times a month, about once a week, and several times a week. Demographic questions and questions about gaming habits were also included. Ten questions had built-in skip logic, so that subsequent items were skipped if the behavior in question had not occurred in the last 2–3 months.

We coded the MMOG listed by each participant as the game they played the most often in terms of the level of violence. We used Entertainment Software Rating Board (ESRB) rating descriptors to code the level of violence. Games were assigned a 0 if the ESRB did not list violence in the game content, a 1 if "mild violence" was listed, a 2 if "fantasy violence" was listed, a 3 if "violence" (which indicates moderate violence) was listed, and a 4 if "intense violence" was listed. In addition, games were assigned an additional 0.5 if "blood" or "gore" was listed. Each game was coded from 0 to 4.5 by the first author and 5 by lab members. There was 100% agreement in coding.

Procedure

The study received institutional review board approval. As reported above, most participants were recruited through the psychology subject pool of a Southern liberal arts university and given course credit. Reasonable options for credit were available. The rest were recruited via e-mail, Facebook, and Reddit. A consent statement was

presented at the beginning of the survey. Consent was assumed if the participant continued the survey. The participant could choose to stop the survey at any time without penalty. When the participant completed the survey, they were given a debriefing statement describing the intent of the study.

Results

Descriptive Statistics

Participants commonly reported being cyber-victimized (52%; female = 52%, male = 49%, and transgendered = 60%), perpetrating cyberbullying (35%; female = 25%, male = 40%, and transgendered = 0%), and/or being cyberbully victims (21%; female = 20%, male = 23%, and transgendered = 0%) during MMOG play in the 2–3 months prior to taking the survey.

In terms of the frequency of being cyber-victimized in the past 2–3 months, 25% (female = 27% and male = 24%) of the sample reported that they had been victimized once or twice, 11% (female = 11% and male = 12%) reported that they had been victimized 2–3 times per month, 9% (female = 8% and male = 11%) reported being victimized once a week, and 3% (female = 6% and male = 2%) reported being victimized several times a week. Fifty percent of participants reported that the cyber-victimization only lasted one gaming session. However, 2% of participants reported that the cyber-victimization persisted for a year or more.

With regard to the frequency of perpetrating cyberbullying during MMOGs in the past 2–3 months, 22% (female = 22% and male = 22%) reported that they had cyberbullied once or twice, 6% (female = 3% and male = 7%) reported that they had bullied 2–3 times per month, 2% (female = 0% and male = 5%) reported that they had bullied once a week, and 5% (female = 0% and male = 6%) reported that they had bullied several times a week.

Participants most commonly reported being cyber-victimized during MMOG play through name-calling (52%), use of profanity (50%), being called names with a sexual meaning (48%), exclusion (20%), sexual harassment (23%), being threatened (12%), being pursued in a sexual manner (11%), being kicked out of a guild because someone disliked them (11%), and having told lies about them (10%). Those who perpetrated cyberbullying most often did so using name-calling (29%), profanity (25%), using names with a sexual meaning (21%), exclusion (24%), sexual harassment (5%), threatening (5%), pursuing in a sexual manner (4%), and kicking someone out of a guild because they disliked them (13%).

Game rank was the most cited reason for both cyber-victimization and cyberbullying. For example, 45% of respondents who bullied another play by calling them mean names, making fun of them, and/or teasing them did so due to the other player's rank. Forty percent of those who excluded another did so because of the other player's rank and 29% of participants who threatened or forced another player to do things did so because of the player's rank. Tables 1 and 2 include participants'

Table 1. Victim Perceptions Regarding Motives for Cyberbullying by Type of Victimization.

