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Representation of Mental Illness in Video Games

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Abstract: Portrayals of mental illness appear frequently in video games and have the potential to shape cultural attitudes toward psychopathology for better or for worse. Yet research on such portrayals is practically nonexistent. The limited available research focuses almost exclusively on how specific characters fit into film and television mental illness tropes. Representations of mental illness in games are broader than this; for instance, they may include settings (e.g., insane asylums) and specific terminology (e.g., clinical diagnoses). Until now, there has been no framework to help identify and categorize the many game-based representations of psychopathology. This paper puts forth a new framework that does just that in an attempt to address the limitations of previous research and to offer guidance for future game researchers and developers on how to think critically about the representation of mental illness in games.

Introduction

Since 2014, there has been a dramatic increase in games research and media coverage centered on the representation of diverse populations and experiences in digital games. These discussions have focused on the lack of non-White, non-male characters and on stereotyped portrayals of gender and race (Jenkins & Cassell, 2008; Salen & Zimmerman, 2003; Sarkeesian, 2013; Shaw, 2014; Williams, Martins, Consalvo, & Ivory, 2009). As this area of study continues to develop, it is important to expand research and analysis of representation to include less visible marginalized groups, such as persons with mental illnesses. Approximately 24% of video games portray mentally ill characters (Shapiro & Rotter, 2016) and the presence of mental illness–related content, such as insane asylums and straitjackets, or pejorative terms such as “crazy” and “psycho,” increases the frequency with which players come in contact with mental health representations. Compared to other marginalized groups, the portrayal of those with mental illness is common, yet research on the portrayal of mental illness in digital games is practically nonexistent (Ma, 2017).

How games portray persons with mental illnesses and psychopathological content conveys a sense of their cultural value (Klein & Shiffman, 2009) and, conversely, our cultural values take cues from the media we consume (Lule, 2016). Over 40 years of media research has consistently found that mass media are the most common public source of information about mental illness and that media portrayals of mental illness tend to be negative, exaggerated, and inaccurate (Ma, 2017; Singorielli, 1989; Stout, Villegas, & Jennings, 2004; Wahl, 1995). Exposure to negative media portrayals of mental illness have been linked to negative or stereotyped perceptions of the mentally ill among people without a mental illness (Ma, 2017; McGinty, Webster, & Barry, 2013; Stout et al., 2004) and impaired help-seeking behaviors and treatment adherence for persons coping with a mental illness (Maier, Gentile, Vogel, & Kaplan, 2014; Stuart, 2006).

Before we can systematically analyze how mental illness is portrayed in games, we first need to identify what constitutes mental illness in games. What does it mean for a game to portray mental illness? This paper will examine previous attempts to identify and analyze mental illness in video games, create an updated framework for categorizing mental illness portrayals, and provide examples of classic and contemporary games that fit those categories.

Mental Illness and Games Studies

Previous research has attempted to map film and television tropes of mental illness to video games' portrayals of mental illness (Shapiro & Rotter, 2016). These tropes include: the homicidal maniac, the rebellious free spirit, the specially gifted or enlightened, the female patient-seductress, the narcissistic parasite, the zoo specimen (Hyler 2003), the simpleton, and the failure or victim (Pirkis, Blood, Francis, & McCallum, 2005). Shapiro and Rotter (2016) analyzed depictions of mental illness across the top 50 best-selling video games each year from 2011 to 2013. Of the 96 games they surveyed, 23 games (24%) depicted one or more mentally ill characters. Forty-two individual characters were identified as portraying mental illness, 29 of which (69%) acted violently and in line with the homicidal maniac trope. Of the remaining characters, one (2.4%) was categorized as a narcissistic parasite, two (4.7%) were categorized as zoo specimens, and 10 (23.8%) did not fit into an established category but displayed psychologically disturbed attributes such as cognitive or behavioral dysfunction or paranoia. The authors noted that their findings were consistent with the portrayal of mentally ill persons in other forms of media.

