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Abstract

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Keywords

addiction, grounded theory, MMORPG, internet gaming disorder

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Escaping the Escapism: A Grounded Theory of the Addiction and Recovery Process in Online Video Gaming

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The purpose of this grounded theory study was to describe the experience of people who struggled with self-described addiction to *World of Warcraft*™ (WoW). WoW is a massive multiplayer online role-playing game (MMORPG), and many players have shared their stories of compulsive use and recovery efforts on two different websites: www.wowdetox.com, and a Reddit forum called /r/noWoW. We analyzed 140 unique posts on these sites to develop a process model describing how posters experienced addiction and recovery from WoW. We used grounded theory methods to create a model with categories including, time sink, impairment in work and relationships, and realization of loss. The process of recovery from compulsive WoW use included a series of realizations and the gamer "coming to themselves." Implications for clinicians and researchers who study internet gaming disorder and related issues are offered.

Keywords: addiction, grounded theory, MMORPG, internet gaming disorder

Releasing at the end of 2004, *World of Warcraft*™ (WoW) quickly grew to be the most popular massively multiplayer role-playing game of all time. WoW has yet to be surpassed in total monthly subscriptions by any other MMORPG, peaking at 12 million subscribers in April 2010 but experiencing a decline to the last recorded number of just over 5.5 million subscribers in 2015 (www.Trefis.com, n.d.). Though the game was successful, there is a dark side for many who play. The *South Park* episode lampooning WoW was the highest-rated midseason premiere on Comedy Central since 2000 and depicts the main characters of *South Park* starting new characters in WoW and having to confront the episode's antagonist, depicted as an overweight, sedentary, middle-aged, balding, Cheetos dust-covered man. This comedic portrayal of the villain highlights how many players have sacrificed significant aspects of their lives to the game. For many, their excessive use feels like an addiction or a life-impairing compulsion.

In WoW, the player creates a character and interacts as an adventurer with other characters in the fictional world of Azeroth. As they play, characters move up from levels 1 to 60 (usually taking at least 150 hours of game time), form guilds, and work together in 40-person raids to vanquish more difficult monsters to obtain better gear for their characters. Players can also choose to fight other players in combat and gain items. They gain honor by defeating other players or winning matches which helps them increase in rank. Honor decays if the player does not achieve an equal or higher rank than the previous week. For many players, the compelling nature of the game becomes compulsive as they spend excessive time and energy in Azeroth.

Internet Gaming Disorder

Internet gaming disorder (IGD) is a "condition for further study" in the DSM-5[1] (APA, 2013) and is not an officially sanctioned mental disorder by the American Psychological Association. However, more investigation is ongoing to examine whether the condition merits inclusion in the next iteration of the DSM. One gap in the literature on IGD are analyses of the lived experiences of gamers through different stages of addiction and recovery. This research could add details to the debate around IGD and how it may be similar or different than other addictive disorders (Bean et al., 2017; Griffiths et al., 2016).

Prevalence. In the United States, about 8% of video-game players exhibited pathological patterns of play out of a sample of 1,178 youth ages 8 to 18 (Gentile, 2009). Stockdale and Coyne (2018) found 7% of participants to be video game addicts out of a sample 1,205 young adults at two major universities in the US. Between 7.6% and 9.9% of children in grades 3, 4, 7, and 8 during a two-year longitudinal study in Singapore were categorized as having pathological gaming from a sample of 3,034 students (Gentile et al., 2011). In a French sample, the prevalence of IGD was 2% among the sample of 418 gamers who were recruited online (Laconi et al., 2017). A Spanish and British sample showed 7.7% and 14.6% prevalence respectively for 2,356 adolescents between ages 11 and 18 (Lopez-Fernandez et al., 2014), and a German sample of 1,431 12 to 25-year-olds found a prevalence ranging from 5.7% to 7.0% (Wartberg et al., 2017).

MMORPGs and IGD. Massively multiplayer online role-playing games allow hundreds of thousands of people to play together in rich three-dimensional virtual worlds which create unique social interactions and experiences. This mix of three-dimensional worlds, internet relay chat, and multi-user domain predisposes MMORPGs to be played for longer periods of time in one sitting than any other gaming genres. These players often spend around 7 to 40 more hours a week than non-MMORPG video game players (Ng & Wiemer-Hastings, 2005) and have higher rates of IGD characteristics than other gamers (Achab et al., 2011; Eichenbaum et al., 2015; Na et al., 2017).

Chan and Vorderer (2006) detail seven broad characteristics that define the MMORPG experience, including:

1. *World persistence*. The virtual world will exist all day, every day barring technical difficulties. Gamers are free to access and remain in the virtual world at any time from any location as long as they have the game installed.
2. *Avatar persistence*. Individuals are able to maintain a stable identity which allows for networks and communities to form, and reputations to be created.
3. *Physicality*. The design of the virtual world mimics the physical world, with gravity, motion and time occurring, despite otherwise fantastic elements.
4. *Social Interaction*. Players communicate in the world and relationships form as plans are made and mutual goals worked on. There are "buddy lists" in most games that notify players when their friends are online.
5. *Avatar-Mediated Play*. Each player controls an avatar, which provides real-life anonymity (i.e., masking of age, gender, nationality).
6. *Vertical Game Play and Perpetuity*. Avatars progress through obtaining levels, earning money or other, items, but even after players reach the maximum level offered characters can gain more items, money, and achievements. The

[1] Internet gaming disorder first appeared in the DSM-5. The 5th edition of the DSM is also the most updated version.

extensive and immersive nature of these games makes them particularly powerful for players vulnerable to addictive and disordered play.