	Most Common Types of Cyberbully Victimization			
	Name-Calling	Exclusion	Threats	Lies
Perceived motive				
Gender	6.6%[a] (12.7%)[b]	3.3% (16.7%)	0.7% (5.6%)	2% (20%)
Age	4.6% (8.9%)	0% (0%)	0.7% (5.6%)	0.7% (6.7%)
Rank	39.7% (75.9%)	12.6% (68.3%)	7.3% (61.1%)	6% (60%)
Race	4.0% (7.6%)	0% (0%)	2% (16.7%)	0.7% (6.7%)
Sex. orientation	12.6% (24.1%)	7.0% (10%)	2% (16.7%)	2% (20%)
Avatar's gender	5.3% (10%)	1.3% (6.7%)	1.3% (11.1%)	0.7% (6.7%)

Note. Participants were first asked if they had experienced each type of cyberbullying. If they reported victimization, they were asked why they thought it happened.
[a]Percentage of the total sample. [b]Percentage of those who experienced the specific type of cyberbullying listed.

Table 2. Perpetrator Motives for Cyberbullying by Type of Perpetration.

	Most Common Types of Cyberbully Perpetration			
	Name-Calling	Exclusion	Threats	Lies
Motive				
Gender	3.3%[a] (11.4%)[b]	2% (8.3%)	0.7% (12.5%)	0.7% (100%)
Age	9.3% (31.8%)	5.3% (22.2%)	0.7% (12.5%)	0.7% (100%)
Rank	24.5% (84.1%)	17.2% (72.2%)	3.3% (62.5%)	0% (0%)
Race	5.3% (18.2%)	1.3% (5.6%)	2% (37.5%)	0.7% (100%)
Sex. orientation	4.6% (15.9%)	2% (8.3%)	0.7% (12.5%)	0% (0%)
Avatar's gender	2% (6.8%)	0.7% (2.8%)	0.7% (12.5%)	0% (0%)

Note. Participants were first asked if they had perpetrated each type of cyberbullying. If they reported perpetration, they were asked why they had engaged in the behavior.
[a]Percentage of the total sample. [b]Percentage of those who perpetrated the specific type of cyberbullying listed.

perceptions of the most common motives for cyber-victimization, cyberbullying, and the most common subtypes of cyberbullying. Two MMOGs—*Call of Duty* (Activision, 2005/2013) and *World of Warcraft* (Blizzard Entertainment, 2004) were reported as the most common contexts for bullying. Each was listed by 24% of the sample.

Most (90%, female = 94% and male = 89%) of those who reported having been cyber-victims during MMOG play reported that they had been bullied at least once by a male. A slight majority (53%, female = 53% and male = 43%) reported having been the victim of a female cyberbully at least once in the past 2–3 months. However, while 17% of men and 18% of women reported being bullied by a male player

Table 3. Gender Differences for Victimization Via Specific Cyberbullying Behaviors.

	Gender			
Bullying Behaviors	Females	Males	t	df
Teased	1.94 (1.286)	1.95 (1.135)	−0.007	145
Threatened	1.22 (0.591)	1.16 (0.548)	0.560	145
Lies	1.25 (0.841)	1.16 (0.581)	0.701	145
Profanity	1.69 (1.167)	2.11 (1.316)	−1.686	144
Teammate hostility	1.75 (1.131)	1.95 (1.168)	−0.919	144
Opponent hostility	1.72 (1.111)	2.02 (1.234)	−1.279	144
Sexual name-calling	1.94 (1.351)	2.17 (1.489)	−0.812	145
Sexual harassment	1.78 (1.124)	1.29 (0.767)	2.944***	145
Sexual pursuit	1.47 (0.878)	1.05 (0.248)	4.617***	145
Exclusion	1.36 (0.867)	1.24 (0.664)	0.856	145
Group exclusion	1.42 (0.806)	1.12 (0.377)	3.018***	144
Kicked out of group	1.19 (0.467)	1.09 (0.288)	1.601**	145

Note. Values are represented as mean (SD).
*$p < .05$. **$p < .01$. ***$p < .001$ based on Levene's Test for Equality of Variances.

several times a week, only 4% of men and 0% of women reported being bullied by a female player several times a week. This indicates that cross-sex bullying is most common for women and that same-sex bullying is most common for men during MMOG play.