Morris and Forrest (2013) evaluated mental illness representation in a single video game, *Batman: Arkham Asylum* (Rocksteady Studios, 2009). In this action-adventure game, Batman battles his way out of an asylum for the criminally insane after being trapped inside. The authors summarized the portrayals of the mentally ill as featuring “stereotypical and discriminatory mental health representations commonly found in other video games” (pp. 757–758). Asylum inmates were depicted as “feral” and “animal-like” and were referred to by guards as “psychos,” “insane,” and “freaks.” The Joker is even directly referred to in the game as a violent “schizophrenic,” a clinical term for persons experiencing a constellation of symptoms such as hallucinations, delusions, lack of emotional expression, and disorganized speech or behavior (American Psychiatric Association, 2013). The stereotypes and discriminatory representation of mental illness in *Batman* is reflective of representations in other video games and across other forms of media. The authors expressed optimism about the potential of games to help destigmatize mental illness but also concern regarding the current state of mental illness representation. They urged game developers to think critically about the portrayals they create.

A well-played examination of *The Walking Dead: Season One* (Telltale Games, 2012) explored how psychological trauma was integrated as a core game mechanic (Smethurst & Craps, 2015). Combining work by game scholars and informed by psychological and sociological trauma studies, the authors suggested a “trauma-theoretical” approach. They suggested “inter-reactivity,” empathy, and complicity to be unique affordances of games that effectively elicit compassion for traumatized characters and provoke a sense of responsibility for the occurrence of traumatic events. In a scene in which Lee, the player-character, is faced with cutting off another character's leg, the player is required to target and tap the screen to swing an ax. This is followed by a brief cutscene in which the camera shifts from first-person to a third-person perspective, allowing the player to view the player-character as well as all of the nonplayer characters. During this time, the player has no control—the player cannot move the camera, change his or her mind, or make any other decisions. Once the scene ends, the player must tap the screen to initiate the next swing. By alternating between first- and third-person perspectives, and between being an active agent and a passive observer, the game gives the player the space and the time to consider his or her choices and their visceral, gory, agonizing consequences. Although this research did not directly analyze *The Walking Dead* for portrayals of mental health, it did provide an additional way to conceptualize the representation of mental illness in games; specifically, that mental health issues can be embodied in game mechanics, not just characters.

Outside of academia, game critics also have weighed in on the representation of mental illness in games. In July 2014, Polygon posted an article by games critic Patrick Lindsey titled, “Gaming’s favorite villain is mental illness, and this needs to stop.” Lindsey, who worked on the interactive fiction game *Depression Quest* (Zoë Quin, 2013), discussed the tendency of games to depict mentally ill characters as broken, less than human, and completely foreign. According to Lindsey, “These characters are dehumanized, portrayed as mental disorders embodied and wrapped in ostensibly human packaging.” In instances when the mentally ill are more than subhuman entities, they tend to be murderous villains. Lindsey identified Vaas Montenegro from *Far Cry 3* (Ubisoft Montreal, 2012) and Makarov from *Call of Duty: Modern Warfare* (Infinity Ward, 2007) as examples of characters who appear to have no motivation for their murderous inclinations other than being criminally insane. Lindsey also called out the use of “sanity meters,” a graphical user interface that quantifies how “crazy” a character is, as an example of mental illness as a game mechanic.

A July 2013 article published on Kotaku similarly identified games as using insanity as a game mechanic and the *raison d’être* for an aggressive, violent villain. Written by neuroscientist Ian Mahr, “Nobody Wins When Horror Games Stigmatize Mental Illness” dove into the common tropes associated with mental illness in horror games. These tropes related to the “crazed killer” and “horrific insane asylum” were identified as common story devices used to tie up loose exposition or backstory or to provide justification for a character’s behavior. His analysis reflected established tropes in media around the mentally ill as dangerous and particularly violent and also emphasized the role psychiatric environments and artifacts (i.e., straitjackets, medication, etc.) play in portraying mental illness in games.

Additional critique in this area comes from the website Not Your Momma’s Gamer (NYMG). NYMG is a website founded by Samantha Blackmon, a professor of rhetoric and games studies, and Alex Layne, a professor of gender and gaming issues. Articles posted to NYMG include exploration of mental illness as the new “damsel in distress” trope (Barry, 2015), critique the horror genre’s frequent reliance on mental illness as a means to induce fear (Nixon, 2013), and parsing the difference between madness and mental illness in games and what those representations reflect about society (Layne, 2016). The feminist perspective taken by many of these articles provides a needed bridge of intersectionality for mental illness and other minority populations portrayed in the games space.

