Playing with Perceptions: A Mixed-Methods Exploration of Video Game Player Responses to Video Games as Contemporary Mental Health De-Stigmatisation Tools.

A Study of the Video Game, *"Hellblade, Senua's Sacrifice"* (2017)

Luke Simeon McGibney Pierce

MSc Science and Health Communications MSHC1 2022/23

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A study submitted in part fulfilment of the requirement for the award of Masters in Science and Health Communications, Dublin City University.

September 2023.

Declaration by Researcher:

I hereby certify that this material, which I, Luke Simeon McGibney Pierce, now submit for assessment on the programme of study leading to the award of MSc. in Science and Health Communication is entirely my own work, that I have exercised reasonable care to ensure that this work is original, and that it does not, to the best of my knowledge, breach any law of copyright, and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of this work.

Signature: 

Print Name: Luke Simeon McGibney Pierce

Date: 03/09/2023

Abstract:

The rise in mental health issues, compounded by the COVID-19 pandemic, has necessitated novel approaches for both mitigation and de-stigmatisation. In light of the increased prominence of video games as immersive entertainment during the same period, this thesis examines the potential of video games to serve as tools for de-stigmatising mental health issues, with a specific focus on *Hellblade: Senua's Sacrifice* (Ninja Theory, 2017). Despite a growing body of research on game portrayals of mental health issues and their psychological effects on players, there have been no prior enquiries into the perspectives and opinions of players and their thoughts on how gamers and the wider public would receive such games.

This study addresses the gap by investigating the perceptions of a specific cohort—individuals with a strong interest or expertise in video gaming—recruited from university societies and Irish national gaming groups. Data was collected via an online survey and a subsequent playtest of Hellblade, followed by a semi-structured interview. The goal was to acquire insights into participants' responses to the portrayal of psychosis in Hellblade, their views on the role of video games in de-stigmatizing mental health, their beliefs on the reception of such games by gaming communities and the broader public, and their suggestions for enhancing video games as tools for mental health de-stigmatization.

The majority of participants, predominantly male-identifying gamers aged 18-34 with completed 3rd-level education, supported using video games for de-stigmatisation, highlighting the importance of authenticity, player autonomy, and the continued inclusion of diverse perspectives regarding mental health issues during development. However, participants also noted potential pitfalls, such as over-sensationalising mental health issues and the complexity and cost of current gaming technology as barriers to widespread adoption. Participants suggested leveraging more popular forms of entertainment such as online videos, live-streaming by online influencers, and incorporating alternative forms of media concurrently with video games to reach a broader, non-gaming audience.

Despite its limitations, this study provides a foundational understanding of the opinions and requirements of gamers for developing effective de-stigmatising video games. It suggests avenues for future research, including creating an open-source 'Conceptual Framework' database for sharing best practices in de-stigmatizing game development, exploring the

efficacy of more approachable media in de-stigmatizing mental health, and developing cohort-specific de-stigmatizing programmes. Overall, this study underscores the growing potential of video games as de-stigmatizing tools and the need for further research and investment to optimise their effectiveness and broaden their reach.

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List of Abbreviations:

DCU: Dublin City University

UCC: University College Cork

MTU: Munster Technological University

UG: University of Galway (Previously National University of Ireland Galway, 'NUIG')

TCD: Trinity College Dublin

STEM: Science, Technology, Engineering, and Mathematics

VR: Virtual Reality

AR: Augmented Reality

(MMO)RPG: (Massively Multiplayer Online) Role-Playing Game

FPS: First-Person Shooter

UI: User Interface

UX: User Experience

HUD: Heads-Up Display

WHO: World Health Organization

APA: American Psychological Association

DSM: Diagnostic and Statistical Manual of Mental Disorders

ICD: International Classification of Diseases

MHI: Mental Health Issue

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Acknowledgments:

I am deeply grateful for the support and guidance of several individuals, all who were instrumental in helping me complete this dissertation.

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This project would not have been possible without the willing contributions of those that partook in the online survey and playtest interviews. By sharing your thoughts and experiences. You have not only enriched the quality of this research but also contributed to the broader understanding of how video games can serve as tools for de-stigmatising mental health issues. Thank you for your time and for being an integral part of this journey.

To everyone mentioned, my course coordinator Dr Padraig Murphy, my many lecturers, along with the countless others who have contributed in myriad ways, I extend my sincerest thanks. Your collective insight and support have made this journey more than just a possibility, but also a rewarding and enlightening experience.

Thank you.

Declaration of Ethical Approval

Dear MSHC student,

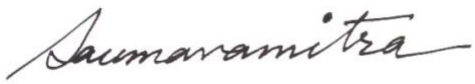
After review of your ethics application by the SoC staff supervising your research activity and the School Ethics convenor, the application made by you has been approved.

Should substantial modifications to the research protocol be required at a later stage, a further amendment submission should be made to the School Ethics Convenor, in advance of proceeding with the revised protocol.

The School of Communications (SoC) has the delegated authority from the Dublin City University Research Ethics Committee to review and approve research activity by undergraduate and taught Masters students in part completion of their module learning outcomes.

Any queries related to the ethical protocol followed during this activity may be directed to the School Ethics Convenor at the email address: saumava.mitra@dcu.ie

Sincerely,



Dr. Saumava Mitra

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Chapter 1: Introduction/Conceptualisation

"…accurate representation within media entertainment of all forms is one of the most powerful tools…as a means to shape the public's view of a certain idea."

- Connor "Spice8Rack" Macleod (2019)

1. Background and Significance of the Study:

Since even before the turn of the millennium, and particularly during the recent Covid-19 pandemic, the video game industry has undergone an expansive evolution (Piralova et al., 2020). This has allowed such media to penetrate a wide demographic spectrum and helped video games to become another influential facet of the global entertainment ecosystem. Having shifted from the relatively solitary arcade cabinet experiences of the 1980s, typified by titles such as *Space Invaders (1978), Tetris (1988)*, and *Street Fighter(1987)*, to the increased social and interconnected online experiences of today through home consoles and PCs, video games have fundamentally reshaped the landscape of interactive entertainment (Wolf, 2007; Prato et al., 2014).

With such an extensive variety of genres and modes of play, video games now range from deeply narrative single-player journeys, such as *God of War(2018)* and *The Last of Us (2013)*, to sprawling world of online multiplayer experiences found in the likes of *World of Warcraft (2004), Fortnite Battle Royale (2018),* and *Call of Duty: Modern Warfare II (2022)*. Consequently, the video game industry now commands an audience of over three billion individuals worldwide, thus positioning itself as a formidable player in the global entertainment market, rivalling other long-established forms of consumable media such as Film and Television (Zackariasson and Wilson, 2010) For some, video games have even come to replace the consumption of these other forms entirely (Bogost, 2010)

However, where video games critically differ from such media is in their greater potential for enhanced audience engagement (Abbasi et al., 2017). This is primarily achieved through interactive gameplay and player control of characters and environments within the game itself. This 'playing' of the game is thought to promote a deeper connection with game content, and so this comparatively strong interactive nature has been theorised and assessed to serve as a powerful tool to introduce audiences to new concepts and perspectives, including those related to real-world, human challenges (Hefner et al., 2007; Anable, 2018)

Among such is the experience of psychological and mental health issues, standing as a critical matter due to its profound societal impact (Aneshensel, 2015). Despite its importance, the experience of decreased or poor mental health is still often stigmatized and misunderstood, further complicating the journey for those personally affected, both at home (Lakeman et al., 2012; O'Keeffe et al., 2016) and abroad (Friedman, 2014; Ran et al., 2023). Such consequences include a decreased desire to discuss such experiences with others and seek further information or professional assistance. It is here where the potential of video games shines: through portraying mental health issues in a purposeful and accurate way, video games could then act as indirect tools of support, raising awareness and helping to dismantle associated stigmas(Cangas et al., 2017; Ferchaud et al., 2020). Such understanding or familiarity from the broader public could then contribute to a more supportive environment for those facing mental health challenges, helping to alleviate this burden, and encouraging the seeking of professional assistance (Corrigan and Nieweglowski, 2019).

The importance of addressing mental health issues has been thrown into incredibly sharp relief in the wake of the Covid-19 pandemic, which has exacerbated such challenges for many through numerous lockdown and self-isolation measures (Kumar and Nayar, 2021; O'Sullivan et al., 2021; O'Connor et al., 2021). Coinciding with this, the gaming industry has experienced significant growth, both in terms of its audience numbers and its influence (Şener et al, 2021). Therein, lies an intriguing opportunity: to harness the power of this booming industry's product, video games, to address mental health stigma by leveraging the unique interactivity and engagement offered by video games. It's this intersection between engaging video games and mental health awareness that this study aims to further explore as a conceptual framework.

1.2 Prior Research Context and Rationale:

This project intends to build from existing research that has examined the influence of video games on their audiences, audience interpretations of such media, the representation of societal groups within these games, and the viability of video games as applied tools for education and raising awareness. A key text in this area is Ferchaud et al. (2020). This study sought to examine the action adventure, fantasy video game, *Hellblade, Senua's Sacrifice*, developed by Ninja Theory (2017), and evaluate its efficacy in reducing public stigma towards sufferers of psychosis and mental health issues – a De-Stigmatising Tool.

Building upon this foundation, and by focusing on video gamers (Shaw, 2012; Jimenez et al., 2019), this study aims to reveal a unique, insider perspective on how this specific demographic perceives and engages with video games as potential mental health de-stigmatising tools. This decision to focus on gamers as the study sample group was multifaceted. Gamers, as the conduits of the phenomena in question, represent the 'first line' audience for most, if not all, video games (Crawford, 2011; Jimenez et al., 2019). Thus, such groups could potentially hold valuable insights from their extensive interaction with the medium. Their understanding of gaming conventions, mechanics, and narrative devices can give them an expertise that provides a richer and more nuanced response to the game's portrayal of mental health.

Additionally, focusing on gamers brings about practical benefits in terms of executing the playtest portion of this study. Gamers are generally more comfortable with navigating and understanding game controls, mechanics, and narratives (McEwan et al., 2012).. Their experience reduces the need for extensive familiarisation processes, streamlining the playtest process, and thereby enhancing the feasibility of the project.

Although focusing on gamers restricts the scope to this specific population, it does not fully dismiss the potential for wider applicability. Gamers' responses and perceptions have the potential to serve as a basis for estimating the potential, subsequent impact on the broader public. However, the researcher does consider that gamers' deeper engagement with video games might lead to different reactions compared to non-gamers.

1.3 Project Purpose:

The primary purpose of this project is to evaluate how players perceive the video game *Hellblade: Senua's Sacrifice* as a tool for de-stigmatizing mental health. This video game has garnered widespread acclaim for its authentic development approach and its nuanced representation of psychosis, potentially raising mental health awareness (Fordham and Ball, 2019; Austin, 2021). This project can be seen as a form of companion study to likes of Ferchaud et al (2020). Their psychology-based approach of exploring player reactions to the depiction of psychosis complements the social-science approach of this study. Here, focus has been placed on video gamers and their acute response to the experience of the game, through a playtest session, in a similar fashion to the procedure in Ferchaud et al (2020). However, this project adds a series of semi-structured interviews to capture participant insights. Intended assessments included participant attitudes towards the game experience itself, its portrayal of mental health struggles (using psychosis by proxy), the development and effectiveness of mental health destigmatising games, along with how such games would likely be perceived by both gaming communities and wider public. This is completed in combination with an online survey for acquiring demographic data and participant recruitment.

1.4 Hypothesis and Research Questions:[1]

Thesis Hypothesis:

The use of video games, purposefully constructed as mental health de-stigmatising tools, would be supported by video game players.

Main Research Question (RQ):

What are self-identified gamers' perceptions of *Hellblade: Senua's Sacrifice* as a tool for mental health de-stigmatization?

This question can be divided into the following sub RQs:

Sub RQ1: How do participants respond to the portrayal of psychosis in *Hellblade: Senua's Sacrifice*?

Sub RQ2: How do participants view the role of video games in destigmatizing of mental health?

Sub RQ3: How do participants, acting as expert commentators, believe gaming communities and the broader public would receive video games aimed at de-stigmatizing mental health?

Sub RQ4: What suggestions do participants have for enhancing video games as tools for mental health de-stigmatization?