Only 8% of participants (female = 8% and male = 8%) reported being bullied during MMOG play by people they know in real life. More (15%, female = 22% and male = 12%) reported being bullied by someone that they only know online. The most common context for bullying was from perpetrators who were unknown (65%; female = 58% and male = 75%). A small proportion of participants (1.3%) reported being bullied by individuals who have bullied them in real life. Few participants reported bullying those whom they know in real life (11%, female = 5% and male = 13%) or online (8%, female = 6% and male = 9%). They were more likely to bully players who were unknown to them (34%, female = 20% and male = 40%).

Mean Comparisons

Male participants ($X = 1.75$, standard deviation [SD] = 1.17) report higher rates of cyberbullying, $t(145) = −2.33, p \geq .05$, than females ($X = 1.28, SD = 0.51$). While female participants ($X = 1.81, SD = 1.11$) did not report significantly higher overall rates of cyber-victimization, $t(145) = −.32, p = .75$, than males ($X = 1.87, SD = 1.11$), they reported significantly higher rates of sexual harassment, $t(145) = 2.94, p < .01$, and excessive sexual pursuit, $t(145) = 4.62, p < .001$, than their male counterparts during MMOG play. See Table 3 for means and SDs for specific cyber-bullying behaviors by gender.

Table 4. Sexual Orientation Differences for Victimization Via Specific Cyberbullying Behaviors.

Bullying Behaviors	Sexual Orientation		*t*	*df*
	Heterosexual	LGBT		
Teased	1.96 (1.188)	1.86 (1.06)	0.403	149
Threatened	1.16 (0.561)	1.24 (0.511)	−0.751	149
Lies	1.13 (0.529)	1.38 (0.979)	−1.882**	149
Profanity	2.03 (1.291)	1.93 (1.361)	0.378	148
Teammate hostility	1.87 (1.161)	2.00 (1.102)	−0.556	148
Opponent hostility	1.95 (1.182)	1.86 (1.274)	0.356	148
Sexual name-calling	2.04 (1.445)	2.41 (1.452)	−1.247	149
Sexual harassment	1.37 (0.855)	1.72 (1.192)	−1.854*	149
Sexual pursuit	1.12 (0.456)	1.41 (0.983)	−2.379***	149
Exclusion	1.25 (0.719)	1.41 (0.682)	−1.140	149
Group exclusion	1.14 (0.488)	1.38 (0.622)	−2.238**	148
Kicked out of group	1.11 (0.310)	1.14 (0.441)	−0.449	149

Note. Values are represented as mean (*SD*). LGBT = lesbian, gay, bisexual, and transgender.
*p < .05. **p < .01. ***p < .001 based on Levene's Test for Equality of Variances.

Similarly, although LGBT participants ($X = 1.85$, $SD = 1.10$) did not report higher overall levels of victimization than heterosexuals, $X = 1.86$, $SD = 1.09$; $t(149) = −.04, p = .97$, they did report significantly higher rates of excessive sexual pursuit, $t(149) = −2.38, p < .05$, than their heterosexual counterparts during MMOG play. See Table 4 for means and *SD*s for specific cyberbullying behaviors by sexual orientation.

We performed an exploratory analysis using paired *t*-tests to examine whether bullying occurred more under the context of cooperation or competition. Participants reported being cyber-victimized more by opponents ($X = 1.45$, $SD = 1.05$) than by teammates, $X = 1.07$, $SD = 8.30$; $t(150) = −2.88, p < .01$, and cyberbullying opponents ($X = 1.31$, $SD = 1.10$) more than teammates, $X = 1.38$, $SD = 0.82$; $t(149) = −2.51, p < .05$.