Research on IGD. Researchers have compared current IGD criteria with gamers' insights about normal gaming and disordered gaming (Carras et al., 2018). A sample of attendees at a gaming convention agreed with some criteria of IGD (e.g., distress, continuing use after recognition of a problem, unsuccessful attempts at stopping) while also adding possible new criteria such as social isolation, loss of reality, and interruptions to daily schedule. Psychotherapists who treat IGD have identified similar problematic qualities in their clients, including salience, tolerance, mood modification, loss of control, withdrawal, denial and concealment, problems and conflict, and relapse (Kuss & Griffiths, 2015). A meta-analysis of 58 empirical articles found that playing MMORPGs increased addiction potential in other domains of players' lives, and many experienced symptoms of tolerance, mood modification, and adverse psychosocial consequences, with around half of these feeling addicted (Kuss & Griffiths, 2012).

Few studies have explored disordered gaming from the perspective of people struggling with MMORPGs. Northrup and Shumway (2014) did a phenomenological study of "gamer widows," or partners of online gaming addicts. They found that partners ascribed significant changes in their lives and relationships due to the excess gaming. Hellman et al., (2017) also explored how couples negotiate commitment and intimacy where one in the couple is struggling with IGD, specifically to MMORPGs. The researchers interviewed two men, and six women (six spouses, a sibling, and a friend). Themes included situational clashes (prioritizing gaming over something else), shifts in prioritizing (gaming over friendships or relationships), deficient communication, and self and autonomy (decrease or absence of autonomy and agency).

Hussain and Griffiths (2008) found that online gamers were drawn to the freedom of social expression in MMORPGs, and also found that about one in five gamers preferred online social interactions to offline social interactions. Similarly, Beranuy et al. (2013) interviewed online gaming addicts in treatment and found that many were caught up on the online social reinforcement, escapism and dissociation they found in gaming. They also found that excessive online gaming caused many real-world problems in social relationships and personal and professional roles.

Purpose of Study

Clearly for a significant portion of MMORPG gamers there are concerns about how compulsive playing disrupts their lives. It would be helpful to continue to understand how problematic gaming develops and how those affected by it successfully reduce their addictive and disruptive behaviors. The purpose of this study was to gain insight on the process of becoming addicted to and quitting WoW and to generate more research that adds to the scholarship related to the potential diagnosis of IGD. Students, and clinicians who work with those with compulsive behaviors, as well as researchers who study these phenomena could benefit from a deeper understanding of the lived experience of IGD. The research questions for this project included:

1. How do self-described WoW addicts describe their development of addiction?
2. How do these gamers' descriptions reflect how the DSM codifies addiction phenomena?

3. How do gamers describe their efforts to recover from addictive behaviors? This study was exempt from IRB permissions due to data being publicly accessible on the internet and anonymous.

Self of the Researcher

In this study the researchers have a background with the constructs of interest, with the first author having compulsive video game use experience, and the second with a scholarly interest in addiction. In the first author's case, problematic gaming led to flunking out of a freshman year of college, which then led to a focused effort to curb excessive and addictive gaming. Both authors have since worked as clinicians with individuals and couples where video game use was a clinical issue and have also addressed this in their university level-teachings on addiction. The authors are of varying cultural backgrounds and are shaped by being in an academic setting (as a doctoral student and professor), and these contexts shaped their analysis and interpretation of this data.

Method

The current study utilized constructivist grounded theory methodology to develop theoretical categories and build a model describing the process of internet gaming addiction and recovery. According to Charmaz (2014), grounded theory tools are flexible and can be used in this way, where data is organized into descriptive or explanatory categories, even without a formal or substantive theory being produced. The philosophical grounding for this study was interpretive, assuming a process of co-construction of categories in an iterative fashion that resulted in a model that was one interpretation, or representation of experience, rather than reality. In this sense, we as researchers are assuming that not only are our interpretations subjective, but that the gamers' representations of their experience were also re-constructions of their own experience, subject to interpretations during recall and presentation (e.g., Charmaz, 2014). We assume language itself is constructive, as it is always a recreation of the phenomena itself, and cannot fully capture the experience, which in this case included thousands of hours of gaming and stopping addicting gaming behaviors, such as quitting one's job, school, or limiting time with family or significant other to make more room to play video games (e.g., Gergen, 2010). We also assume a both/and approach to addictive behaviors, that although people experience behavioral and physical changes in their lives (which is a key argument for the "disease" model of addiction), that they also are agentic in their behavior (Bandura, 2006). In this study we examined the process gamers went through in terms of constraints, compulsions, and choices, with the intent to generate a model that was grounded in their experiences, acknowledging that our representation is one of many possible interpretations **(**Corbin & Strauss, 2007).

Sample

Grounded theory is not concerned with representative samples, but instead seeks participants that can speak to the process of interest (Charmaz, 2014). The sample was obtained using purposeful sampling strategy of convenience (Creswell & Poth, 2018), and included stories obtained from two internet sites that were specifically created to share stories of addiction and recovery from WoW. The first is an archive site (http://archive.org/web/) which contains pages from the now-defunct website of (www.wowdetox.com), and the other site was (www.reddit.com/r/noWOW), a forum where people discuss their former compulsive and excessive use of WoW. Although the data from the (www.wowdetox.com) site is public, it is

from an anonymous forum. A number between 1 and 50,000 represents these participants' names. The Reddit forum has posts by user. Reddit users can stay anonymous if they desire or let others know who they are. We chose a sample of 140 comments that represented participants' experience s that were at least 180 words or more in length in order to get detailed descriptions.