[1] Additionally, this project has been developed as a form of a proof-of-concept study, assessing how best to engage with video game players, or "gamers", for future research exploring video game communities and the development of other various de-stigmatising tools.

1.5 Positioning of Researcher and Prior Inspiration:

As articulated by Clonan (2017), the concept of positionality infers articulating one's own identity and origins, signifying how one's worldview, or rather the lens through which one interprets reality, shapes the way in which research is conducted (Thomas, 2009) Hence, the researcher's engagement in this study—what, why and how they approach such research—is greatly influenced by their personal worldview. This set of fundamental beliefs serves as a navigational beacon for the actions and direction taken in shaping this project (Creswell, 2009)

Prior to commencing this MSc in Science and Health Communication, the previous academic background of the researcher was in human physiology, with a long-standing personal interest in video games and gaming culture. The aim of the researcher is to bring a fresh viewpoint to the academic discussion of using video games for purposes beyond mere entertainment. This focus arises from a recognition of the value of diverse perspectives, particularly those of the audiences or users of a specific medium—in this case, self-identified gamers. These efforts are underpinned by awareness of the significance of mental health issues, along with the unique potential role that video games could play in addressing these societal concerns.

The earliest inspiration for pursuing research on the influence of video games came from Shalvey's (2016) comparative thesis on the depiction of STEM (Science, Technology, Engineering and Mathematics) in the series, *Portal(2007)* and *Half-Life (1998)*. This Shalvey highlights the unique ability of video games to leave impressions on players. Subsequently, Ferchaud et al (2020), amongst other works, shone a light on further research possibilities regarding the depiction of mental health issues in video games and the beneficial applications for raising public awareness.

Notably, this will also be the researcher's first major step into the world of social science, moving from a natural, biological science perspective. Therefore, this project also has the role of allowing the researcher to experiment in approach and methodology within this new field.

The researcher will also proactively assess prior literature on similar topics but from a multi-disciplinary scope to gain a greater holistic understanding as the bedrock for this project. . Additionally, by acknowledging the inherent bias that can arise from prior positioning, particularly personal interest in the topic, measures have been implemented to ensure the research remains objective, including in-depth validation of findings within existing literature and the deployment of neutral questioning techniques in the interviews, as elaborated on in Chapter 3.

1.6 Key Concepts and Terms, Defined:

Table 1.1: Glossary of Core Concepts and Terminology Utilized in This Study

Number	Concept/ Term Used	Definition & Adopted Source (Citation)
1.6.1	Video Game	An electronic, interactive medium that utilizes visual imagery and sound to create immersive experiences, where players engage with designed challenges to progress through the game (Chandler and Munday, 2011).
1.6.2	Gamer	An individual who actively engages in playing video games, often as a recreational activity (Hamari et al., 2014)
1.6.3	Self-Identified Gamer	An individual who identifies themselves as a gamer based on their own perception and engagement with video games(Kowert and Oldmeadow, 2015)
1.6.4	Mental Health Issue	A clinically significant disturbance in an individual's cognitive, emotional, or behavioural functioning (APA, 2013)
1.6.5	Psychosis	A descriptive term, referring to a loss of contact with objective reality, with two primary symptom characteristics: Hallucinations and Delusions (Fletcher, 2018)
1.6.6	Stigma	Social action with two main characteristics: a sense of (negative) stereotype towards others and a desire to be socially distant (Ferchaud et al., 2020)
1.6.7	De-Stigmatisation	Action by which to reduce the level of stigma in a population to a topic or group by means of raising awareness of said topic or group (Ferchaud et al., 2020)

1.6.8	Playtest	A structured session in which a group of individuals test a video game to provide feedback (Mirza-Babaei et al, 2014)
1.6.9	Serious Video Game	A video game designed with the intention of imparting knowledge, teaching skills, or promoting behavioural change in players (Lieberman, 2001)
1.6.10	Commercially Viable Video Game	A video game that has the potential to generate sufficient revenue and profit to sustain its development and distribution (Taylor., 2009)
1.6.11	Depiction//Portrayal	The representation of characters, situations, or concepts within a medium, often with the intention of conveying a particular message or perspective (Hall, 1997)
1.6.12	Triple A/ 'AAA' Video Game	A high-budget, high-production-value video game typically developed by a large studio, often featuring advanced graphics, gameplay mechanics, and marketing campaigns (Consalvo and Dutton, 2006)
1.6.13	Indie Video Game	An independent video game, often developed by a small team or individual outside of a major game studio. These games often prioritize creativity, unique gameplay mechanics, and artistic expression (Schrier, 2016)
1.6.14	Gamification	The application of game design elements and principles in non-game contexts to engage users, encourage desired behaviours, and enhance their experience. (Deterding et al., 2011)
1.6.15	Ludo Narrative	The interplay between gameplay and narrative in video games, where the mechanics of the game are integrated with the storytelling to create a unique player experience (Toh, 2015)

1.7 Scope and Initial Limitations of this Study:

This study intends to explore a specific intersection of gaming culture and mental health awareness through the lens of players, having played the video game, *Hellblade: Senua's Sacrifice*, and their corresponding acute responses, as self-identified "gamers". The choice of this video game was deliberate due to the game's prior analyses for its representation accuracy and potential effectiveness as a mental health de-stigmatisation tool. The game also represents a unique case study. It merges the high-quality graphics, narrative, and gameplay commonly found Commercially Viable, Triple-A Games, with a focused, good-faith exploration of experiencing mental health issues, specifically psychosis, that is more prevalent in Serious Video Games (Ninja Theory, 2017). This study, therefore, hopes to offer a unique opportunity to examine gamers' responses to mental health portrayals within an immersive, narrative-driven experience.

Notwithstanding, a few limitations should be acknowledged at this stage of the paper:

Single-Game Focus: The study's focus on a single game inherently limits its scope. Video games are a diverse medium, with myriad genres, narrative structures, and gameplay mechanics available. Therefore, findings from this study may not be entirely applicable to other video games, especially those of different genres or those that handle mental health topics in a dissimilar manner.

(Self-Selected) Participant Acquisition: The strategy employed for acquiring participants for both the online survey and in-person playtests and interviews was a form of targeted, snowball sampling (Johnson, 2014). Secure links to the survey were sent out to university societies related to video games and organisations related to video game development. Those who were interested to participate in this study were largely self-identified gamers, particularly those who volunteered for a playtest and interview. This may skew the participant pool towards individuals already interested in the research topic, or those with more positive views on video games, in general and as de-stigmatisation tools, potentially biasing the results.

Sample Size: Due to resource constraints and the intensive nature of individual playtests and interviews, the sample size for this stage is relatively small. As a result, the findings may not be representative of the wider gamer population.

Mental Health Focus: While the scope of this study is to explore the potential of video games as tools to de-stigmatise mental health issues, it should be acknowledged that the approach and findings may not fully apply to other stigmatised conditions or social issues.

Researcher's Inexperience: A further limitation lies in the researcher's relative inexperience with qualitative data collection and analysis. However, introductory papers and case studies, such as Becker (2009) and Lester et al. (2020) have been consulted to help mitigate this issue.

Despite these limitations, the goal of this project is still to provide novel, valuable insights into gamers' views on mental health representation in video games and the unique potential of the medium to reduce public stigma. This project also serves as an initial exploration of this intricate area, with the aim to inform future, larger-scale research in this area.

1.8 Thesis Paper Layout:

The remainder of this thesis is organized into the following five chapters,

Chapter 2: *Literature Review*
This combines explorations into existing academic literature pertinent to video games, mental health, and its de-stigmatization into a comprehensive viewpoint. Additionally, it aims to identify gaps in the current body of research that this study seeks to address, serving as both the theoretical and empirical beachhead from which the project can then expand.

Chapter 3: *Project Design*
This lays out the methodology of the project in detail, providing the sequential implementation of the online survey and the in-person playtest and interviews. It elaborates on how each applied method allows for data collection and analysis, all while justifying their suitability for this project.

Chapter 4: *Project Findings*
This presents the project results, organised by method stage and key themes.

Chapter 5: *Project Discussion*
The findings from the previous chapter are discussed in depth here. This includes interpretations, implications for existing theories and practice, and the study's contributions to the combination of gaming and mental health.

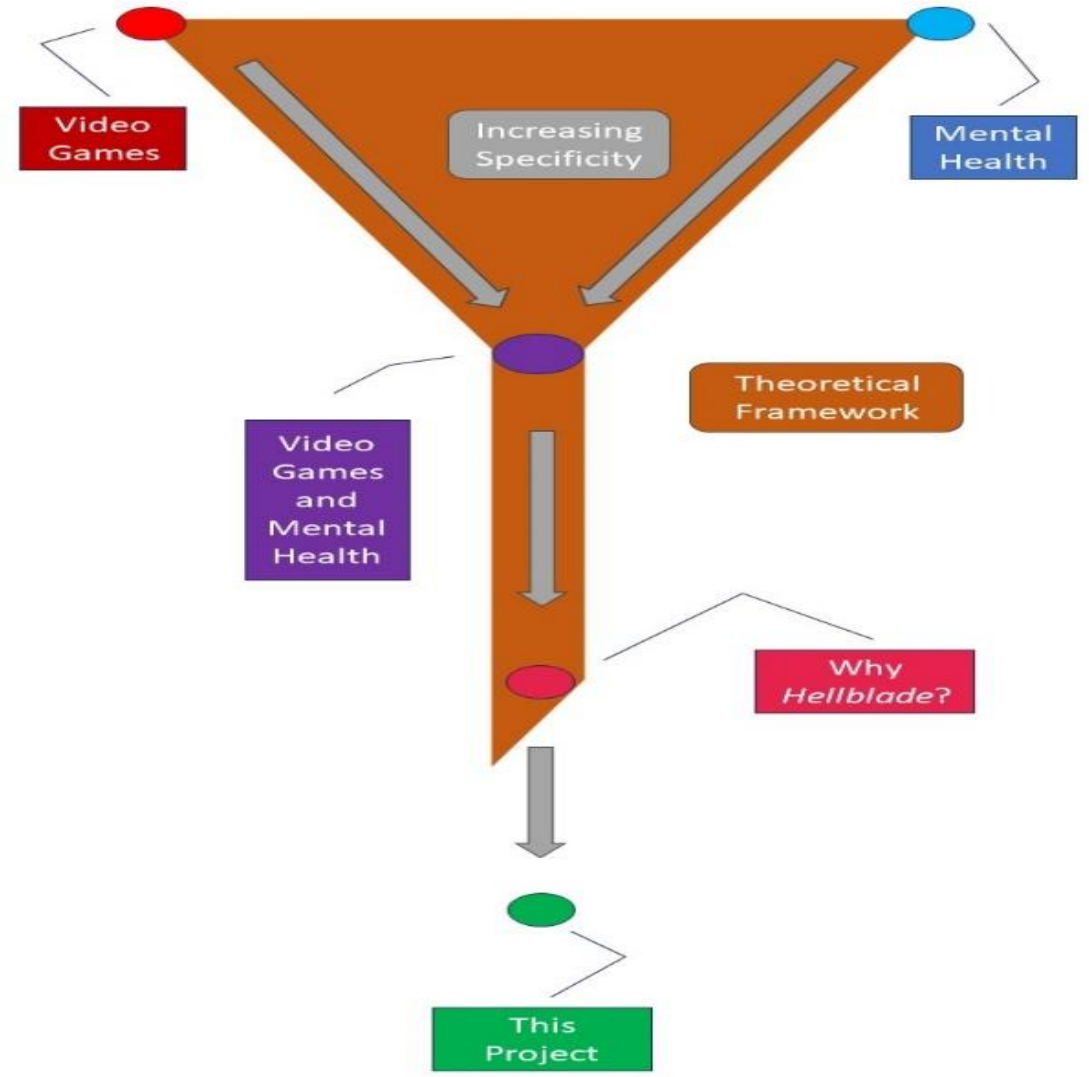
Chapter 6: *Conclusions and Future Directions*
This concluding chapter synthesizes the key insights from the study, answering the research questions and discussing the broader implications. Recommendations for future research in this area are also offered, along with a reflection on the limitations of the study and avenues for improvement.

Chapter 2: Literature Review

2.1 Review Introduction: Explaining the Research 'Funnel'

As outlined by Denney and Tewksbury (2013), the simplest role of a literature review is to act as a project's backbone. This is interpreted by the researcher as developing a beachhead within the existing scholarly landscape from which the project can expand and add to the shared knowledge. In the early stages of this project, the 'Funnel Technique' outlined in Rosala and Moran's (2022) research guide was found to be particularly compelling. This approach has been adapted and utilized to shape the structure of this literature review as illustrated in Figure 2.1 below.