Summary

The minimal literature available on mental illness in games has consistently found games to be populated with negative, stereotyped portrayals. Research has focused on mental illness as portrayed by game characters and has suggested that game mechanics, narrative, and settings might also convey representations of mental illness. The frames used to identify and analyze mental illness in games has drawn extensively from research in other media, such as television and film, as the starting point for analysis. Digital games are a unique medium with specific affordances that differentiate them from other forms of media (Madigan, 2015), so drawing on a framework established to serve a different form of media may not produce generalizable results. That said, because of the scarcity of available research on the portrayal of mental illness in games, frameworks from other media can serve as a solid place to start creating a parallel framework for games. Adopting defined mental illness tropes from television or film is a natural starting point for the first foray into representation in games. However, using this frame has resulted in a near-universal finding of negative and stereotyped portrayals, which is not particularly helpful in encouraging future research. It more or less conveys that video games are terrible at portraying mental illness—case closed. Similarly, this research does not provide game designers any

helpful feedback or guidance on how to create portrayals of mental illness that are anything other than terrible.

What follows is a reframing of previous research into a framework that captures character portrayals of mental illness as well as game narratives, mechanics, and environments that allude to or directly reference psychopathology. In addition, this framework expands upon previous research approaches by including space for considering progressive portrayals of mental illness and creating a method for categorizing less obvious portrayals. The goal of this framework is to enable games researchers to consistently identify mental illness representations in games so that future research can spend more time focusing on analyzing portrayals and less time figuring out what category they may fit into. Additionally, this framework aims to raise awareness within the game-development community about the casualness with which mental illness is often portrayed in games and the potential impact of that casualness, and to support game developers in designing better portrayals of psychopathology.

A Dimensional Approach to Categorizing Psychopathology in Games

Identifying and analyzing mental illness representations in games is uniquely challenging. Unlike with many portrayals of other marginalized groups, mental illness is often not outwardly visible. Even if it were, it is not enough to identify merely the presence or absence of a portrayal of mental illness in a game—researchers also must be able to analyze the depth and accuracy of that portrayal. For example, both *Final Fantasy VI* (Square, 1994) and *Depression Quest* (Zoë Quin, 2013) portray mental illness, but only one of them (*Depression Quest*) explores what it means to cope with a mental illness while the other uses mental illness as a convenient plot point. How do you compare Arkham Asylum from *Batman* (Rocksteady Studios, 2009) to the Ospedale Psichiatrico di Volterra from *Town of Light* (LKA, 2016), the psychiatric hospital modeled on a still-standing insane asylum from 19th-century Italy that is littered with historically accurate artifacts? These games have wildly different goals, but they all offer representations of psychopathology and are worthy of study.

One potential solution is to view representations not as merely present or absent but as points on a spectrum that tend to cluster into one of three groups: One-Dimensional, Two-Dimensional, and Three-Dimensional representations (see Figure 1). Portrayals that cluster around the One-Dimensional group are flat and lack defining characteristics that make them unique or interesting. Two-Dimensional portrayals have specific properties that are essential to making them what they are (e.g., a square must have four points and removing or adding a point means it is no longer a square), but there is no depth to the representation. Portrayals that cluster toward the Three-Dimensional group also have specific properties that make them what they are, but these properties extend beyond the surface and provide depth and alternative perspectives. Three-Dimensional representations are to Two-Dimensional Representations as a cube is to a square.

The idea of viewing mental illness portrayals as a spectrum was inspired by the diagnostic criteria for specific psychological disorders, which also use a spectrum rather than distinct categories (e.g., present vs. absent), such as autism spectrum disorder (American Psychiatric Association, 2013). One of the limitations from previous research is that it focused on trying to sort mental health representations into distinct categories: good or bad; present or not; homicidal maniac or zoo specimen. Using a spectrum allows for flexibility so that researchers do not find themselves attempting to fit fuzzy representations (e.g., does that character *really* meet all criteria for PTSD?) into distinct categories, as happened in the Shapiro and Rotter (2016) study when a quarter of all the characters they evaluated did not fit into any

established category. You can land somewhere in between groups and still have a sense of where you are in terms of representation, as opposed to being tossed into an “other” category.