The participants (*N* = 140) included English speakers from North America, Europe, and Australia, with one participant commenting on English being his second language. Of the 140 participants, from what we could discern, 14 were females, and the rest males (126). Ages ranged from 12 years old to middle adulthood. However, these demographics are a rough estimation due to the data being secondary data. Dates from posts ranged from 2006 to 2011 and were from 100 to 1800 words long.

Data Analysis

The data analysis followed steps in constructivist grounded theory as delineated by Charmaz (2014) and LaRossa (2005) consisting of initial coding, focused coding, memo writing, and theoretical coding. Initial coding began after the posts were copied into a master document and read over carefully. The first author read line by line and made notes that focused on meaning and process. Charmaz (2014) suggests using gerunds to initially code as a way to help describe the emergent links among the processes in the data. Codes obtained in initial coding are the first step in building a model. After coding, memos were written and discussions with colleagues occurred as a way to track the analytic process and decisions made. These initial codes included many kinds of descriptions of what was occurring, and examples included (a) *quitting, (*b) *selling the old account,* (c) *flooding into his mind thoughts of playing,* (d) *unwilling to take it anymore,* (e) *realizing the game never ends,* (f) *encouraging others,* (g) *warning others,* (h) *suffering in his job,* (i) *neglecting his wife, and* (j) *escaping from real life*.

Memos are formal analytic notes that are the bridge between the analyses and writing of the final model and report (Charmaz, 2014). Memos help develop analytic thoughts, questions, ideas, assumptions, and a frame for analysis in each iteration of coding (Charmaz, 2014). Memos evolve as more data is analyzed and are key in articulating and detecting patterns in the data. Concepts that emerged from the initial codes developed this way in a process known as focused coding, where important concepts were refined into categories that represented the participant's experience. Examples of these included (a) *regret*, (b) *anger*, (c) *loneliness*, and (d) *depression*.

Focused coding is an emergent process where codes are compared with codes to see which are conceptually strongest and seem to have the most explanatory power (Charmaz, 2014). One challenge during this process was to keep preconceived notions from influencing the emerging categories. In this case, past personal and clinical experience with addiction and recovery was discussed and written about in a reflexive manner to consider their influence and allow the data to speak for itself. Examples of concepts ascending to categories include (a) *loss of time*, (b) *physical fitness*, (c) *money*, and (d) *relationships* combined to form the category of *loss*; furthermore, concepts of (a) *feeling a pull*, (b) *urge*, and (c) *obsessing* or *flooding thoughts of playing the game* combined to form the category of *withdrawal*.

Theoretical coding occurred in the later stages of the research process through the reviewing of the emerging categories and drawing explanatory connections between them (Hernandez, 2009). During this stage, categories were again compared to the data to see how they related to each other, and which were the most descriptive of the addiction and recovery process participants experienced. At this stage it is also possible to consider extant literature to help determine how connections operate in a theoretical sense (e.g., LaRossa, 2005). For instance, during this phase connections were made between *time wasted* to *need for social*

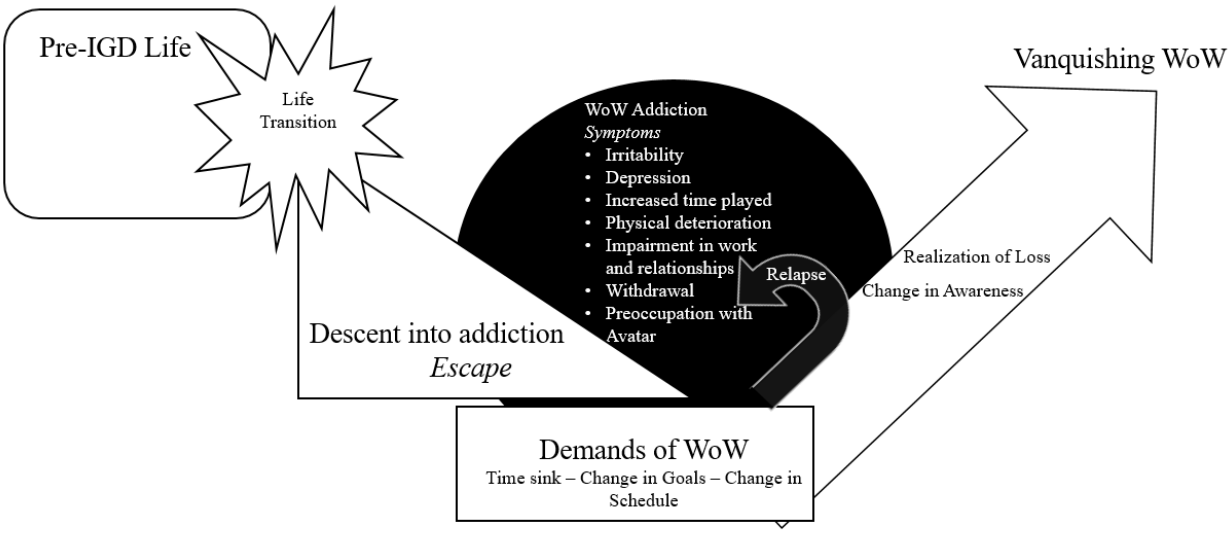
connection because it was apparent that participants found the need for social connection in the virtual realm of WoW and wasted exorbitant amounts of time on attending to virtual relationships.