Figure 2.1: Literature Review Funnel Structure



The review begins with a broad exploration of overarching theories that are relevant to both prior research and the current project [2.2]. These foundational, longstanding theories provide the structural integrity of the metaphorical funnel, offering cohesion and rigor to the study at hand.

At the upper rim of the funnel, two equally critical domains are discussed. The first focuses on the societal role(s) of video games, examining their evolution from pure entertainment to potential educational and therapeutic tools **[2.3].** This contextualises the study's subject matter, i.e., videogames as a tool. The second domain discusses the societal landscape of mental health, particularly its stigma and corresponding implications **[2.4].** Both domains are crucial for establishing the groundwork for the study's focus on using video games as tools for mental health de-stigmatization.

As the funnel narrows, the focus shifts to an examination of the intersection between video games and mental health **[2.5].** This section evaluates the consensus, or arguably lack thereof, surrounding the relationship between video games and mental health, both positively and negatively. At the funnel's penultimate segment, attention is concentrated on *Hellblade: Senua's Sacrifice (2017)* **[2.6].** Existing studies on this game are reviewed, offering the most immediate linkage between the literature and this project.

The chapter culminates in a summary highlighting the significant findings, themes, and existing gaps in the literature **[2.7].** The review aims to underscore the study's relevance and potential contribution to the ongoing scholarly dialogue on using video games to de-stigmatize mental health issues. This structured, funnel-based approach aims to guide the reader through a series of progressively focused topics, thereby enhancing the clarity and utility of the review.

This review was compiled using Google Scholar, PubMed and Nexus Lexus search engines using the following initial keywords.

“Video Games” ; “Game Development” ; “Game Industry” ; “Mental Health” ; “Psychosis” ; “Stigma” ; “ *Hellblade: Senua's Sacrifice*” ; “Gamers” ; “Media Depictions” “ Audience Reception” ; “Mixed Methods” ; “Qualitative”

Additionally, Boolean operators such as "AND" "OR" and "NOT" were also employed to refine the search. For example, "Video Games" AND "Mental Health" were used together to find articles at this intersection.

2.2 Theoretical Frameworks of Project

2.2.1 Section Overview

The aim of this section is to outline how this project aligns with existing, longstanding theories that explore the reciprocal relationship between media (i.e., video games) and their audiences (i.e., players). Such overarching theories form what is known as this projects' 'theoretical framework'. This is succinctly described by Adeoye-Olatunde and Onlenik (2021). In their review of interview-based research practices, this framework acts as a 'theory influencing study' approach, seeking to answer, "how does this theory shape the study?" (pg. 5).

For this project, such frameworks are shaped from four main media-audience theories. When these are combined, they provide a more nuanced understanding of both the influences of media on audiences, but also the ways by which audiences are compelled to engage with such media.

2.2.2 Media Influences on Audiences

Below are two theories that focus on the effects that media have on audiences.

Firstly, 'Medium Theory,' originating in the 1960s, posits that the medium itself shapes the message and the user's experience (Meyrowitz, 1986; McLuhan, 2017). Given their interactive nature, video games are seen to offer a more engaging experience than other forms of consumable media, e.g. Television, Films, thereby potentially altering audience perceptions to a deeper degree (Smuts, 2009; Landay, 2023).

There is also 'Cultivation Theory' which argues that long-term exposure to media influences social perceptions (Gerbner, 1998). This concept can be extended to video games, developed further into suggesting that nuanced portrayals of mental health could help reduce public stigma (Gabriel et al., 2012; Lai et al., 2015; Anderson, 2020).

2.2.3 Audience Engagement with Media

The remaining theories focus on the audience's agency in media consumption.

The 'Uses and Gratification' theory emphasizes that audiences actively seek media for their individual, specific needs, or desires (Ruggiero, 2000). When applied to video games, understanding why players engage with games can inform their utility as destigmatizing tools (Sherry et al., 2012; Kerr et al., 2006).

Finally, there is 'Reception Theory' which considers how the cultural and social contexts that audiences find themselves in can influence the interpretation of media messages (Martin, 2007; Shaw, 2017). This 'Encoding/Decoding' model, first posited by Stuart Hall, underscores that interpretations may differ, a point highlighted by varying online reviews (Hall, 2007)

2.2.4 Section Summary

Overall, these theories provide a comprehensive framework for exploring the intricate interplay between video games and their player audiences (Figure: 2.2). They function as guiding principles for this study, shedding light on the multifaceted potential of video games as tools for de-stigmatizing mental health issues. Upcoming sections **[2.3]** and **[2.4]** will focus on the specialized research in the areas of video games and mental health, respectively.

Figure 2.2: Thesis Media//Audience Theoretical Framework

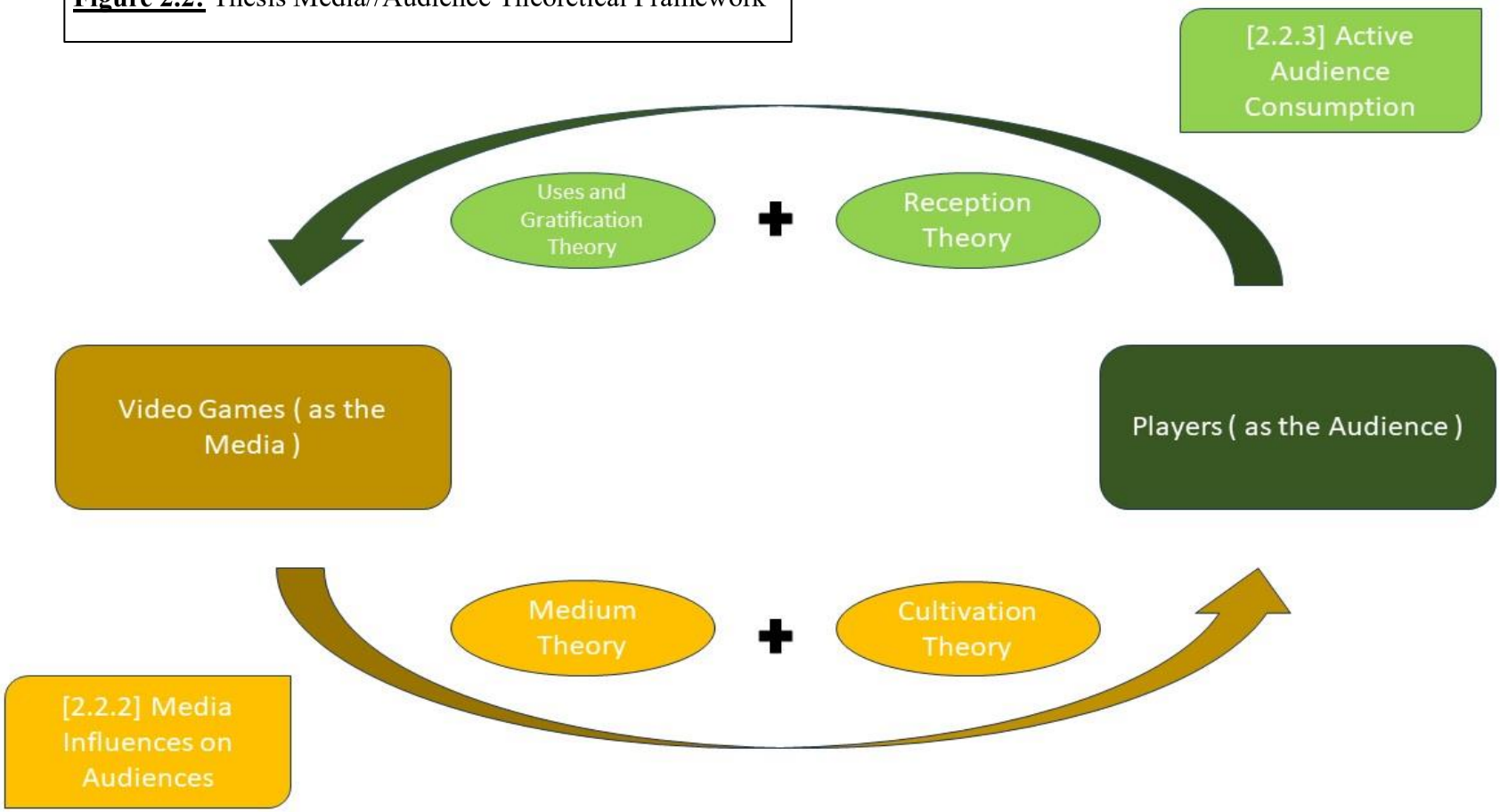


Figure 2.2: This diagram illustrates the longstanding theories that seek to elaborate the reciprocal relationship between media and audiences.
[2.2.2] Theories on Media Influences on Audiences
[2.2.3] Theories on Active Media Consumption by Audiences

2.3 Contextualising Video Games: Evolution, Impact, and Application

2.3.1 Section Overview

The goal of this section is to venture into the realm of video games, casting a light on previous studies along three main streams: the contemporary state and development of the industry, influences on players, and educational applications. This exploration aims to establish an understanding of video games in their broader context before transitioning to the next focal point – mental health [2.4] . This groundwork will facilitate more nuanced discussions in subsequent sections regarding the combination of mental health with games [2.5 – 2.7]

2.3.2 Video Games and the Industry

Defining a video game is more complex than it may initially appear, a nuance acknowledged by both Wolf (2007) and Tavinor (2008). Rather than being simply a technological entertainment system confined to a computer or console, the definition is continually evolving due to the multifaceted nature of video games. Wolf elucidates the intricacies involved, noting that the term's boundaries remain "blurred as ever as new software and hardware continue to appear" (Wolf, 2007, p. 7). Tavinor echoes this sentiment, suggesting that any all-encompassing definition inevitably imposes constraints that reflect inherent biases.

Given the scope of this MSc thesis, particularly its focus on interactivity and exploring player experiences of multi-platform game, *Hellblade: Senua's Sacrifice*, the following operational definition has been adopted:

"A video game is an electronic, interactive medium that utilizes visual imagery and sound to create immersive experiences, where players engage with designed challenges to progress through the game." (Chandler and Munday, 2011).

This complexity is further underscored by the dramatic fluctuations in popularity and diversity of video games over the years. After enduring market crashes in 1977 and 1983, as noted by Ernkvist (2008), the industry faced significant challenges, including a decline in innovation, eroded consumer confidence, and a staggering drop in market value to just $100 million (Ernkvist, 2008, p. 186). Despite these setbacks, the industry has remarkably rebounded to become a persistent global media market on its own. In the span of four decades, it has not only regained consumer trust but has also expanded exponentially in popularity. As of 2020, the global user population has exceeded 3 billion DFC Intelligence, 2020). Moreover, its market capitalisation has also skyrocketed to over $1.3 billion USD (Baltezarević et al, 2018).

The gaming landscape, particularly the numbers and kinds of games, has evolved significantly over the years. Initially limited to stand-alone arcade cabinets in the 1970s and '80s (Guins, 2015; Gao et al., 2022), the gaming sector then transitioned with the introduction of home-based entertainment as a result of the increase adoption of computers and consoles (Murdock et al., 2014; Redhead Ahm, 2021). Systems such as the *Atari 2600* (1977) and later the *Nintendo Entertainment System* (1983) and *Sega Genesis/ Mega Drive* (1988) revolutionized the gaming experience by offering players expansive game libraries for at-home play (Williams, 2002; Zackariasson and Wilson, 2010; Palomba, 2016).

Continuous technological advancements, coupled with the rise of the internet (Sonmez and Çakir, 2021) has ushered in a new era for video games: online connectivity. Online gaming provides a platform for players to compete or cooperate with each other, even from different geographical locations (Walther and Sorhammar, 2021; Chan et al., 2022). This has brought about a new age of social interaction and competition, transforming the process of gaming into a dynamic and continuously evolving form of entertainment. Today's gaming experience is now more immersive and connected than ever, with opportunities for cross-platform play (Jurgelionis et al, 2010), live-streaming (Johnson and Woodcock, 2019) and eSports (Cranmer et al., 2021). Notwithstanding these leaps and bounds in technological development, the gaming industry still fosters further innovation, shaping the future markets of both technology and entertainment (Zackariasson and Wilson, 2012; Dale and Green, 2017).