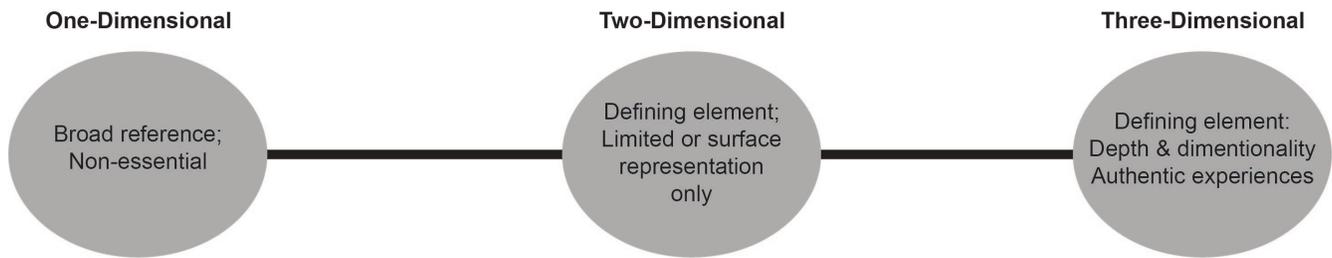


Figure 1. Video game psychopathology spectrum.

One-Dimensional Representations

At the left end of the spectrum are One-Dimensional representations. These consist of broad references to mental illness wherein the representation is a nonessential element to a character, story, or environment. These references are background noise, something that is alluded to but not established and which carry minimal significance. One-Dimensional portrayals acknowledge that mental illness is something that exists in the world, but only through passing references. For example, Heimskr is a Nord priest in *The Elder Scrolls V: Skyrim* (Bethesda Game Studios, 2013) who preaches loudly outside the keep in Whiterun. His sermons predict the end-times for Skyrim and he is regarded by some of the nonplayer characters (NPCs) in Whiterun as mentally ill: “That Heimskr’s crazy.” There is no further attempt to understand his insanity. Labeling Heimskr as crazy is not essential to any aspect of the game. Removing the pejorative reference would not impact the game in any measurable way and it would also break from perpetuating stigmas and stereotypes around mental illness. One-Dimensional representations are not inherently problematic as they can also provide neutral or even positive representations. For example, an NPC could mention in passing that he went to therapy before or, when searching a house, a player could find a prescription for psychiatric medications or a psychiatrist’s business card. These kinds of neutral, nonstigmatizing references may even be helpful as they may normalize the presence of mental illness and its ephemera in mundane daily life.

Another type of One-Dimensional representation are the “illness in name” characters whose names presuppose the presence of a mental illness (Shapiro & Rotter, 2016). This includes the Psychos from *Borderlands* (Gearbox Software, 2009), Crazy Red from *Animal Crossing: New Leaf* (Nintendo, 2012), and the descriptively named Disturbed Suspect from *L.A. Noire* (Team Bondi, 2011). Naming these characters does nothing in terms of story or character development—other than signal to the player that there is something odd about the character or situation—and could be removed without anything related to the character, narrative, or setting being lost.

Two-Dimensional Representations

In the middle of the spectrum are Two-Dimensional representations wherein psychopathological features are essential to, or a defining element of, a character, story, or setting. A key element of these representations is that they lack depth; the game does not explore mental illness beyond the surface level. Two-Dimensional representations often provoke commonly held views or beliefs about what mental illness is, what it does, and what it looks like. These portrayals serve as a kind of shorthand

between the game developer and the player, enabling the developer to convey a great deal of information with minimal effort. For example, have you ever played a game in which your character woke up in a psychiatric hospital and something *good* happened? Probably not. The stereotype of a psychiatric hospital as a terrifying place where terrible things happen is so pervasive that it serves as a convenient, easy way to tell players to be afraid and to expect trouble.