Results

Figure 1 shows the model of falling into and escaping addiction to WoW. Categories are shown with descriptions, along with representative quotes from participants illustrating each category and subcategories. As categories were being formed an overarching narrative emerged detailing the journey a gamer takes through IGD while playing WoW. The model starts with descriptions of the participants' life before their descent into addiction.

The model shows a process of how how gamers lived before playing copious amount of WoW. Descriptions of their lives include physical activities, hobbies, academic and social accomplishments. Gamers then explain their life transitions which led them to play and escape into WoW. Life transitions included moving, parents divorcing, or starting school in a new place (e.g., college). Descent into addiction includes using WoW to escape the detrimental effects of the life transition and the salient features of an MMORPG, such as social interaction. The next step in the model is: *The Demands of WoW*, where gamers focus on goals set in the virtual world, and the excessive time spent to attain those goals, which includes the real-life schedule changes required to reach virtual goals. Next are the emerging symptoms of addiction, including: (a) irritability, (b) depression, (c) physical deterioration, (d) impairment with work and relationships, (e) relapse, and (f) withdrawal. The final step is vanquishing WoW through recovery, which included: (a) changes in awareness, (b) realization of loss, (c) setting boundaries, (d) seeking help, and (e) detoxification.

Figure 1
Model for WoW Addiction



Pre-IGD Life

Participants often contrasted their disordered gaming with accomplishments and satisfactions that characterized their lives before they began playing WoW, with quotes like: "I was a brilliant student at college, had a wonderful girlfriend and my family was proud of me," and, "I was homecoming queen and voted prettiest eyes in high school. I had a million

friends and won state on solo cello. I could run a 5:42 mile. I had straight A's my last semester of my senior year," or, "I used to run (about 25-30 miles a week)," and, "I used to have a tight click of friends in "RL" [term in gamer speak meaning *real life*] that [I] hung out with. Bar drinking, friends, an amazing [girlfriend], and a job. That was my life." The pre-IGD life often contained physical activity, hobbies, other video game playing, and academic and social accomplishments. However, not all pre-IGD experiences were wonderful. Some related challenges that may have led them to escape into online gaming, such as "[I was] never popular in school and always quite depressed." Another was similar, "I was still quite depressed. I resorted to games to relieve the agony I was suffering in my social life."

Life Transitions. Most people started to play WoW at a time of transition in their life, which often included stress:

> my start of gaming more than I needed…began the summer before I began 8th grade…strongly against my wishes it became necessary for us to move," and "I was stressed to be in a new place (college), and my boyfriend had cheated on me with my best friend before I left for college.

"I never had that many friends," one recalled, "and then I moved…to a boarding school…well it was the first summer of my laptop, so I downloaded WoW to experience what my neighbor was talking about." Another wrote, "My parents got divorced when I was 11. My sister, twin brother, and I were stuck in the middle. We were the messengers between our parents. WoW provided an escape from any troubles."

Descent to Addiction

Escape. Gamers typically described the descent into problematic game playing as a gradual but powerful transformation that seemed harmless at first, but later became problematic after it was too late. "WoW was like a slow virus infecting me," one recalled, "slowly eating away at my sense of self…Alcohol is a well-known drug, but a video game?! I hardly recognized it was a problem." The stress mentioned earlier was often a factor in the compelling nature of the game, as it became an escape. One played "as a way to escape from [her abusive boyfriend]," and after he left, her need for the game left as well. Similarly, another participant described WoW as, "…more [of an] escape and substitute [than] an addiction…it was a substitute for my already destroyed life…and a very interesting and quite fulfilling substitute too. . . I had no desire to [do] anything else in my [so-called] life." Another said, "WoW came along at a time in my life when I needed a break from the overwhelming responsibilities, I had made for myself." Strains on social relationships in the offline world made online relationships in WoW more enticing:

> there were connections, and after a while, you feel connected to [people you did not know in real life]," and "…the heady thing about the games for me is the attention…when people want you to be in their raids, or just want to chat or hang out, or helping others with accomplishing game goals and making them happy…that attention is addictive.

Demands of WoW

Many players found themselves descending deeper into levels of problematic use before they realized it, and at this point the game had become not only a diversion, but a demanding presence in their lives, changing their personal goals, use of time and their schedule.

Change in goals. Many who posted described a shift in priorities as previous responsibilities became less important as the game became more prominent. One described this in typical fashion: "I realized that I started enjoying hanging out with these online people more than my real life friends. I would look at the loot [items which players attain after defeating game enemies] all day and look at how it could improve the fun me and my online friends would have." Another gamer found himself struggling to stay off the game: "I'm having serious withdrawal issues: can't stop thinking about points, ratings, gear, etc." Another "was obsessing about leveling my new character, which is something I told myself I would never do – set in-game goals." One explained how in-game goals are structured to hook players in: "ALL MMORPG's are a poison, the way they are made forces you to set in-game goals that over time suck you in and actually make the game your new 'RL.'"

Time sink. One of the primary demands of the game was the time needed to devote to it. One player found himself in a lose-lose situation caught between the game and real life: "I just wanted [WoW] to be a fun way to spend some time with new people, then I realized my mistake. Neglecting wife and family, job started to suffer. I had to rectify it, which meant alienating all the important online relationships I have made." Another similarly realized: "just how much time this game has sucked out of me and my family. I played this game for 8-10 hours a day." Others had similar experiences: "I stay up until 4 am," and, "I played in the morning, before school…after school I [played] until bedtime," "…staying up till 6 am in the morning, getting an hour of sleep," and, "I even once got up at 2 am on a Saturday and sat in my room playing until around 1 am the next morning."