Further development has stemmed from the recent, and arguably still ongoing, COVID-19 pandemic, which has markedly accelerated the growth of the video game industry (Ortiz et al., 2020; Sener et al., 2021). As people worldwide grappled with lockdowns and social distancing, video games emerged as both a popular entertainment outlet and a means of maintaining social connections (Barr and Copeland-Stewart, 2022). This has led to a global spike in sales and player engagement (Chen, 2022). Furthermore, the period witnessed a diversification in both the player base and the genres enjoyed, emphasising the industry's adaptability to meet varied tastes during times of social isolation (Wannigamage et al., 2020). Thus, the pandemic has not only boosted the industry's market value but also underscored its social significance as a vital conduit for human connection in an increasingly distanced world.

Video games also exhibit a stark contrast to other, older forms of mass consumable media such as film and television. Where the latter two primarily involve audiences consuming a fixed narrative from a 3rd party perspective (Gripsrud and Lavik, 2008), video games often require audiences to engage directly in shaping the experience through gameplay and narrative choice, thereby offering a unique, immersive adventure (Eliashber et al., 2016; Payne and Huntemann, 2019) . This level of agency is thought of to bring deeper emotional and cognitive engagement with the content. However, this requirement to know how to play a specific video game and how accessible the controls are can act as thresholds that not all members of the public would be able or willing to cross (Yuan et al., 2011; Robson and Meskin, 2019; Anderson and Schrier 2022). This contrasts the more widely accessible and passive film or TV experience (Meers, 2001; Ellcessor, 2012). This distinction also translates to media studies. As emphasised by Dunlap and Kowert (2022), video game research has largely borrowed elements and techniques from studies concerned with more traditional media. However, since video games are more complex, more than just experiencing a narrative, but actively engaging with the media, games thereby necessitate a greater multidimensional approach that considers interactivity, player agency, and the unique interactive dynamics that shape player experiences.

Industry-wise, video games are viewed as rivalling or even surpassing film and television in terms of market value and audience reach. The boundaries between these industries are also porous (Picard and Fandango, 2008). Well-established video game franchises, such as

Resident Evil (1996), have been made into (in)famous films (2002) and a Netflix series (2022). Additionally, tie-in video games of the latest silver and small-screen releases have been commonplace (Picard and Fandango, 2008; Karam and Kirby-Hirst, 2011). While all three industries have seen growth due to advancements in technology and distribution platforms, the video game industry appears to have uniquely capitalised on the demand for interactive, social, and adaptive product experience.

Contemporary games are largely divided into two categories; Triple A / 'AAA' and Indie / 'Independently Developed' games. Triple-A games represent the higher end of the industry (Ivanov et al., 2021; Keogh, 2023). These are produced by large, often multinational, studios, such as Activision-Blizzard, Square Enix and Nintendo (Karthikeyan, 2021). With budgets often soaring into the millions, these games boast cutting-edge graphics, immersive sound, and sophisticated gameplay, frequently pushing technological boundaries (Keogh, 2023). Recent examples include *Grand Theft Auto: V* (2013), *FIFA 23* (2022) and *Halo: Infinite* (2021). Usually targeting mass appeal, they are backed by aggressive marketing strategies, ensuring high sales volumes to eclipse staked investments (Ivanov et al., 2021).

In contrast, Indie Games are usually crafted by smaller teams or even solo developers (Simon, 2013). While such games may not have the lavish budgets that afford polished graphics or expansive gameplay, their modest scale often yields greater creative latitude (Lipkin, 2013; Ruffino, 2023). This leads to games that can be artistically innovative or cater to niche interests. Standouts like *Minecraft* (2012) and *Among Us* (2018) have achieved both critical acclaim and commercial success, the former even becoming a cultural phenomenon (Frago, 2023). Unlike their Triple-A counterparts, indie games often target niche audiences rather than the mainstream population at first. The advent of digital distribution platforms like *STEAM* (Valve, 2003) has been a game-changer for indie developers, enabling wide distribution without the need for a major publisher (Lin et al., 2018).

However, there are games that defy this clear-cut classification, borrowing attributes from both Triple-A and Indie realms. *Hellblade: Senua's Sacrifice* is a compelling example. Developed by Ninja Theory (2017), the game is branded as an "independent AAA" title (Antoniades, 2014), and was produced by a lean team of around twenty. Despite its relatively

modest scale, the game achieved remarkable success, selling over a million copies within its first year of release (Campbell, 2018).

Tied to this commercial growth of the video game industry has been a greater degree of democratisation within the development process (McAllister and White, 2015; Freeman et al., 2020). Common, user-friendly software engines, including Unity (2005) and Unreal (1998), have lowered the entry barriers for aspiring creators (Lee et al., 2019). This has cultivated a rich subculture of independent game development, epitomised by events such as 'Game Jams' (Borg et al., 2019; Contreras-Espinosa and Eguia-Gomez, 2022). These are collaborative, often time-constrained gatherings where developers create small games around a given theme (Meriläinen et al., 2020). A notable Irish example is the Galway Game Jam, which is celebrating its tenth anniversary, offering a creative playground for emerging talents (GGJ, 2023). This has not only expanded the industry's creative pool but also made game development more accessible to academics and hobbyists.

Overall, this dynamic nature and swift growth of the gaming industry highlights the widespread popularity of video games, and their potential to shape society further Competing with the giants of Hollywood, the gaming industry's ongoing expansion, diverse offerings, and growing accessibility for amateurs and independent developers illustrates its adaptability and ingenuity. As this medium keeps evolving and engaging audiences worldwide, it's vital for academia to keep pace, providing timely insights into its societal role and future applications beyond entertainment.

2.3.3 Game Influence on Players

The dramatic rise in the popularity of video games has understandably garnered increasing scholarly attention, particularly from the domains of psychology and public health (Halbrook et al., 2019; Altintas et al., 2019). Despite this plethora of research, a clear consensus regarding the net impact of video games on players remains elusive. Opinions span from early alarmist viewpoints, rooted in the parental and societal fears about the influence of new technology on young minds (Squire, 2002; Middaugh, 2011), to more recent nuanced perspectives that emphasize the role of player choice and the specific contexts within which games are played (Fernandez, 2021). This nuanced discourse holds relevance for social science research, such as this project, that aim to leverage video games as a means to address stigmatizing perspectives on complex issues such as mental health.

The research landscape on this subject offers two main viewpoints: Instrumentalist and Deterministic. The majority of recent research inclines toward an instrumentalist perspective, positing that video games are neutral tools whose positive or negative effects largely depend on the nature of player interaction (Fernandez, 2021). This stance allows for a complex, multi-dimensional understanding of gaming effects, as opposed to deterministic views that tend to simplify video games as inherently controlling technologies (Feenberg, 2009). This complexity becomes especially relevant when considering the potential role of video games as platforms for societal change and awareness.

Diving deeper into the specific impacts of video gaming, a myriad of psychological and social effects emerges. For instance, multiplayer games in cooperative settings have been found to foster social connections and prosocial behavior (Halbrook et al., 2019). However, the same gaming environments can also give rise to stress and antisocial behaviour when engaged in excessively competitive or intense gameplay (Altintas et al., 2019; Pelletier et al, 2020). Furthermore, studies have indicated a multifaceted interplay between extrinsic factors like sleep quality, mental well-being, and the intensity of gaming (as opposed to strictly length of gameplay) all of which paints this relationship between game and gamers as far from straightforward (Altintas et al., 2019; Rusnac et al., 2019).

While psychological and social impacts garner much focus, research has not ignored the more physical dimensions of gaming effects. Concerns have been raised about increasing BMI and musculoskeletal issues as potential side effects of extensive gaming (Pelletier et al., 2020; Chan et al., 2021). Conversely, there is also compelling evidence to suggest that video games can offer cognitive benefits, including improvements in spatial awareness and hand-eye coordination, particularly in games that require physical interaction (Johannes et al., 2021). These contrasting outcomes, again, underscore the need for an integrated and nuanced approach to understanding the multi-layered experience of video gaming.

In attempting to encapsulate this section, it is clear to see that the relationship between video games and their complex effects on players is a subject that continues to evolve (Halbrook et al., 2019; Altintas et al., 2019; Johannes et al., 2021). While the earliest academic dialogues often demonised video games, casting them as unilaterally detrimental to mental and physical health (Squire, 2002; Middaugh, 2011), contemporary scholarship calls for a more complex interpretation (Fernandez, 2021; Feenberg, 2009). This complexity not only invites but necessitates a nuanced discourse capable of examining how to utilise the more beneficial aspects of video games, while concurrently minimizing their potential risks. As video games continue to stake their claim as a dominant cultural medium, the urgency to understand their multifaceted impacts on society has never been more critical.

2.3.4 Beyond Entertainment - Video Game Application

This subsection delves into the scholarly work that has explored the transformative potential of video games beyond mere entertainment. Within the scope of this project, i.e., promoting public understanding/awareness, existing research has predominantly highlighted the educational applications of video games. Gamification, i.e., the use of game-like elements to boost learner engagement and motivation (Buckly and Doyle, 2016), has been widely cited as effective in various educational settings, ranging from classrooms to professional training and self-learning environments (Manzano-León et al., 2021; Oliveira et al., 2023). The prevalence of video games in educational contexts has also been associated with the development of 'Serious Games,' which offer edifying content in addition to entertainment. Therefore, this sub-section centres on the ways in which the gamification and repeatability of video games can be a means of amplifying player engagement than conventional means. This is key for developing de-stigmatising games, which intend to foster greater social understanding leveraging player engagement through the game experience.

A salient entry point for understanding the broader applicability of video games is their increasingly recognized role within educational settings, from primary schools to higher education institutions worldwide. One exemplary model is *Minecraft: Education Edition*, or *Minecraft Edu* (2016). This adaptation of the original sandbox game serves as a multi-faceted educational tool designed to nurture creativity, teamwork, and problem-solving skills. Capitalizing on the gameplay mechanics of the original—where players construct diverse worlds using a variety of 3D blocks— *Minecraft Edu* integrates academic subjects. For instance, it offers modules in STEM education (Tablatin et al., 2023), history curriculum enrichment exercises (Zhu et al., 2017), along with language art activities (Baek et al., 2020). It also incorporates specialized features such as heightened privacy controls, collaborative tools, and secure authentication mechanisms to tailor an appropriate school experience.

Other gamified platforms like *Kahoot!* (2014) have shown promising results in enhancing student engagement and learning outcomes (Licorish et al., 2018). For instance, educator Niall McFadyen (2021) has documented the compelling but yet untapped potential of employing such game-based teaching methods. Further solidifying the importance of these approaches, the pivot to online education spurred by the COVID-19 pandemic has

highlighted the important role that games and gamification have towards effective distance learning. Educational practitioners (Simamora et al., 2020) and students alike (Adnan and Anwar, 2020) have found these methods vital for sustaining academic engagement and enabling effective remote instruction.

Beyond the classroom, another application of video games can be found in professional development (PD) training (Kamińska et al., 2019). Video game technologies, especially virtual and augmented reality (VR; AR), have become prevalent in (re)training staff, particularly within higher stakes sectors. Examples include the aviation (Brown et al., 2021), manufacturing (Abidi et al., 2019) and healthcare (Mäkinen et al., 2022) industries. Here, staff can integrate themselves into simulated scenarios that enable risk-free training and practice. These simulations allow trainees to gain valuable experience and proficiency in a controlled environment, dramatically reducing potential risks associated with on-site training.

Increasing the focus to the individual, the rise of self-guided learning through video games has also been noteworthy in recent years and has been particularly facilitated by the contemporary ubiquity of mobile technology (Mäyrä and Alha, 2020). These games offer an interactive platform to acquire a range of skills and knowledge in an engaging and often more relaxed and motivated setting than traditional classrooms. Language learning games such as *Duolingo* (2012) and *Rosetta Stone* (2014), for instance, offer a gamified approach to acquiring new languages, leveraging the appeal of progressing through levels, earning rewards, and high scores to motivate learners (Karasimos, 2022). Similarly, games like *Yousician* (2010) and *SimplyPiano* (2019) are revolutionizing music education, allowing individuals to learn instruments at their own pace, providing real-time feedback and tailored lessons (Micheloni et al., 2019). Coding games like *Code Combat* (2013) and *Scratch* (2003) help users learn programming concepts through play, making complex topics more accessible and enjoyable (Guo et al, 2021). This self-guided learning facilitated by video games broadens the reach of education, catering to learners of various ages and backgrounds, and allows individuals to adapt their learning to personal schedules and preferences – a critical concept to understand when developing de-stigmatising tools.