Two-Dimensional representations can also be used as a tool to explain a character's behavior or backstory. In *Final Fantasy VI* (Square, 1994), Kefka, the game's villain, is motivated to destroy the world solely because he is "insane." Vaas Montenegro from *Far Cry 3* and Makarov from *Call of Duty: Modern Warfare* also are inclined toward extreme violence because of insanity. Their psychopathology is core to who they are but any attempt to dig deeper reveals a hollow shell of a character.

Not all Two-Dimensional representations portray negative stereotypes. For example, Sandal from the role-playing game *Dragon Age: Origins* (BioWare, 2009) appears to have a cognitive impairment rendering him nearly mute, and it is strongly implied that Symmetra from the team-based shooter *Overwatch* (Blizzard Entertainment, 2016) is on the autism spectrum (Kriss, 2016). These characteristics are important to each character's identity (Sandal) or personality (Symmetra) but are not explored, questioned, or discussed. It is critical that these kinds of neutral representations be included in assessments of mental illness representation; otherwise, researchers may overestimate the percentage of portrayals that are over the top or that propagate negative stereotypes. These representations also serve as a model for game developers on creating characters with mental illness symptoms in a neutral or nonstigmatizing way.

Three-Dimensional Representations

At the right end of the spectrum are Three-Dimensional representations of mental illness. These characters, narratives, and environments are more than just plot points or convenient backstory; they are essential and fully realized components. These representations have depth and dimensionality and examine the experience of mental illness from multiple perspectives. One prominent example of Three-Dimensional representations is *Hellblade: Senua's Sacrifice* (Ninja Theory, 2017). *Hellblade* features character, narrative, and environmental representations of mental illness and delivers a thoughtful and emotionally engaging story that explores the complexities of mental illness without stereotype or sugarcoating. *Hellblade* was developed in cooperation with mental health professionals as well as individuals who experienced voice-hearing or other psychosis-related symptoms.

Three-Dimensional representations do not need to be true to life in terms of narrative or design, but they do need to reflect authentic experiences. For example, *Neverending Nightmares* (Infinite Games, 2014) is a 2.5D psychological horror game with cartoon graphics with an almost entirely black-and-white color palette. Matt Gilgenbach, the game's creator, has been very open about his experience coping with major depressive disorder and obsessive-compulsive disorder and how he integrated those experiences into gameplay. *Neverending Nightmares* is not realistic in terms of graphic fidelity to the real world and the story is fictional, but the gameplay creates both cognitive and emotional experiences that are multidimensional, complex, and reflect the lived experience of the game's creator. *Night in the Woods* (Finji, 2017) is another example of how a game with a cartoon aesthetic can portray and convey the experience of mental illness in a way that respects the complexity of mental health and the everyday experiences of those who cope with mental illness, and it offers players an authentic experience while avoiding the flavor of mental health tourism.

Conclusion

The lack of research around psychopathology in video games is somewhat shocking considering how common mental illness is worldwide and how frequently it appears in games. Mental illness affects one in every five Americans (Mental Health America, 2018) and stigma is a major factor that inhibits help-seeking behaviors (Maier et al., 2014). Media representations of mental illness have been found to influence perceptions of the mentally ill, mental health professionals, and those who seek therapy, and they accurately predict how likely persons with a mental illness are to see themselves as broken or unacceptable (self-stigma; Maier et al., 2014). How mental illness is portrayed in games reflects how we, as a society, perceive the mentally ill. But since culture also takes cues from media, it is possible for games to change how society thinks about persons with mental illness, seeking treatment, and mental health professionals.

The video game psychopathology spectrum presented in this paper can be useful for game developers as it provides a system to critically evaluate mental health portrayals and proactively protect against shortchanging those portrayals when they arise in games. Avoiding the perpetuation of harmful tropes and stereotypes is a crucial part of breaking down mental health stigma. For researchers, the spectrum provides a solid foundation for collecting, sorting, and analyzing portrayals of mental illness in games. Going forward, future research can more accurately document the prevalence of mental illness in games and begin to dig deeply into specific types of representations and how they may impact players' thoughts or beliefs about mental illness, seeking treatment, or mental health professionals. More research on how games can reduce stigma against mental illness is encouraged using both serious games (e.g., Cangas et al., 2017; Ferrari, Bush, Clark, & Archie et al., 2016) and commercial games.