Part of the resentment towards the lost time was associated with the structure of the game itself, which players described as purposely demanding and addictive: "[This] game that REQUIRES you to spend four or more hours per day doing in order to achieve anything cool is just plain wrong," one said, summarizing the whole experience:

> It requires several hours that you can't log off or take unscheduled breaks (God forbid you have a life!). It requires you to farm gold [repetitively kill monsters or gather items and sell them for in-game currency] for repairs and consumables (needed for killing high-level monsters in dungeons). It requires you to be a part of an in-game dysfunctional social guild structure of hardcore WoW Addicts that pressure each other to be online as much as possible so you can get your gear when it randomly drops so you don't "miss out." It requires you to pick a "main" character and play ONLY that ONE toon 99% of the time. . . . It requires you to spend the bulk of your online time in only a small number of "instances" [dungeons], thereby eliminating the majority of the game and the fun you used to have exploring it! If you raid in WoW that is all you do…in and out of the game. It really takes that much commitment. Only you can decide if you really want that type of dysfunctional "lifestyle." Personally, I am done selling my soul for purple "epic" [hard to find item] pixels!

Changes in schedule. An inevitable result of the time needed for game accomplishments was the forced changing of the player's schedule. One WoW gamer described his usual day when he was playing intensely:

> 5:00 pm: Log in, get some solo play in before the guild's regularly scheduled raiding time. 7:00 pm: Report at the entrance [of] today's dungeon, chat, prepare for the upcoming raid. 7:30 pm: Go into the raid dungeon, hoping that this time the one rare item I wanted dropped, and that I had enough DKP [dragon killing points, token economy to bid on items] saved up to outbid my fellow warlocks to determine who gets it. 12:30 am: Raid over. Go to bed either ecstatic that I finally got the item I wanted or disappointed because it either didn't drop or I was outbid for it.

Some players described the schedule like a relentless career: "I clocked into WoW like I would clock into a job, play my shift, then go to bed."

Symptoms of Addiction

The central category in this study included the symptoms that players described that resembled addiction characteristics. These varied widely and followed a typical transformation process as the game took an outsized role in the player's life. Commenters described symptoms of irritability, emotional and physical deterioration, and impairment in professional and personal responsibilities.

Irritability. A wife of a player related how her husband transformed as he became consumed with WoW, "[he is now] short-tempered, huffy, and gets pissed off at simple questions." A player recalled: "I wasn't angry at the fact that I saved up for four months to pay for that computer, I was angry that [MY PARENTS] prevented me from playing WoW." One player realized it was time to quit when he, "…got angry with, and then resented [his] wife because she wanted help…deep breath, putting up CHRISTMAS LIGHTS." He was mad because he was thwarted in his desire to finish a quest allowing access to an additional dungeon. This anger at times caused relationship damage, as one recalled, "[Players] will become extremely irritable if not playing the game when they'd like to, and they threaten physical violence. Depending on how addicted the player is, those threats may be fulfilled." A girlfriend of a WoW player concurred with the potential for aggression in players: "He doesn't eat right, sleep right and if I say anything I get yelled at. He won't accept his problem."

Depression. One of the most common symptoms described was depression. One player realized "how depressed it made [him]," in part because of the time wasted and the relationships damaged: "I could no longer connect with the people in my life, and I became a shell of my former self, which made me depressed." A commenter described his WoW-infatuated roommate as, "overweight, lifeless, depressed." Another wife similarly identified her husband as "currently suffering from depression and is currently unemployed as a result of this, I think he is losing himself in this virtual world, so he doesn't have to face the reality life has to offer." A former Marine related how he was honorably discharged "for basically being depressed for being out of shape," due to spending 8 hours a day playing WoW," and another said, "I know it made me depressed to have nothing really going for me in my life other [than] that damned game." Some felt shame:

> The fact that I did not have the willpower to break away made me feel weak and made me even more depressed! I was on the verge of going to my doctor and asking for some pills, or therapy, or something…but that would break into my WoW-time!

Physical deterioration. Many posts described physical changes including weight gain: "I played WOW for seven months…I played nearly for 14 hours a day for seven months…I

gained 15 pounds," and another's experience was more dramatic: "I almost lost everything including putting on over 100 lbs. [It is] like the 'game' puts you into a trance." Another gained 20 pounds because he "made loads of excuses as to why I couldn't go play hockey with REAL LIFE FRIENDS." And another identified one of the sources of calories as "the sugar and [caffeine needed] to get you up." Others lost weight during this "trance:" "I went from being 205 lbs., in extremely good shape, six pack, toned, tanned with a very lovely girlfriend, to about 180 lbs., beer gut, pale scrawny little lonely kid," and others had various physical problems: "In real life I gained 10 lbs., carpal tunnel, and nearsightedness."

Impairment in work and relationships. The DSM 5 lists criteria for a substance use disorder as "A problematic pattern of . . . use leading to clinically significant impairment or distress" (APA, 2013, p. 233), and many descriptions posted by these players reflected this. "[I] was kind of failing at school," one said, "and instead of taking matters into my own hands I started to play 50+ hours a week. Eventually, I failed at school and WoW was my life, I was very depressed." Another noted, "I'm still unpopular, and I still don't have any respect from my peers, I'm suspended from school for skipping continuously playing WoW, and I've failed four courses since I started playing in 2004." Others described ruptured relationships and the isolation that accompanies addiction:

> [I am] trying to quit, why, [because] this game [has] made me lonely, so god damn lonely that it hurts and I break down crying sometimes, missing my friends, missing RL activities that [I'm] no longer part of, that [I'm] now [too] far away from to be a part of again, and [I'm] scared of going out in the real world again at the same time, so [I] have a hard time quitting.