Lastly, a key aspect to the implementation of video games in education has been the growing category of ‘Serious Games’. These games, designed predominantly for objectives beyond entertainment, “attempt to address important societal issues, such as world hunger,

homelessness, and national catastrophe" (Sanford et al., 2015, pg. 91) While serious games possess this unique ability to engage players and foster learning, they also present certain challenges (Theodosiou and Karasavvidis, 2015). At the outset, the risk of oversimplification can arise due to the excessively gamified representations of complex issues (Westera, 2022). This could potentially risk players walking away with shallow understandings or misconceptions. Evaluating the engagement levels of players in these contexts is also a complex task, with various methodologies available but no standardized approach (Bellotti et al., 2013).

Another concern lies in the level of enjoyment these games can offer. Lacking the vast resources dedicated to mainstream 'Commercially Viable' games, serious games can often struggle to captivate similarly high numbers of audiences (Breuer and Bente, 2010). Such drawbacks might lead to less engagement than intended, possibly constraining their efficacy in communicating critical messages or lessons.

Despite these challenges, the innovative use of serious games in various domains continues to evolve, demonstrating their potential to positively impact learning and promoting public awareness in unique ways, thereby signifying their promise for future applications. Understanding the mechanics of serious games is pivotal for developing effective de-stigmatization tools. This will aid in designing immersive and interactive experiences that can promote attitude changes, simulate real-life experiences, and increase audience reach, thus maximizing de-stigmatising potential.

2.3.5 Section Summary

Having charted the industry's growth, the various interconnected influences on players, and the roles of games in education, this section has demonstrated how video games have evolved from simple forms of adolescent entertainment to multifaceted societal tools. As this landscape grows, it's essential for academia and developers to fully understand and utilize the vast potential of games.

2.4 Contextualising Mental Health (Issues): Definitions, Public Understanding and Perception

2.4.1 Section Introduction

Having explored the development and present state of video games, this section focuses on the second point at the metaphorical funnel entrance: Mental Health (Issues). Divided into four main sub-sections, it begins by elaborating on the use of standard referential texts, along with crucial definitions relevant to this study. Following this, it offers an overview of contemporary mental health issues, particularly the experience of psychosis, and how such issues are perceived by the public. The aim is to establish a robust comprehension of the existing mental health scenario and public awareness, paving the way for the exploration of video games' potential as de-stigmatisation tool.

2.4.2 Key Reference Materials – Why or Why not?

It will become clearer though reading this section that. initially, the researcher had a greater understanding of videogames than of mental health. When consulting colleagues and other professionals more involved in the fields of psychiatry, psychology and neuroscience, the researcher was advised that related projects tend to be tied to a key referential text for critical definitions or concepts to help form the project scope.

Of these, there were two key texts suggested:

1) Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition 'DSM-5-TR' (APA, 2013; 2022)

   Published by the American Psychiatric Association (APA), the DSM-5 is a widely recognized classification system providing standardized criteria for diagnosing various mental health conditions. Its 2022 update, called DSM-5-TR, refines its diagnostic and taxonomic criteria, while specifically aiding mental health professionals, researchers, and clinicians in accurate diagnosis, treatment, and communication.

2) International Statistical Classification of Diseases and Related Health Problems, Eleventh Revision ‘ICD-11’ (WHO, 2022).

   The ICD-11, developed by the World Health Organization (WHO), is a globally recognized system for classifying various diseases and health conditions, including mental disorders. The eleventh revision, published in 2022, offers updated diagnostic criteria, used not only by psychiatrists but also by diverse healthcare professionals, researchers, and policymakers. This ensures uniform recording, reporting, and analysis of health data, supporting global public health assessments.

Within the context of this social science and health communications project, the conscious decision was made to avoid sole reliance on either the DSM-5 or ICD-11 as key reference texts for defining mental health concepts. Although they both offer comprehensive insights into mental health and condition classifications, their extensive detail surpasses this project's scope. The DSM-5 and ICD-11 offer intricate diagnostic criteria and clinical descriptions, more suitable for clinical practitioners and researchers within the field of psychiatry, psychology, or neuroscience. However, for this project, by aiming to establish a foundational understanding and explore player perceptions of de-stigmatization games, a combined approach using a range of interdisciplinary sources is adopted. This ensures relevance to the fields of social science and health communication, balancing essential information with clarity and conciseness.

2.4.3 Explaining Key Definitions & Terminology[2]

To establish this foundation for understanding mental health and its depiction within the realm of video games, its first necessary to elucidate the key terminology used in this project.

First and foremost, 'mental health' largely refers to an individual's holistic well-being encompassing emotional, psychological, and social aspects, and it forms the backdrop – i.e., the supposed 'norm' (Keyes, 2005; Bhugra et al., 2013). Conversely, negative deviations from said norm, i.e., 'mental health issue(s)', pertain to various states of being and conditions that affect an individual's thoughts, emotions, behaviour, and overall societal functionality (Prince et al., 2007; APA, 2022). It is important to understand that mental health issues are not uncommon and can encompass a spectrum of disorders, including but not limited to anxiety disorders, mood disorders, and psychotic disorders (WHO, 2022; APA, 2022). Recognizing this spectrum is crucial for comprehending the diversity of mental health challenges that individuals may face, especially as they are depicted in various media forms, including video games.

One such critical mental health issue is "psychosis'. With a background largely external to the field of neuroscience and psychiatry, the researcher found it particularly difficult to initially comprehend this term. Rather than a dedicated or individual condition, psychosis constitutes a complex set of symptoms, emphasised differently within related fields, that can be present in various mental health disorders (Arciniegas, 2015; Seiler et al., 2020). These symptoms often involve a detachment from reality, including hallucinations, delusions, disorganized thinking, and impaired insight (Van Os and Tamminga, 2007; Seiler et al., 2020). However, within the context of exploring *Hellblade*, an excellent working, and more approachable, definition for psychosis was found. It was sourced from corresponding feature documentary, released by Ninja Theory (2018), the developers of *Hellblade*. Here, they interview Professor Paul Fletcher, University of Cambridge, a psychologist, and neuroscientist who was a major consultant during the game's development.

During the interview, Fletcher defines psychosis as follows:

[2] Please See Ch.1, Fig 1.1 for a comprehensive list of Key Concepts and Terms, Defined.

"A descriptive term, referring to a loss of contact with objective reality, characterised by two main sets of symptoms: Hallucinations, where one experiences perceptions when there is no actual objective thing to be perceived and Delusions, where one comes to very often bizarre, unpleasant and frightening beliefs when there's no good evidence in favour of them."
- (Fletcher, Ninja Theory 2018)

The term, psychosis, holds particular significance within the context of this study due to its prominent portrayal in *Hellblade*. The developers focused on accurately and sensitively depicting an experience of this mental health issue through innovative gameplay mechanics and the various narrative visuals and audio cues. For the game developers, along with this project and prior research on *Hellblade*, psychosis serves as a proxy for using and subsequently examining the portrayal of mental health issues in video games, and the potential positive influence such depictions have as de-stigmatising tools.

Regarding this goal, the concept of stigma refers to the negative attitudes, beliefs, and stereotypes surrounding individuals with mental health issues, leading to discrimination, social exclusion, and a reluctance to seek help (Link and Phelan, 2001; Anderson and Varga, 2022). Regarding mental health, stigma towards those suffering from mental health issues often leads to the creation of barriers towards public understanding and acceptance, along with proper professional support. It can arise from various sources, including media portrayals, societal attitudes, and cultural beliefs (Link and Phelan, 2001; Świtaj et al., 2012) Interestingly, Livingston and Boyd (2010) also flag how the presence of externally sourced stigma can then promote the development of 'self-stigma', herein individuals begin to adopt and internalize the negative societal perceptions and attitudes towards their own mental health issues, leading to feelings of shame, low self-esteem, and further reluctance to seek help (Chan et al., 2022)
From the above, it is easy to see that dealing with stigma is a paramount issue, and thus de-stigmatization becomes a critical goal, and aims to challenge and overturn such perceptions by presenting mental health issues, in this case via video game portrayals, in a way that promotes understanding, empathy, and awareness (Ferchaud et al., 2020; Anderson et al., 2020)

2.4.4 Contemporary Exploration of Mental Health Issues

Mental health issues have a global impact, constituting a complex and diverse spectrum of experiences. This section delves into the prevalence of, and nuanced schools of thought surrounding different mental health issues, while shedding light on their intersections with age, gender, and gaming behaviours.

Firstly, attention is directed towards psychosis, often linked with conditions like schizophrenia, schizoaffective disorder, and bipolar disorder (Fusar-Poli et al., 2014; Moreno-Küstner et al., 2018). In their evaluation of cross-national data, McGrath et al. (2016) found that first incidents of psychosis-related experiences were more likely to manifest in adolescence or young adult, and that biological sex did not influence this age of onset (AOO). Worldwide occurrences of psychosis also range greatly, with Nuevo et al. (2012) estimating from 0.8% to as much as 31.4%. Specifically in Ireland, Dolphin et al (2015) found that reports of adolescents experiencing at least one psychosis like experience (PLE) had risen to an estimated 12.4% from a previously calculated value of 7.5% by Kelleher et al (2012) In comparison, A cross-sectional survey in China reported 95.7% of adolescents had encountered multiple instances of PLEs, with 17.2% indicating consistent experiences of PLEs (Sun et al., 2015). Not only does continued experiences of psychosis flag a risk to developing fully-fledged psychotic-based conditions like schizophrenia (Malla and McGorry, 2019), indirect consequences include exclusion and discrimination (Hampson et al, 2020; Lazaridou et al., 2023), adding to the negative impact psychosis can bring the perceived quality of life of those experiencing the mental health issue (Degnan et al., 2021) This variance is an excellent example of the intricate web of connections within the realm of mental health, a crucial concept to understand when developing de-stigmatisation tools (Kaplan and Sadock, 2015; Illingworth, 2021).

In addition to psychosis, two other prominent mental health issues warrant attention. Depression and anxiety, prevalent worldwide, are characterized by persistent feelings of sadness, hopelessness, and fear (Craske et al., 2011; Stringaris, 2017). The prevalence of these issues has also varied and grown in the last 20 years, particularly in the peri-COVID-19 era (Lakhan et al., 2020; Schafer et al, 2022). Beyond their growing global prevalence, these issues have also been observed to manifest differently across different age groups, genders

and are also tied to existence of concurrent or prior health conditions (Curran et al., 2020; Lakhan et al., 2020)

Bringing focus now to the prevalence of mental health issues within the gaming community, numerous studies indicate that players may experience unique mental health challenges – known as 'Gaming Disorder(s)' (Pontes et al., 2021; Teng et al., 2021; Columb et al., 2022). However, there are ongoing debates on the overall influence of video games on player mental health. Nonetheless, there appears to be a consensus to taking an instrumentalist stance as opposed to a more deterministic perspective. As outlined by Fernandez (2021), this posits that technology, i.e., video games, are not inherently controlling, either in positive or negative sense. Instead, their effects hinge on how, when, and which games a player interacts with. Thus, the player's choices, gaming context, and the nature of the game determine the outcomes. Techno-determinism contrasts this by suggesting technology has more of a controlling aspect (Feenberg, 2009).

In terms of video game impact, research has identified both pros and cons within similar contexts. A significant area of focus, related to this thesis, is the effect that games have on the cognitive functionality and mental health of players. Halbrook et al. (2019) examined the benefits of playing video games. They found that online play with others in a cooperative setting could provide a means of social connection and an opportunity to develop prosocial behaviour. However, players were still at risk of increased stress and anti-social behaviour if engaging in overly competitive or intense play for excessive portions of time. This threshold concept regarding playtime and intensity is shared by Altintas et al. (2019). Here, excessive video game play has been linked to lower sleep quality, and a decrease in perceived mental health quality. This is echoed by Pelletier et al (2020) who made connections between increased playtime and decreases in general physical and mental health. In contrast, Johannes et al (2021), while combining objective game telemetry data from industry partners with survey responses found that regulated video game play correlated to a positive effect on player mental well-being, particularly regarding intrinsic motivation and satisfaction.