References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed). Arlington, VA: American Psychiatric Publishing.
- Barry, A. (2015, March 21). Mentally ill characters: Another kind of damsel-in-distress? *Not Your Momma's Gamer*. Retrieved from <http://www.nymgamer.com/?p=6925>
- Bethesda Game Studios. (2013). *The elder scrolls V: Skyrim* [Video game]. Bethesda Softworks.
- Bioware. (2009). *Dragon age: Origins* [Video game]. Electronic Arts.
- Blizzard Entertainment. (2016). *Overwatch* [Video game]. Blizzard Entertainment.
- Cangas, A. J., Navarro, N., Parra, J., Ojeda, J., Cangas, D., Piedra, J., & Gallego, J. (2017). Stigma-Stop: A serious game against the stigma toward mental health in educational settings. *Frontiers in Psychology*, 21. doi:10.3389/fpsyg.2017.01385
- Ferrari, M., Bush, N., Clark, D., & Archie, S. (2016). Debris: Exploring the video game values that can help reduce mental illness stigma. In *Proceedings of 1st International Joint Conference of DiGRA and FDG*. Retrieved from http://www.digra.org/wp-content/uploads/digital-library/paper_256.pdf
- Gearbox Software. (2009). *Borderlands* [Video game]. 2K Games.

- Hylar, S. (2003). Stigma continues in Hollywood. *Psychiatric Times*, 20(6).
- InfiniTap Games. (2014). *Neverending nightmares* [Video game]. InfiniTap Games.
- Infinite Fall/Secret Lab. (2017). *Night in the woods* [Video game]. Finji.
- Infinity Ward. (2007). *Call of duty 4: Modern warfare* [Video game]. Activision.
- Jenkins, H., & Cassell, J. (2008). From *Quake grrls* to *Desperate housewives*: A decade of gender and computer games. In Y. Kafai, C. Heeter, J. Denner, & J. Sun (Eds.), *Beyond Barbie and Mortal combat: New perspectives on gender and gaming* (pp. 1–19). Cambridge, MA: The MIT Press.
- Klein, H., & Shiffman, K. S. (2009). Underrepresentation and symbolic annihilation of socially disenfranchised groups (“out groups”) in animated cartoons. *The Howard Journal of Communication*, 20, 55–72. doi:10.1080/10646170802665208
- Kriss, A. (July 29, 2016). With Symmetra, Blizzard raises the bar on representing autism in games. *The Meta*. Retrieved from <https://themetakillscreen.com/overwatch-autism/>
- Layne, A. (2016, December 26). Incoherent worlds: Video games, madness, and subversion. *Not Your Momma’s Gamer*. Retrieved from <http://www.nymgamer.com/?p=15643>
- Lindsey, P. (2014, July 21). Gaming’s favorite villain is mental illness and this needs to stop. *Polygon*. Retrieved from <http://www.polygon.com/2014/7/21/5923095/mental-health-gaming-silent-hill>
- LKA. (2016). *Town of light* [Video game]. LKA.
- Lule, J. (2016). Cultural values shape media; media shapes cultural values. In *Understanding media and culture: An introduction to mass communication*. Minneapolis: University of Minnesota Library.
- Ma, X. (2017). How the media cover mental illness: A review. *Health Education*, 117(1), 90–109. doi:10.1108/HE-01-2016-004.
- Madigan, J. (Producer). (2015, November 16). *How do games differ from other media* [Audio podcast]. Retrieved from <http://www.psychologyofgames.com/2015/11/podcast-9-how-do-games-differ-from-other-media/>
- Mahr, I. (2013, July 26). Nobody wins when horror games stigmatize mental illness. *Kotaku*. Retrieved from <http://kotaku.com/nobody-wins-when-horror-games-stigmatize-mental-illness-912462538>
- Maier, J. A., Gentile, D. A., Vogel, D. L., & Kaplan, S. A. (2014). Media influences on self-stigma of seeking psychological services: The importance of media portrayals and person perception. *Psychology of Popular Media Culture*, 3(4), 239–256. doi:10.1037/a0034504
- Mental Health America. (2018). *The state of mental health in America*. Retrieved from <http://www.mentalhealthamerica.net/issues/state-mental-health-america>
- McGinty, E. E., Webster, D. W., & Barry, C. L. (2013). Effects of news media messages about mass