Regression Analyses

Stepwise linear regressions were used to examine the best predictors of cyber-victimization and cyberbullying during MMOG play. In terms of victimization, gender, sexual orientation, ratings of game violence, and cyberbullying were used as predictor variables. The only significant ($p < .001$) predictor of cyber-victimization was the perpetration of cyberbullying ($R = .36$, adjusted $R^2 = .13$, $β = .36$). When examining cyberbullying, gender, sexual orientation, ratings of game violence, and victimization were used as predictors. Both cyber-victimization ($p < .001$; $R = .35$, adjusted $R^2 = .12$, $β = .35$) and sexual orientation ($p < .05$;

$R = .40$, adjusted $R^2 = .14$, R^2 change $= .04$, $\beta = -.19$) were significant predictors of cyberbullying. A follow-up t-test indicates that heterosexual participants ($X = 1.71$, $SD = 1.14$) were more likely to report cyberbullying others than LGBT participants, $X = 1.21$, $SD = 0.41$, $t(149) = 2.32$, $p < .05$.

Discussion

Most of the hypotheses were supported. As expected (Hypothesis 1), players reported that both cyber-victimization and cyberbullying were common during MMOG play. Also as expected (Hypothesis 3 and Hypothesis 4), males perpetrated more cyberbullying than females. Males self-reported significantly higher levels of cyberbullying, and a higher proportion of those who were bullied indicated that they were bullied by a male player. Females and LGBT players did not, as hypothesized (Hypothesis 2 and Hypothesis 5), report more overall cyber-victimization than males or heterosexual players. However, they did report experiencing more cyber-victimization via behaviors with sexual meanings. As expected (Hypothesis 6), game rank was the most common reason for both cyberbullying and cyber-victimization. Finally, as hypothesized (Hypothesis 7), cyber-victimization and cyberbullying overlapped substantially with each of these variables being the best predictor of the other, indicating high rates of bully–victim behavior. These findings are also consistent with Yang (2012) and Law, Shapka, Hymel, Olson, and Waterhouse (2012).

Bullying is common across a wide variety of social settings (Kowalski & Limber, 2007; Kwan & Skoric, 2013; Monks et al., 2009; Nocentini et al., 2010; Olweus, 2010; Vandebosch & van Cleemput, 2008; Ybarra et al., 2012), so it is not surprising that it is common during competitive MMOG play. Many (Anderson & Bushman, 2002) would argue that the violent content of video games fosters aggression. However, in this study, the level of game violence did not predict either victimization or perpetration of bullying in MMOGs. Adachi and Willoughby (2011, 2013) argue that competition has a stronger effect on aggression than video game violence per se. Since most MMOGs are both cooperative and competitive in nature, we were not able to look at this directly but did find that participants were cyberbullied and cyber-victimized more by opponents than by teammates, which support Adachi and Willoughby's (2011, 2013) claims. Laboratory studies examining real-time MMOG play would be useful in determining the game characteristics or individual differences that most strongly influence cyberbullying behavior in this context.

As reported earlier, there is inconsistent evidence regarding gender and bullying across contexts. In general, males are more accepting of and perpetrate more bullying (Boulton et al., 2012; Werner & Hill, 2010). However, the data regarding gender and cyberbullying have been mixed (Caravita et al., 2012; Low & Espelage, 2013; Moore et al., 2012; Topcu & Erdur-Baker, 2012). We found that males report that they cyberbully more in the context of MMOGs than females. Further, while most traditional bullying is perpetrated on those of the same sex (O'Brien, 2011), our data