And another summed up the damage to his life in this regard: "I began to treat affairs coldly, have ceased to go to [my] mother, began to work badly…broke corporate standards, [my girlfriend left]. I have absolutely lost [the] meaning of existence."

Players reported significant damage to work, school, family, other social relationships, and even finding purpose in life. A person lamented,

> I've [sic] lost pretty much all of my friends outside the game, forsaken most of my family, given up just about every hobby I had, and my grades are starting to fall pretty hard as well. I'm pretty sure my girlfriend of 3 years is going to leave me soon as well, because of the game.

Another shared how their career and marriage suffered:

> Got laid off and then "let go" from my next job. Eventually I found a job in my field, but I made sure it did not interfere with my raiding. Spouse used to play with me in WoW, but then quit. We would fight about the game all the time. Our relationship became strained. I would contently play every night while the love of my life sat alone or went out without me.

Another's marriage was also suffering: "My wife hates the game and resents every minute I am on the computer, 100 times she threatened to smash my (our) computer."

Preoccupation with avatar. Many users commented on how their preoccupation with improving their WoW "toon" became an obsessive search for status or meaning, as one described:

> We are trying to "one-up" each other by having the best gear on a super-toon or having the most "leet" [elite] guild. We gave up gobs of our free time and parts of our lives just to make our characters "unique."

The design of the game creates a comparative hierarchy where players categorize each other by looking at their gear, "I would look at the loot all day and look at how it could improve the fun me and my online friends would have." Another summed up the irony found in endless pursuits of online respect: "All that matters in Warcraft is how much gear you have. Too bad the gear you have is directly proportional to how little social skills you have."

Relapse. One of the defining features of addictive behavior is the persistent desire to quit or cut down use, with the accompanying failure to do so, as one plaintively said: "I know I need to quit, it is just so hard, it really is." Many described repeated relapsing into the game, after efforts to stop. One comment was typical: "I quit for months and then signed up again…I was obsessing about leveling my new character…what the hell is it about this game!?" The draw can be from friends in real life or in-game. An ex-player relates feeling the pull of his community: "I came back for them [his guildmates]. People don't understand how great the social community is here and how hard it is to actually let that go." A wife describes the hope she felt with her husband's sobriety from WoW, and the despair of his relapse:

> …he relapsed after a glorious three months because a friend of his never talked about anything else and he thought he could go back casually. Now he plays more than ever trying to regear and catch up from the three months that he missed playing.

Players described setting boundaries and finding it hard to keep them:

> after one week I logged on and got a me a new 5v5 [player vs. player group] and decided that just maybe I can stick to 10 arena games a week and maybe the daily PVP quest. The game has flooded my mind. The adrenaline rush just kills me, and I want it again and again.

Another convinced his girlfriend to let him play the next expansion casually but, "of course it started out casually and then I wasn't a noob [novice] anymore. I'd grind my ass off and raid. I got into raiding pretty heavily."

Withdrawal. Another common theme that is consistent with the experience of addiction is withdrawal. People reported physical and psychological symptoms that were unpleasant after reducing or quitting their WoW usage. One commenter was specifically coming to the community site for support to cope with his cravings for WoW: "I wouldn't be at this site again if I didn't feel the urge to get back on." Some described rationalizing their "need to play" with internal justifications: "… the only things going through my head right now are the good parts about being a [WoW]player." People described their struggles in staying clean by being plagued with thoughts of WoW: "I have been slowly weaning away but thinking about anything but the game has been hard." Another spent a weekend away from WoW on a "vacation to San Francisco and the whole time [he] was thinking about how badly [he] wanted to back to [his] computer and didn't fully experience the thing [he] enjoyed most, travelling." A commenter lamented, "Already left, but can't stop thinking about [WoW]. Help me before I [k]ill someone."

Some literally had physical symptoms when considering quitting: "…every time I think about quitting the game, it almost makes me sick. This is how I know I am addicted; I need to

quit pronto." Another shared the blessing in disguise experienced by having to get a new video card in their computer:

> I could not play WoW until my pc warranty got me a new one. As the days passed waiting for the new card, I found myself constantly thinking about the game, and realizing how much of a waste of time it is.

By the fifth day of sobriety from WoW the poster realized: "…the more time I spend away, the more sick I get thinking of how I am addicted to [WoW]…I fight the urge to play constantly."

Vanquishing WoW Through Recovery

These stories of addiction were detailed and compelling, as were their stories of how players reclaimed their lives from compulsive use of WoW. The transformation from disordered gaming back to a functioning person typically involved several overlapping steps, beginning with a recognition that they needed to do something different.