shootings on attitudes toward persons with serious mental illness and public support for gun control policies. *American Journal of Psychiatry*, 170(5), 494–501. doi:10.1176/appi.ajp.2013.13010014

Morris, G., & Forrest, R. (2013). Wham, sock, kapow! Can Batman defeat his biggest foe yet and combat mental health discrimination? An exploration of the video games industry and its potential for health promotion. *Journal of Psychiatric and Mental Health Nursing*, 20, 752–760

Ninja Theory. (2017). *Hellblade: Senua's sacrifice* [Video game]. Ninja Theory.

Nintendo. (2012). *Animal crossing: New leaf* [Video game]. Nintendo.

Nixon, S. (2013, September 12). They're mad, I tell you: Portrayal of mental illness in video games. *Not Your Momma's Gamer*. Retrieved from <http://www.nymgamer.com/?p=3557>

Pirkis, J., Blood, R. W., Francis, C., & McCallum, K. (2005). A review of the literature regarding fictional film and television portrayals of mental illness. Melbourne, Australia: University of Melbourne. Retrieved from http://www.mindframe-media.info/__data/assets/pdf_file/0006/7746/A-review-of-the-literature-regarding-film-and-television-drama-portrayals-of-mental-illness.pdf

Rocksteady Studios. (2009). *Batman: Arkham asylum* [Video game]. Eidos Interactive.

Salen, K., & Zimmerman, E. "The primary schemas: Rules, play and culture." In *Rules of play: Game design fundamentals*. Cambridge, MA: MIT Press.

Sarkeesian, A. (2013) Tropes vs. women in video games. *Feminist Frequency*. Retrieved from <https://feministfrequency.com/tag/tropes-vs-women-in-video-games/>

Shapiro, S., & Rotter, M. (2016), Graphic depictions: Portrayals of mental illness in video games. *Psychiatry and Behavioral Sciences*, 61(6). doi:10.1111/1556- 4029.13214

Shaw, A. (2014). *Gaming at the edge: Sexuality and gender at the margins of gamer culture*. Minneapolis: University of Minnesota Press.

Singorielli, N. (1989). The stigma of mental illness on television. *Journal of Broadcasting and Electronic Media*, 33(3), 325–331. doi:10.1080/08838158909364085

Smethurst, T., & Craps, S. (2015). Playing with trauma: Interreactivity, empathy, and complicity in *The walking dead* video game. *Games and Culture*, 10(3), 269–290. doi:10.1177/1555412014559306

Square. (1994). *Final fantasy VI* [PlayStation]. PlayStation.

Stout, P. A., Villegas, J., & Jennings, N. A. (2004). Images of mental illness in the media: Identifying gaps in the research. *Schizophrenia Bulletin*, 30, 543–561.

Stuart, H. (2006). Media portrayals of mental illness and its treatments—what effect does it have on people with mental illness? *CNS Drugs*, 20, 99–106.

Team Bondi. (2011). *L.A. noire* [Video game]. Rockstar Games.

Telltale Games. (2012). *The walking dead: Season one* [Video game]. Telltale Games.

Ubisoft Montreal. (2012). *Far cry 3* [Video game]. Ubisoft.

Wahl, O. F. (1995). Madness, madness everywhere. In *Media madness: Public images of mental illness* (pp. 1–13). New Brunswick, NJ: Rutgers University Press.

Williams, D., Martins, N., Consalvo, M., & Ivory, J. (2009). The virtual consensus: Representations of gender, race and age in video games. *New Media Society*, *11*(5), 815–834. doi:10.1177/1461444809105354

Zoë Quin. (2013). *Depression quest* [Video game]. Zoë Quin.