Such connections between video games and mental health appear to not be so straight forward, and instead, there is an intricate interplay of multiple factors and co-variables. For example, Altintas et al. (2019) noted a positive correlation between sleep quality and mental health in players, and an inverse link between sleep quality and gaming duration and intensity. This observation is shared by Rusnac et al. (2019), who suggest that diminished sleep quality, resulting from prolonged gameplay, might elevate risk-taking behaviours and sensation-seeking tendencies. This could then perpetuate high levels of gameplay and further amplify its negative implications for mental health when indulged excessively. Beyond just sleep, this nexus between extended gaming and player mental health also manifests through physical health. Research by both Pelletier et al. (2020) and Chan et al. (2021) demonstrates that unchecked video game engagement can correlate with declines in certain aspects of young players' physical health. These impacts range from a rise in BMI due to decreased physical activity and poor dietary habits, to heightened instances of musculoskeletal discomforts. These factors cumulatively contribute to a perceived decline in mental well-being (Firth et al., 2019).

Even with this simplistic grasp of mental health and ongoing research, it's evident that numerous factors can impact one's well-being. Given these intricate influences, a broader perspective becomes crucial, acknowledging the diverse elements shaping mental health problems. This holds particularly true for enthusiasts of video games and digital content and moreover, comprehending these complex interactions forms the basis for utilizing the positive facets of video games, notably their capacity to challenge mental health stigmas and foster informed public discussions.

2.4.5 Public Perception of Mental Health Issues.

While the intricacies of mental health issues have gained increasing recognition and attention from academia, especially in light of COVID-19 (Peprah and Gyasi, 2021), public perception remains a critical aspect to address. Stigma, formed from (negative) stereotypes and desire for social distance (Ferchaud et al., 2020), along with the formation of misconceptions (LaCaille et al., 2019), is continually observed as a leading factor to the marginalization and discrimination faced by individuals with suffering from mental health issues (Hack et al., 2020; Hampson et al., 2020; Tyerman et al., 2021). These attitudes are not only observed in the literature to still passively permutate within the ingrained social zeitgeist, but they can also manifest through actions and decision-making. This thereby negatively influences those suffering in regard to help-seeking behaviours (Villatoro et al., 2022; Goodwin et al., 2023), social interactions (Hampson, 2020); and overall well-being of sufferers (Thornicroft et al., 2022).

A central pillar of prior investigations has been to highlight the various facets feeding into the public perception, i.e., 'understanding the cause'. Several societal determinants have been flagged by prior research including cultural influences, wherein the societal norms, values, and traditions inherent to a particular culture can significantly influence perceptions of mental health (Crowe et al., 2016; Koshorke et al., 2017; Ran et al., 2021).
Another key aspect mentioned is education quality. Both Vidourek and Burbage (2019) and Hack et al. (2020) note how education is a significant factor in the perception of mental health issues, thereby influencing a person's potential stigma.

A third stream, and key aspect of this project, is the power behind portrayal of those suffering from mental health issues in consumable media . Such depictions have played a pivotal role in perpetuating mental health stigmas (Klin and Lemish, 2008; Smith, 2015) Prior studies have noted a tendency for media to disproportionately focus on characters or situations that promote either mental health issues as a source for comic relief (Ments and Green, 2019; Redmond et al., 2021) or as an antagonistic force (Wahl, 2003; Smith 2015). The latter includes an inclination towards violent incidents involving individuals with mental health issues(Williams and Taylor, 1995; Smith, 2015). This then reinforces the association between mental illness and danger (Mannarini and Boffo, 2015; Riles et al., 2021), which is theorised

as a contributing factor to public apprehension and discomfort, amplifying the stigma attached to these conditions (Stuart 2006; Maier et al., 2014; Riles et al, 2021)

Moreover, public perceptions have been previously seen to vary based on specific mental health issue. For example, depression and anxiety are often perceived as more "acceptable" due to their prevalence, while conditions like schizophrenia may still be met with fear and misunderstanding (Pescosolido et al., 2013; Wood et al., 2014). Such perceptions contribute to the reluctance of individuals to disclose their struggles and seek support (Degnan et al., 2021).

However, in recent years, the media landscape has shown progress in its portrayal of mental health issues, reflecting a growing awareness of the need for accurate and compassionate representation to reduce the level of perceived stigma (Clement et al., 2013).Beyond traditional media, and even video games, the researcher came a cross research on the influence of online video sharing sites, particularly YouTube and other vlogging platforms, and their significant contribution to this change (Godwin et al., 2017; Devandorf et al., 2020). Content creators on these platforms often share personal experiences and insights into their mental health journeys, providing a more genuine and relatable perspective compared to traditional media (Sangeorzan et al., 2019; Devendorf et al., 2020) This trend underscores the potential power of user-generated content in helping to shape public perceptions and fostering open discussions about mental health (Lam et al., 2017).

2.4.6 Section Summary

In essence, this section has provided a surface level, yet just as crucial, snapshot of the growing prevalence and attention on mental health issues, the sources and consequence of stigma towards sufferers, and how media can be used as a form of de-stigmatisation. Video game portrayals is to act in a similar fashion, bringing the experience of such mental health issues to the forefront to reduce such stigma, but this is covered further in the following review section 2.5.

2.5 Video Games and Mental Health

2.5.1 Section Introduction

Having delved into video games and mental health individually, this section now examines their intersection. It focuses on academic views regarding video games' role in mental health in two discussions. First, there are the mental health depictions in games, followed by the efficacy of games in addressing mental health issues. Such analyses are essential to understand nuanced impacts of video games on mental health.

2.5.2 Depictions of Mental Health in Video Games:

As styled by Dr Heather Stuart (2006), before the public ever encounter someone with a mental health issue, or interact with a mental health specialist, they are likely to already possess preconceived notions and biases. Stuart credits this in part to the perpetuation of negative depictions surrounding mental health found in various media. This is not limited to media for older members of the population, as children's media has also been seen to continue this trend of negative portrayals (Wahl, 2003). Video games, like other forms of consumable media such as film and television, have also had a checkered past regarding the depiction of characters with mental health issues. However, Dunlap and Kowert (2022) have stressed that even though research into video game depictions and representations are based on techniques and perspectives derived from traditional media, video games are more complex in nature because of engaging gameplay possibilities. One of the most infamous of genres, guilty of poor representation of mental health, is the extensive range of horror-related games (Dickens, 2017). Such games tend to portray characters, as crazy, or mad, exasperating the negative aspects while having such characters as villains or anti-heroes.

Such depictions are not tied to just horror-based games. Individuals that portray attributes associated with mental health issues in video games have tended to fall into typecasted roles in various genres (Shapiro and Rotter, 2016). One example is the mad villain role. This tends to have such characters as 'madmen', who use their unhinged nature to assert power. A notable instance would be the character Vaas from the first-person shooter (FPS) game *Farcry 3* (2013). Vaas leads a band of mercenaries that control a tropical island which the protagonist must combat. As described by Grimwood (2018), confrontations between the

player and Vaas have include him talking to himself, rapidly change in emotional state and tone, with Vass also prone to lashing out at both friend and foe. Another role would be that of the comic relief. The character of Tiny Tina from the *Boarder Lands (2012)* is a good example (Ments and Green, 2019). She is a young girl found on the dystopian colony planet, Pandora, living by herself in a cave. Due to the murder of her parents by bandits, she 'lost her mind' and now exerts heavy acts of violence while still being portrayed as a young girl. While such characters can be captivating from a storytelling perspective, it is understandable that they have the potential to contribute, even indirectly, to the societal stigmatization of mental health issues in society. This underscores the importance of more nuanced and responsible representation in the gaming industry.

In their assessment of the last two decades of released video games, Buday et al (2020) found that of the top selling games from 2002 to 2021, 12% of such games depicted some form of mental illness (N=54). However, within this group of portrayals over 75% of such games containing a negative, stereotyped presentation of mental health issues. The most prevalent depictions were schizophrenia- like and hallucinosis. This means that if one was to pick a videogame depiction of mental health, it is likely to have been presented poorly. This is compounded by the work of Ferrari et al (2019). Out of a selection of one hundred popular games depicting characters with psychosis-like conditions, on the storefront, *STEAM* (Valve, 2003), 97% were found to perpetuate stigmatising and stereotyped depictions of such issues. Even though these studies flag the prevalence of negative portrayals, both note how there is an increasing number of games in recent years that have actively sought to produce good-faith portrayals of various mental health issues.

Anderson et al (2020) performed a content analysis of recent games that have received praise for their representation of characters with mental health issues to help identify the strengths of the medium. This included *Doki-Doki Literature Club, What Remains of Edith Finch* and *Hellblade, Senua's Sacrifice*. These games, contain both playable and non-playable characters (NPCs) with various mental health issues including hallucinations, delusions and other psychosis or schizophrenic experiences. However, they found that the interactive nature of these contemporary games could foster empathy towards such characters by having the game proxy the opportunity for players to experience the social consequences of such issues, rather than a fearful depiction from the outside. They argue that "Instead of mental illness as a narrative justification for horror, it can be portrayed as a part of everyday life" (pg. 30).

2.5.3 Mental Health Uses of Video Games

Alongside this rising frequency of empathic mental health depictions in video games, there has been an increased push for examining the practical applications of such games surrounding mental health. Such approaches can be broadly categorized into two key areas:

a) **Focus 1:** Direct therapeutic benefits for players themselves.
b) **Focus 2:** Indirect influence on public awareness and stigma reduction.

Focus 1: Direct Therapeutic Benefits

Within the well-established, yet growing realm of mental health and psychotherapy, the use of additive play as an arm of therapy has existed since 20th century, such as physical board games (Swank, 2008). Video games are the next step. Such use is tied to the growing prevalence of portable technology within therapies, such as smart phones or other smart accessories, along with the popularity of video games (Annema et al., 2010). However, focus on implementing games of any kind appear to have largely focused on therapies for conditions surrounding social and behavioural cognitive challenges (Horne-Moyer et al., 2014). Examples include clients with Autism Spectrum Disorder (ASD) , Attention Deficit Hyperactive Disorder (ADHD) or Developmental Co-ordination Disorder (DCD), particularly in children and young adolescence, amongst other related conditions.
There's also a burgeoning academic interest in video games as therapeutic tools. This paradigm has evolved considerably, with scholars and practitioners exploring not only the potential benefits but also the limitations and ethical considerations (Gibbson et al, 2022)

Nonetheless, there is a push for the use of video games in mental health therapy.
Within the literature, there appears to be two major ways in which video games can used within therapy. Firstly, as described by Ceranoglu (2010), video games can be used as a form of indirect support of the therapy process by providing additional means for evaluating clients' cognitive processes. Ceranoglu notes when a therapist "knows more about a child's cognitive processing style, reaching therapeutic goals may become easier" (pg 145).
The goal with such use of games is that clients, especially youths, can be evaluated while being more cooperative and enthusiastic about therapeutic process (Annema et al., 2010).

Annema et al. (2010) also recommend that such games must be easy to start up and configure, allowing the therapist to support a patient more easily during play, and enable easier tracking of a client's performance.

Alternatively, video games, both commercially viable and serious, have been used directly in the treatment of various mental health issues. Horne-Moyer et al. (2014) observes how games have been used successfully in individual and group therapy sessions for those suffering from neurological difficulties and agrees with Annema et al (2010) that the portable nature of such devices is a key asset to their further adoptability and usage. Fish et al. (2018) completed a comparative study on the effectiveness of pharmacological treatment via selective serotonin reuptake inhibitors (SSRIs) and prescribed sessions (~30-45 minutes x 4 per week) of the game, *Plants vs Zombies* for treating depression and co-morbid anxiety. Those that played the game were reported to have a larger reduction in the severity of their anxiety. Viana et al. (2020) also supported the use of games this way, citing in their review that such treatment methods had similarly consistent adherence, but with added enjoyment by clients. Reductions in anxiety resulting from other conditions, such as Parkinson's, was found possible through motion-based gameplay (Alves et al., 2018)
Looking to the future, Kowal et al (2021) supports this use of video games to combat this "serious threat to mental health globally" (pg.6), noting that the next step would likely be the implementation of Virtual Reality (VR) games. This has already begun here in Ireland with VR being used to assist in youth socialisation via virtual youth group activities (Foroige, 2023) .