indicate that both males and females are more commonly cyberbullied by males in the MMOG context. Female and LGBT participants reported higher levels of sexually related cyber-victimization and heterosexual participants reported higher overall rates of cyberbullying than LGBT participants. These findings suggest that sexism, misogyny, homophobia, or the dominant masculine culture of MMOGs might increase the likelihood of cyberbullying during MMOG play (O'Leary, 2012; Pinchefsky, 2012; Prati, 2012; Toomey et al., 2010). An informal survey of online gamers found that 79% of participants reported that sexism is prevalent in the online gaming community (Matthew, 2012). Many of those responding (35% of all participants and 61% of females) stated that they had been the victim of sexual aggression and harassment during MMOG play. Matthew (2012) reports that females viewed sexism during online gaming as pertaining to the degradation of women, but males reported that sexism was tied to not fitting the normative standard of masculinity. This is consistent with Salter and Blodgett's (2012) argument that males target weaker or minority players to maintain their perceived power and with Fox and Tang's (2013) findings that higher masculine norms predicted greater sexism in relation to gaming. More research is needed to examine whether or not sexism is a primary motive in the bullying of females and LGBT players and/or if masculine norms and themes in the games support this behavior (Poteat et al., 2010; Steinfeldt et al., 2012).

Rank, which implies status in the game, played a large role in the bullying process. Participants cited game rank as the primary reason for both cyberbullying and cyber-victimization. This is consistent with social dominance theories of aggression (Espelage et al., 2013) and suggests that bullying in the context of MMOG play is linked with status seeking, consistent with findings regarding traditional bullying (Mishna et al., 2010; Werner & Hill, 2010). Cillessen and Mayeux (2004) found that bullying is correlated with higher status. Our findings support the idea that a power differential is a common characteristic of bullying, even in an online context (Olweus, 2010). Since gender and sexual orientation also affects status—cisgendered heterosexuals, particularly males, have more power—this factor should also be explored more directly in future research (Fletcher, 2012; Meunier, 2010). It would be interesting to examine player rank and bullying more dynamically. We did not gather information about rank in this study as (a) players often play several different games and hold different ranks, (b) players have multiple avatars with different ranks for one game, (c) rank varies across time, and (d) criteria for ranking varies across games. However, it might be possible to control for these factors in a laboratory study.

Future research on cyberbullying should also more specifically examine repetition, intent, and power. We provided a traditional definition of cyberbullying, including all three of these components, for our participants. However, many of our survey participants reported singular actions as cyberbullying. These results indicate that the traditional definition of bullying does not hold up well in a digital context. Further, most of the reported cyberbullying and cyber-victimization occurred only a

few times in the 2–3 months previous to the survey. Given our findings, we agree with others (Bauman, 2013; Law et al., 2012; Menesini & Nocentini, 2009) that since cyberbullying occurs in a public forum, with many witnesses and where data can be readily saved and reposted, that a single instance of cyberbullying can meet the criteria for repetition. Intent is subjective and is difficult to ascertain, particularly in competitive environments such as sports or video game play and victims may connote intent where none was meant. However, we assume that our participants saw aggressive intent in the behaviors that they reported as cyberbullying or cyber-victimization. In terms of power—given our findings on rank and sexual orientation and gender and the fact that most of our participants played with strangers—we posit that within the environment of MMOGs, power imbalances are associated with several factors including rank, masculine norms, and anonymity. Anonymity did seem to play a role in cyberbullying in MMOGs in our sample. Most participants reported that they bullied or were victimized by someone unfamiliar to them. This is consistent with other findings (Kowalski & Limber, 2007; Mark & Ratliffe, 2011; Mishna et al., 2010) and suggests that the full or partial anonymity offered by virtual worlds may increase the likelihood of aggression (Armstrong & Forde, 2003; Law et al., 2012; Silke, 2003) or provide a sense of power or control (Law et al., 2012; Menesini & Nocentini, 2009; Vandebosch & van Cleemput, 2008). One way to tease out issues of rank and anonymity in terms of power and control would be to compare casual gamers—who usually go into a context where they play with a group of strangers for a short period of time—to those players who are heavily invested in the game, construct a virtual reality within their online game play, and consistently play with the same group of players in the same or multiple virtual spaces. When cyberbullying occurs at this intensive level of the game play spectrum, it could be more similar to face-to-face bullying and would also allow researchers to examine the impact of occasional versus frequent bullying on the victim. Perpetration that occurs repeatedly across time during game play might be much more harmful to the victim.