Changes in awareness. As is typical in recovery programs, the road back often started with a change in awareness, which was often a result of realizing that the time spent on the game was preventing meaningful things in their own life. For example, many people came to the realization of the meaninglessness of accomplishments achieved in WoW, which were incongruent with life goals and values. A commenter explained, "I'd conquered some of the toughest dungeons in the game and collected some of the rarest items there were. Items that now were essentially worthless thanks to the expansion, meaning that everything I'd done was for nothing." Some described conflicting feelings: "I'm really torn though, I lead a guild and have [a lot] of friends in-game, but I'd like to quit and live my life." Many others also commented on how the game grew to be onerous and less satisfying over time. Some changed awareness when they realized the game now felt like an insistent obligation, like an albatross that could not be gotten rid of. "Fun as these games start out," one recalled, "they always deteriorate into stress and distract totally from the real world, sometimes in ways that you really, really regret. And you can't get that time back." The irony of having to escape from escapism was captured by one: "It's ironic how WoW, which I originally played as an escape from stress, became itself a source of stress thanks to the ill-mannered, mean-spirited people who inhabit it."

Realization of loss. For many addicts, change begins with "hitting bottom" or finding that the consequences of the addiction are becoming increasingly damaging and cannot be excused any longer. For many of these gamers, there were painful realizations such as realizing:

> I am a shell of the person I used to be in terms of motivation and mental focus. EVERYTHING feels much much harder, and I have to make a conscious effort to carry out tasks I used to do on autopilot.

One expressed how his consequences helped him escape this destructive cycle: "only after losing [every] valuable thing to me in life (Girlfriend, Job, friends, REAL LIFE…) did I stop playing." People lost hobbies, skills, professional opportunities, and especially relationships:

> I am also trying hard to get a new woman in my life but four years of absence and this damn game have really hurt my skills with the women…I still feel like a senior in high school. WoW has really hampered myself from growing up.

Another lost basic functional skills needed to interact with others:

> A few weeks after quitting I realized . . . I had actually LOST those social skills. I have gone from a person who gained energy, pleasure and release from being sociable, who loved joking around with, talking with and messing around with friends, to someone who finds it hard/taxing to spend many hours around family and friends. I could almost cry about this.

Setting boundaries and seeking help. One of the challenges in addiction recovery is to separate from contexts and people that are triggering of the temptations. Boundaries must be set, and lifestyle changes made for recovery to be successful. These players described taking difficult steps to break the hold the game had. For some this was analogous to defeating bosses within the game, with this new goal becoming vanquishing the game itself. Players described replacing WoW game time with offline activities, selling one's account, offering encouragement to others and being grateful for beating the addiction. This required commitment and difficult choices, as typified by one player's account of putting "my discs and manual, cd key, etc., are all in hundreds of pieces in my bin." Additionally, the use of a support community by these players (e.g., interacting on the online groups from which the data was gathered) provided a place to find like-minded friends who can validate and support recovery efforts in a similar way that happens in 12-step or other recovery groups.

Detoxification. This subcategory captures the sense that many described of being free from the negative effects of destructive gaming. Like vanquishing a final boss in WoW, there is a sense of reward and hard work that many described as hopeful and positive. One described the contrast: "I really feel refreshed now and I actually have time to go and do other things IN THE REAL WORLD!!" Another compared their recovery to another addiction they had before: "Can only say it feels so good to leave it behind. I never felt such a relief in my life and I fought "real" drug addiction to my success before. Stop now, you won't regret!!" Another similarly described happier emotions after going cold turkey: "I decided one morning I wanna quit and I did. I feel so great, and I already feel my life is on track." Some described the relief of a better schedule: "I've gotten so much more free time and I feel so free. I no longer have any commitments towards a video game and no one who I feel like I'm "letting down" by not attending a raid." Others mentioned hope towards accomplishing new goals: "Can't wait to finish my degree in chemical engineering," one said, and another is now "look[ing] forward to what will come next in my life and creating my own "expansion."

Discussion

According to Joseph Campbell (1990), the hero's journey begins in the mundane and ordinary. A call to adventure lures the would-be hero past the threshold of the known world into adventure, peril, and growth. The hero descends to the abyss, a type of death, and experiences a rebirth and transformation. The process of adventure, ensnarement, and eventual freedom these WoW players experienced is reflected in the model that was the product of this project. The players who shared their experiences of problematic gaming were now returned from their quests, sadder but wiser, with scars gained and lessons learned. These findings that represent their experiences can be useful for those seeking to better understand IGD, addiction and recovery, and work with those who are dealing with these issues.

Categories derived from this grounded theory resemble criteria for addiction found in the DSM-5: (a) salience, (b) tolerance, (c) mood modification, (d) loss of control, (e) withdrawal, (f) denial and concealment, (g) problems and conflict, (h) and relapse (APA, 2013). One typical characteristic of addiction not found in this study was deceiving or lying to

others regarding the amount of time spent on the addiction (Whiting, 2016). This is likely due to the stage these players were in, which was mostly recovery or attempted recovery, which is past the point of self-deception and instead is usually a stage of awareness and accountability (Lauria et al., 2016). It is also important to note that although the model presents steps in quitting as a linear progression, for many of the steps could happen simultaneously or in varying order.

Many commenters seemed to be sharing experiences from late adolescence and early adulthood, and descent into addiction often coincided with transitions from secondary to post-secondary education or from college to full-time employment. Other researchers found the ages and time of the lifespan with IGD to be similar (Kuss & Griffiths, 2015; Smahel et al., 2008), but did not connect this to transitions characteristic of this age. This may be related to findings of Collins and Freeman (2013), where problematic video game players were found to have less offline social capital than non-problematic video game players. Perhaps during stressful periods of transition, problematic players do not have the necessary social capital in family, friends, or associates to cope. Others have also found that younger players are more prone to addictive behaviors with video games (Fuster et al., 2013), with Smahel et al. (2008) finding that younger players were more prone to addiction than players over 27 years old.