Focus 2: Indirect Awareness Raising and Stigma Reduction

Another emerging focus is the role of video games in raising public awareness about mental health issues (Cangas, 2019). This is a form of de -stigmatisation, where game developers, in collaboration with mental health experts, are beginning to craft narratives that humanize individuals with mental health conditions (Ferchaud et al, 2020). By providing the opportunity for players to 'experience' a more nuanced portrayal to help foster greater levels of empathy towards those suffering from mental health issues. The end goal would then be to reduce the perceived stigma by having the number of players reach a critical mass within the wider public, thereby decreasing the sense of isolation felt by those suffering, while promoting their desire for social integration and seeking professional assistance.

Nevertheless, as argued by Anderson (2020), this is a double-edged sword. While video games have great potential for education and advocacy, the risk of trivializing or misrepresenting mental health issues also exists, highlighting the need for responsible and informed game design.

2.5.4 Section Summary

In sum, this section has delved into the encouraging shift towards more empathetic and constructive depictions of individuals grappling with mental health issues in video games. Additionally, it has examined the potential utility of this technology not only as a direct therapeutic tool but also as an indirect means of alleviating stigma and providing relief for those affected by mental health issues.

2.6: Why *Hellblade: Senua's Sacrifice*?

2.6.1: Section Introduction

This final section of the review elaborates on the main points for having the game, *Hellblade: Senua's Sacrifice,* as a 'case-study' conduit for exploring de-stigmatisation tools.

2.6.2: Development Process

Hellblade was produced by British studio, Ninja Theory (2017), for the Sony PlayStation 4 console first, being ported to other consoles and PC in subsequent years. It is set within a grim fantasy landscape, and players take on the role of the titular character, Senua, on a quest into Helheim for the soul of her departed lover, Dillion.

The development process of the game is the first key point as to why it was chosen for this study. Ninja Theory released both series of YouTube Developer Diaries and a Featurette which documented their highly in-depth and intricate process for developing the game (2017) . Uniquely, the process included the team consulting not only neuroscientists, including Professor Paul Fletcher, University of Cambridge, but also involved those who have experienced psychosis. They also partnered up with the Welcome Trust, an international biomedical research charity, based in London, UK (Welcome, 2022). The stated goal of such cooperation was to get both sides of the coin, those that have studies psychosis, but also those that have undergone the varied kinds of psychosis-related experiences to help develop a more nuanced and respectable depiction of the player character, Senua, and thereby the player's own experience (Ninja Theory, 2017)

Another novel aspect of the game's production was the proactive implementation of audio technology. This included the use of 'binaural 3D microphones' to provide the illusion of hearing the various voices, as does Senua, from different directions. As elaborated on in their frame analysis, Fordham and Ball (2019) note how leading medical and scientific experts on auditory hallucinations have flagged that *Hellblade,* as a video game, is an excellent representation of such experiences.

2.6.3: Prior Research

Various other studies have been conducted on *Hellblade*, particularly on the accuracy of its depiction of psychosis and other aspects to mental health issues, on its own but also as part of comparative enquiries. Notable examples include Ings (2017), Anderson et al (2020), and Austin (2021).

In his article, Simon Ings (2017) praises the innovative combination of psychological realism, through the particular use of directional voices and implementation of hallucinations as part of the gameplay, all as part of a more positive portrayal of a character experiencing psychosis – "The game's most radical element is that while Senua is in the throes of psychosis, she is a hero" (p. 1). Anderson et al., (2020) agrees with this innovative approach that video games can have in the depiction of various mental health issues. They undergo an analysis of *Hellblade,* along with two other games; *What Remains of Edith Finch* (2017) and *Doki-Doki Literature Club* (2017). Each game is observed to provide a unique means to challenge preconceptions of various aspects to mental health issues, such as physical symptoms like hallucinations in *Hellblade* but also the more indirect consequences such as social detachment *Edith Finch* and *Doki-Doki.* While cautioning about the risks of reducing complex characters and storylines to mere embodiments of mental health issues as a form of 'narrative prothesis', Austin (2021) nonetheless approves of proactive and more sensitive depictions that *Hellblade* provides to illustrate the cognitive complexity and lived experience of psychosis. However, he finished with a warning that games must refrain from incorporating mental health issues as mere clichés to continue such portrayals.

Branching from such viewpoints have been research on the applicability of games like *Hellblade* as a commercially available tool for the public de-stigmatisation of mental health issues. A key text example is Ferchaud et al (2020), which found evidence that player stigma towards those suffering from mental health issues could be positively affected, i.e., reduced, after playing the game. Degrees of stereotyping were not as affected, likely on account of the depiction of hallucinations, while an increase in empathy towards Senua through playing the game was seen to reduce the self-reported desire to socially distance oneself from those suffering.

In essence, these studies collectively show how *Hellblade*, amongst other games with good-faith representation, are leading a promising change from the mainly negative portrayals of mental health issues, as described by Ferrari et al (2019)'s review of 100 video games, which were seen to vastly perpetuate such stereotypes and themes of prejudice. And so, this project is considered another step in that direction, focusing on the social response of people who play games, to the idea of video game de-stigmatisation of mental health issues through playing Hellblade in a similar fashion to Ferchaud et al (2020).

Chapter 3: Research Design/ Methodology

3.1 Chapter Introduction:

This chapter outlines the research methodology employed to answer the questions set forth in Chapter 1. It begins by detailing the selected research approach, the rationale for choosing specific methods, and how these align with established best practices. Subsequently, the chapter delves into the various data collection and analysis methods used. Throughout the design process, Professor Bryman's guidebook (2016) served as a primary reference.

3.2 Overview of Chosen Approach and Applied Methods:

3.2.1 Methodology Approach

This project seeks to explore how video game players perceive video games as tools for destigmatizing mental health issues. For this, a mixed-methods design has been chosen and employed, aligning with social science research standards for exploring perceptions and experiences (Bryman, 2016; Baškarada & Koronis, 2018). The qualitative approach permits a deep dive into individual perceptions and experiences, capturing the complexities in participants' responses (Merriam, 2002; DiCicco-Bloom and Crabtree, 2006). In contrast, the quantitative aspect aims for generalizable, empirical data, such as demographics or gaming habits (Sukamolson, 2007; Goertzen, 2017). While integrating different data types can pose challenges, such as resource allocation and risk of methodological dilution (Malina et al., 2011; Queirós et al., 2017), these mixed methods approach nonetheless has been chosen as it offers a more comprehensive understanding of the subject matters, the gamer, and their thoughts, making it invaluable for a complex social science inquiry as is this project (McKim, 2017).

3.2.2 Methods Used

This project has been structured into two, sequential stages, as outlined in Figure 3.1. The first involves an online survey, while the second consists of in-person sessions that include a questionnaire, a video game playtest, and a post-playtest semi-structured interview (SSI). This subsection details the rationale for each chosen method and provides guidance on optimizing data collection within the scope of this research.

Figure 3.1: Overall Project Methods Layout

a) **Online Stage:**

Survey:

The choice to use an online survey was driven by prior experience of the researcher, and its increasing adoption in social science studies (Evans and Mathur, 2018; Braun et al., 2021). Previous works such as Davis et al. (2005) have demonstrated the potential surveys have as effective tools for capturing diverse data types. By hosting and disseminating the survey online offers wider reach (Lefever et al., 2007), flexibility in design, and leverages prevalent technology such as mobile phones and internet connectivity (Zdravkova et al., 2012).
For this project, of the many choices available described by Abd Halim et al. (2018), the platform, SurveyMonkey (2023) was chosen. Several factors influenced this decision:

- Its user-friendly interface simplifies the survey creation process.
- Its advanced data collection and representing capabilities ensure comprehensive insights.
- Its reputation and trustworthiness among peers and participants as a service, potentially boosting response rates.

However, online surveys are not without limitations. These can include risks such as low response rates and potential for misinterpretation (Lefever et al., 2007; Evans and Mathur, 2018; Nayak and Narayan, 2019). To mitigate these, clear instructions were provided, along with clear questions within the survey itself, all provided through secure, web-based links.

Within the context of this project, the objective of this survey was two-fold:

- Gather demographic data and insights into participants' gaming behaviours and perceptions on gaming as a de-stigmatization tool.
- Shortlist candidates for the subsequent in-person phase

The survey was configured on SurveyMonkey to record responses anonymously, ensuring compliance with DCU's ethical policy (2023). Anonymity was also thought to encourage participants to express their thoughts more freely and candidly, reducing concerns about potential personal identification, biases, or any other unintended consequences stemming from their participation (Nayak and Narayan, 2019). Post-completion, participants could indicate interest in future research phases via a secure email.
For a detailed survey outline, refer to the appendices.

b) <u>In-Person Stage:</u>

Participants were invited to attend individual in-person sessions conducted at two predetermined locations.

- Classroom 6, Boule Lecture Hall, located in the Main Campus of University College Cork, Wilton, Cork
- Training Room 1, Northridge House Education and Research Centre, located at St Lukes Home Campus, Mahon, Cork

These locations were chosen for ease of location for both the researchers and participants, as advised by Bearman (2019), with Figure 3.2 and 3.3 illustrating the basic set up used at each location.

Figure 3.2: Interview Playtest Set up at University College Cork.

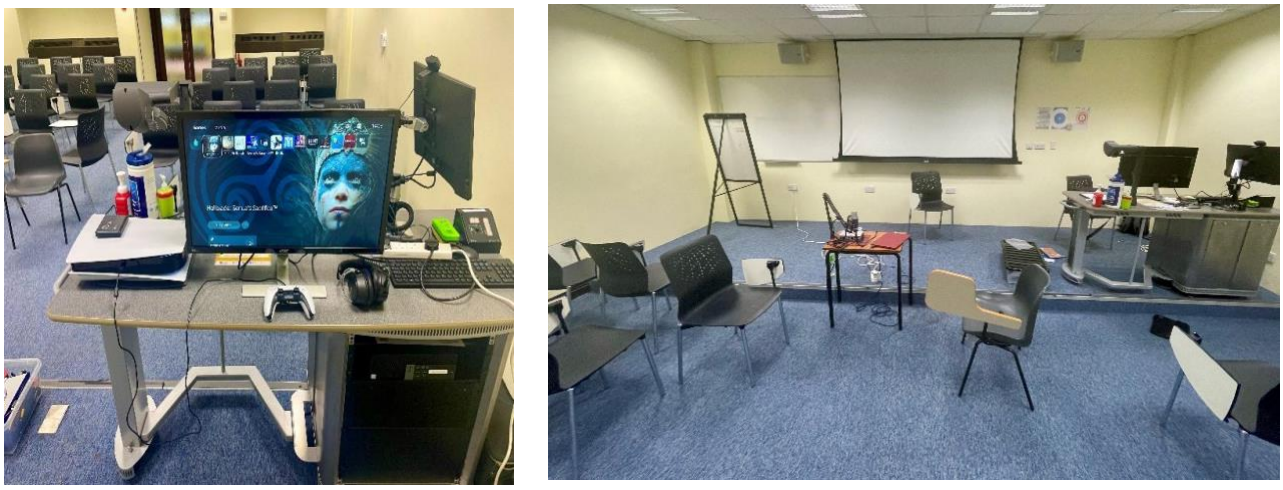


Fig 3.2: Photos of the basic set up of the Playtest area (left) showing the PlayStation console [white], Controller, Headset and Monitor, and Interview area (right) with the Recording Equipment. Location: University College Cork

Figure 3.3: Interview Playtest Set up at Northridge House Education and Research Centre

Figure 3.3: Photos of the basic set up of the Playtest area (middle left) showing the PlayStation console [white], Controller, Headset and Monitor, and Interview area (middle and bottom right) with the Recording Equipment. Location: Northridge House Research and Education Centre

To safeguard participant privacy while enabling individual response tracking, pseudonyms were assigned to each participant (Jensen et al., 2019). A separate key linking pseudonyms to real names was securely stored on a DCU Google Drive, separate from the main dataset. This approach maintained participant confidentiality and ensured data integrity throughout the research process (Allen and Wiles, 2016).

i) Questionnaire:

The in-person session began with a physical questionnaire. This served multiple goals:

- To correlate pseudonymized in-person responses with previous anonymous survey data.
- To facilitate more in-depth answers similar to the online survey.
- To establish a baseline for comparison pre- and post-playtest.