While cyberbullying during MMOG play was common, it is important to point out that most participants neither had been victimized nor perpetrated bullying during game play in the past 2–3 months. Given that a small proportion of our sample was bullied, our findings are consistent with Perry, Kusel, and Perry's (1988) contention that peer aggression is not distributed evenly across the population, but that a few receive the brunt of the victimization. In many ways, online video game play is a positive innovation that allows people to interact with one another in new and entertaining ways. Many people find the online gaming world to be a safe and supportive zone. Cole and Griffiths (2007) reported that 35% of MMOG players in their study felt like they could be more themselves during online game play than in real life because they are not judged based on age, gender, or appearance. Further, some studies (Leung & McBride-Chang, 2013; Snodgrass, Lacy, Dengah, & Fagan, 2011; Trepte, Reinnecke, & Juechems, 2012) have found that playing MMOGs with real-life friends enhances those social relationships, particularly if players are engaged in a variety of off-line activities with these friends.

Finally, it is important to consider what can be done to counter cyberbullying during MMOG play. Recently, a discourse concerning hate speech, sexism, and other forms of aggression during online play has begun in the online gaming community. The tensions brought about by #GamerGate have highlighted these concerns. These conversations have sparked gamer-initiated petitions, calling for an end to hate speech and bullying (Gaar, 2012; Kaplan, 2014). Parents and teachers can have an impact on the likelihood of noticing and reporting cyberbullying. However, cyberbullying is difficult to observe, sanction, and control (Hinduja & Patchin, 2013; Kowalski et al., 2012).

In the context of MMOGs, both Microsoft (2013) and Riot (2009)—the creator of *League of Legends*—have been developing the means to control sexist, homophobic, and racist behavior through giving players the power to report one another and police their own community (Prell, 2013). This strategy has been somewhat effective but is difficult to enforce, as violators can return with another account and/or avatar if banished. Further, internet service providers are limited by the rights to privacy and free speech in regard to terms of monitoring and responding to negative behavior (Coyne & Gountsidou, 2013). Therefore, Riot is attempting to establish a method to reward positive behaviors by using in-game incentives (Prell, 2013). Other suggestions have included harsher and more permanent punishments for offenders (Gaar, 2012) and in-game tutorials that articulate acceptable behavior when players first join games (Teng, Visser, Chen, & Wu, 2012). Coyne and Gountsidou (2013) suggest a shared community response to bullying or griefing. They also recommend that the industry better educate parents and children about safe Internet use. While these efforts to reduce cyberbullying in the gaming industry and online community are promising, their effectiveness will have to be assessed empirically. In the meantime, it is important to continue to examine the predictors and outcomes of cyberbullying across contexts.

Limitations and Conclusions

The primary limitation is that we used a convenience sample of online, self-selected participants. Most of the sample consisted of college students. It is also possible that individuals experiencing cyberbullying during online gaming were more likely to complete the survey. The participants were also primarily White, were all from the United States, and had access to a computer and Internet, suggesting that they belonged to middle to upper-middle class. These issues might restrict the generalizability of the data, particularly in terms of those from various cultures, ethnic backgrounds, or across the life span. Future studies should include a broader array of participants in terms of culture, ethnicity, and age. However, these results do provide a useful snapshot of cyberbullying in MMOG play among US college students.

Despite these limitations, our findings indicate that cyberbullying occurs frequently during MMOG play and perpetration and victimization showed substantial overlap. Males more commonly perpetrated cyberbullying and females and LGBT

players were more likely to be victimized in sexually related ways. Rank was the primary motive for victimization. These findings suggest that cyberbullying in MMOG play, like traditional bullying, is tied to status and gender roles.

Declaration of Conflicting Interests

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