Ng and Wiemer-Hastings (2005) found the inordinate amount of time spent by gamers in MMORPGs leads to online relationships becoming more salient than offline relationships, and this was reflected by many of these commenters. Although changing relationship priorities may not necessarily indicate addiction, it is a noticeable development for many players. The weakening of social ties in real life was a contributor to depression and loss of control for some. The inability to stop playing, growing irritability, and depression are also similar to those found by Stockdale and Coyne (2018) where people suffering from IGD exhibited poorer emotional and mental health (although not physical health as some of these participants experienced) than those not suffering with IGD.

Findings in this study contrast with what Carras et al. (2018) found about criteria of IGD, where a focus group of gamers did not generally report problems with focus, relationships, or work. However, these findings do mesh with the criteria the focus group wanted to add, which included *isolation, game controls/determines the schedule, and loss of reality*. This may be because the sample in this study were those gamers who self-identified as having problems, where other studies worked with general gamers. Current results also match what Kuss and Griffiths (2015) found related to criteria for IGD when interviewing psychotherapists on symptoms they saw in clients, which included: (a) withdrawal, (b) relapse, (c) mood modification (escape), (d) loss of control, (e) salience, (f) problems and conflict, (g) and being IGD comorbid with depression.

Clinical Implications

Findings from this study suggest that clinicians who work with compulsive gamers will hear similar themes and issues compared to other process or chemical addictions. This model suggests several intervention points where a clinician may assess for or suggest changes in behaviors. For example, if clients are descending into addiction, including changing their schedule, or spending extreme amounts of time on gaming, they are likely heading for other symptoms of addiction. If these symptoms are already occurring (such as irritability, withdrawal, or damaged relationships), then there can be possibilities for intervention there. For discouraged clients who are feeling a loss of control it may be helpful to focus on empowerment and helping set boundaries. In this study gamers mentioned action, like uninstalling the game, selling their account, and reaching out to others online or in person as a way to “be free.” Clinicians should do a thorough exploration with the client on the degree to

which video game culture permeates their daily lives and which items might trigger them to go back to the game.

Other clinical options may include any of the following: First, working with a client to track their history of video game playing, including the functions it may be serving and any problematic consequences. Second, taking a future-orientation about goals and values, for example, planning for the next one to five years. Third, the client could try a fast from their video game playing for a week and track their affective states and cognitions during the period. Fourth, the clinician could process with the client what skills they have gained from playing MMORPGs and how these may transfer to offline goals. Fifth, include the family or other significant relationships to therapy to assess relationship strains and protective factors and cohesion as they relate to the video game playing (Adams et al., 2018).

Other relevant areas for clinicians to assess when working with clients with problematic gaming include, impaired work or personal relationships, daily schedule, sense of agency, diminished social skills, and emotional or physical deterioration. Comorbidity of depression with addictive behavior is particularly important to assess and possibly treat. There may be factors that have created vulnerabilities to problematic gaming, including family dysfunction, transitions, or other stressors, particularly for teens and young adults. Many of these comments focused on how players found a lot of meaning in the game and the relationships they formed playing it. Exploring existential questions around values and life challenges with the client may help them separate out where they need to find more in the real world. Clients may need to focus on relationships, meaning and accomplishment in real life as a way to avoid being pulled back into problematic gaming.

Research Implications

Future qualitative studies could further explore the experience of problematic gaming, including addiction and recovery as described by those who have lived it. This could be done with other samples, including interviews, or with those coming from addictive histories, or those at different stages of life. Direct comparisons of these experiences with other kinds of addictive behaviors could help those who are studying the experience of IGD. Future studies can focus on other video games in the MMORPG genre or go into other multiple genres like multiplayer online battle arenas (MOBA) or battle royale games (like Player Unknown's Battlegrounds, H1Z1, or Fortnite). Also, scholarship could investigate the impact of significant others and family of the addicted gamer with researchers interviewing both the addicted and their familial or social network. Other studies could focus on interviewing families where the adolescent or spouse are currently experiencing IGD. Others have found emotional but not physical health effects of video game compulsion (Stockdale & Coyne, 2018) whereas in this study people reported both. Further studies could explore the physical and even neurological effects of electronic addiction as a way to further examine this process in relation to other addictive experiences. Gathering negative cases (Charmaz, 2014) of gamers who were able to engage in WoW play without marked interference in their life would allow for a new perspective.

Limitations and Conclusion

Qualitative data is only a representation of lived experiences. There is always interpretation and distortion with the researcher's interpretations and even the participants' descriptions of their experiences. The researchers bring previous experiences and understandings about addiction and video games, and these are discussed and accounted for as a way to ensure rigor in the process (Creswell & Poth, 2018). Although this is typical of any research, it is

particularly relevant in grounded theory and qualitative work, where the researchers are the primary analytic tools. Further studies with other samples or other investigations would yield varying results, but we assume that there would be overlap with these.

Also, this data was gathered from an online source, which has advantages and disadvantages. We were not able to recruit and control for subjects, or revisit them for member-checking, which are both used in qualitative research as ways to enhance rigor (Creswell & Poth). However, these data were gathered from worldwide sources, providing a rich picture of those who were motivated to speak to and describe this experience, which itself is a type of triangulation of data that strengthens the categories (Charmaz, 2014). Also, this data is strong and direct as those posting were sharing their own stories anonymously and reacting to others who were also sharing. These voices provide compelling accounts of the experience of video game addiction and listening carefully to them can bring helpful information to others who are seeking healthier ways of gaming or helping those who are doing the same.

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