Primarily, questionnaires function to provide a uniform and cost-effective method for data collection (Rowley, 2014). They also have the potential to eliminate the need for specialized software and are inclusive, as they do not require participants to be necessarily tech-savvy. However, physical questionnaires in this project may yield less detailed answers due to the requirement of handwriting answers (Ebert et al., 2018)[3]. To address this, participants were given clear instructions and could ask questions during the session.
For a blank questionnaire, please refer to the appendices.

ii) Video Game Playtest:

This phase served as a preparatory step for subsequent interviews, rather than a dedicated data collection method. Participants played the first ~ 45-minutes of "Hellblade: Senua's Sacrifice" on a Sony PlayStation 5. The choice of a console was motivated by its broader familiarity among potential participants (Mattioli and Lahtiranta, 2021)

Reasons for Playtest Segment Selection:

- *Ease of Setup:* The chosen segment, being at the start of the game, simplifies the game-reset process between each session.

- *Comprehensive Gameplay Experience:* This segment includes all of the key gameplay elements found in the game such as the various puzzles and combat scenarios, providing a rounded experience of the game.

[3] A noted criticism shared by multiple participants at this point was the use of a physical questionnaire form, rather than an online one, which required using a pen or pencil. This could potentially have limited answer depth resulting from discomfort of writing for the reported first time in a while.

- *Narrative Importance:* The game's start is crucial to understanding Senua's story and it is key for participants to play in order to then come to a comprehensive conclusion about their experience of the game.

- *Alignment with Prior Research:* The same segment was used in a key study by Ferchaud et al. (2020), who endorsed its use for this project through email correspondence (Pierce, 2023).

As a method, the playtest offers participants a direct experience of the game's narrative and mechanics. It allows for deep engagement with how the game addresses mental health issues, a phenomenon known as 'Transportation' and 'Identification' (Ferchaud et al., 2020, pp. 2-3). However, the method is not without limitations. Variances in gaming skills among participants could lead to uneven experiences, a concern raised by Davis et al. (2005) and Gerling and Masuch (2011). As a form of mitigation, Ferchaud et al. (2020) suggests that choosing a game with intuitive mechanics, like *Hellblade*, can help standardize the experience across different skill levels. The researcher can then further level the playing field by aiding upon request from participants. By selecting this segment, the study aims to offer a consistent and meaningful gaming experience to all participants prior to the interviews.

iii) **Semi-Structured Interview:**

A Semi-Structured Interview (SSI) serves as the final phase of data collection. As opposed to Structured Interviews (SI), SSI's leverages the precision of structured queries through primary, guiding questions, combined with the freedom to pursue emergent topics if present and beneficial (Whiting, 2008). This blended approach of question types allows for dynamic conversations between interviewer and interviewee which can delve into nuanced or unexpected areas, all while continuing to use consistent structural framework for comparison across interviews. Nonetheless, this method is certainly not without challenges. While this flexibility is an asset, it can also introduce variability within responses (Adams, 2015; Adeoye-Olatunde and Olenik, 2021). A strong balance between following the guiding questions and allowing the conversation to flow naturally is required. Additionally, the qualitative nature of SSIs can entail substantial work in transcription, coding, and analysis.

To address these issues, pilot interviews were conducted to refine the balance between sticking to guide questions and pursuing emergent themes (Rabionet, 2011; Mannan and Afni, 2020; Adeoye-Olatunde and Olenik, 2021). This would assist in ensuring consistency without stifling the richness of each participants' individual experiences.

Within the context of this project, the SSI was employed to gain insights into participants' experiences and sentiments post-playtest along the themes of mental health representation, de-stigmatisation and the role video games can have as such tools. Please see appendices for a copy of the question guide used.

A single focus group was considered, as an alternative method to the SSIs, in similar fashion to the focus group on player perceptions by Holl et al. (2020). Participants would be asked to reconvene once each participant had completed the previous processes, including the playtests, to then discuss, collectively, the game and the concept of in de-stigmatization media. While focus groups could provide diverse real-time perspectives and be more time-efficient, shortening the time participants would have to spend at any one time, this method also comes with challenges (Longhurst, 2003; Sim and Waterfield, 2019). More vocally dominant participants might overshadow the perspectives of others, potentially skewing data. The group setting itself might also limit the depth of individual experiences and perspectives shared from each participant with the researcher, and the proceed coordinating schedules for all participants to come back could present further logistical challenges. Given the project's emphasis on deep, individual insights, semi-structured interviews were chosen, ensuring the goal of obtaining in-depth player responses was possible. Please see the appendices for a copy of the question guide.

3.2.3 Sampling Strategy:

The project employed a modified Snowball sampling strategy. As explained by Johnson (2014), this is a form of non-probability and convenience-based sampling. This method allows initial participants to help recruit additional ones through their social networks, creating a 'snowball' effect to gather a larger sample. According to Nadeifer et al. (2017), this strategy is effective for reaching specialized or hard-to-access populations.

Initial participant recruitment was geared towards students who are 18 years or older and are active members of university societies related to gaming. Such a target group was selected to align with ease of acquisition and with ethical clearance requirements (DCU 2023).

The scope was then broadened to also include individuals who are 18 years or older and are members of nationally recognized gaming organizations. This expansion served a dual purpose: not only did it facilitate the increased participation of individuals familiar with gameplay, but it also opened the door for insights from those involved in the development side of video games.
To facilitate recruitment, correspondence was initiated with key, trusted members of elected committees of both university societies and gaming organisations across the country. Dedicated links to the online survey were provided to groups that agreed to share with their members. The link was then posted , along with a provided explanation, to each group's official, dedicated, and exclusive *Discord* (2023) channels. These serve as platforms for focused discussions and activities among official members, thereby ensuring that the survey reached a relevant audience while limiting external influence.[4]

[4] Or 'Trolling 'by non-members (Ortiz et al, 2020)

Below is a list of societies and organisations that agreed to share the weblinks:

University Societies:

- University College Cork (UCC) Science-Fiction, Anime, Horror and Fantasy "Sci-Fi" Society
- UCC Wargaming and Role Play "Warps" Society
- UCC Networking, Gaming and Technology "NetSoc" Society
- University of Galway (UG) Video Game "VGSoc" Society
- UG Anime and Manga Society
- Munster Technical University (MTU) Sci-Fi Society
- MTU Anime and Manga Society

National Organisations:

- Galway Game Jam
- The Irish Game Makers Association "IMIRT"
- The Irish Games Association "IGA"

Non-probability sampling is a technique in which members of the population do not have an equal or known likelihood of selection (Nadeifer et al., 2017). The focus is on the specific viewpoints of the sample group, particularly their opinions on the de-stigmatization of mental health through video games, rather than their statistical representation within the larger population. Convenience sampling, a subset of non-probability sampling, involves selecting participants based on their accessibility and relevance to the research objectives (Johnson, 2014; Naderifar et al., 2017). For the goals of this project—exploring perceptions among video game enthusiasts— this project then engaged with college students in gaming societies and professionals in gaming organizations. Therefore, this sampling approach allowed for an efficient yet targeted sample collection, albeit one that may not be broadly generalizable.

3.3 Specific Data Collection Processes:

This subsection delves into greater detail how each of the data collection methods mentioned previously were specifically applied.

3.3.1 Data Collection Processes:

a) **Online Stage:**

Survey:

- The online survey was open for one month (26/06/23 – 26/07/23)
- Participants were required to first read the plane language statement for the entire project, with further details regarding the survey, and then complete a consent form integrated into the survey to partake in the survey itself.
- Each question was required to be completed by participants to finish the survey.
- Participants were kept anonymous, with no additional personal identify data taken beyond the demographic and habitual information willingly provided by participants.
- To contribute to the integrity of the collected data, the multiple responses functionality was turned off, strictly allowing the survey to be taken once per device.
- The survey itself was composed of 40 questions, including a combination of Short Answer, Likert-Scale, Matrix/Rating Scale, Multiple-Choice, Dropdown, Binary-Choice (Yes/No) and Checkboxes style.
- Participants were asked to flag their interest in taking part in the in-person stage of the project by contacting the researcher through a secure DCU email.
- Once closed, the collected data was preliminarily examined using the filter and comparison functionalities found on the SurveyMonkey 'Analyse Results' page.
- The full collected data was exported from the SurveyMonkey website as a series of .XLS files, that were then immediately uploaded to the DCU Google drive for sole storage (See Section 3.4).

b) <u>In-Person Stage:</u>

Preparations for Sessions:

- Once a participant expressed their interest in taking part, a digital copy of the plane language statement for this stage was sent to the requested email address.
- Once read, the researcher confirmed that the participant understood the sequence and reasoning for the in-person stage, and then coordinated a workable time and location to schedule the session.
- Any additional requirements deemed necessary by the participant were noted.
- Scheduling data was uploaded to the DCU google drive.
- The series of sessions took place between 20/07/23 – 25/07/23.
- A reminder email was sent out to the participant prior to the day of the session.
- On the day of each session, the in-person stage set up, as per Figure 3.2/3.3, the functionality of each piece of equipment was tested and the area sanitised.

Pre-Stage Brief:

- Upon arrival, the participant was greeted, and their identity confirmed.
- The researcher discussed the overall session structure.
- The participant was then provided with three physical forms to be read and filled in order:
  - *In-Person Stage Plane Language Statement* – Describes the process, the specific data that will be collected and role of the participant and researcher during the session.
  - *In-Person Stage Consent Form*
  - *Questionnaire*

Questionnaire:

- Once the participant had confirmed that they understood the Plain Language Statement and filled in the Consent Form, they then were asked to complete the Questionnaire.
- This form was composed of 16 questions, including a combination of Short Answer, Ranking and Binary-Choice styles. These were divided into the following themes,

Demographic, Gaming Habits and Opinions, Understanding of the Playtest Game, Knowledge of Mental Health.

- The goal of this step was twofold:
  a) Compare the pseudonymous interview participants answers to the anonymous survey data.
  b) Provide points for expansion during the interview discussion.

Video Game Playtest:

- This involved the participant sitting down to play *Hellblade, Senua's Sacrifice.*
- The participant was given the PlayStation controller and Headset while being instructed on the use of both.
- The audio quality was confirmed with the participant.
- Th participant was told how to commence the game, and where to access the control scheme of the game.
- When comfortable and ready, the participant was asked to commence the game from the beginning. Please see appendices for a summary of the gameplay experience.
- The participant played the game for approximately 45 minutes, with the researcher observing the playset from behind.
- The use of a headset and decreased room lighting were implemented to enhance playtest immersion (Therrien, 2023)
- Upon completion of the playtest, the room lighting was restored, and participants were asked to stop playing. A brief break (~10-minute) was offered to the participant prior to commencing the interview.

Interview:

- The participant was informed again how the interview would be conducted, and that solely the audio would be recorded for transcription and analysis.
- Once ready, the participant was asked if they were ready for the interview to start, only then commencing the audio recording.
- The participant was asked a series of questions in the order of the Question Guide, with room to enquire further into their answers if beneficial, as per the Semi-Structured Interview strategy.

- This process lasted between 1 to 1.5 hours.
- Prior to finishing the recorded interview, any further queries from the participant were answered by the researcher.
- The participant was informed the moment the recording ceased.

Post-Session:

- The participant was encouraged to ask any further questions having completed the In-Person stage.
- The participant was thanked and encouraged to contact the researcher via email for any further enquiries, subsequently being escorted out of the interview room.
- All equipment were sanitised down.
- Each physical form completed were scanned and subsequently uploaded to the DCU Google Drive. Hard copies of the forms were subsequently destroyed.

3.3.2 Data Collection Tools:

This subsection lists the hardware and software used in the data collection process.

Hardware:

- Sony PlayStation 5 Console Disc Edition, using a DualSense Wireless Controller
- Mpow Air 2.4G Wireless Headset
- 13-inch, 2017 MacBook Pro, with macOS Ventura 13.4.1
- Standard Monitor
- Subzero SZ-AI2 2x2 USB Audio Interface, paired with a Nx SZC-300 Condenser Microphone, Broadcast Microphone Arm and XLR Cable

Software:

- Microsoft Excel for macOS v. 16.75.2
- Microsoft Word for macOS v. 16.75
- GarageBand v. 10.4.8

3.3.3 List of Data Collected:

This subsection lists what specific data was collect at each stage for analysis.

Online Stage: (Anonymised)

- Survey (Typed digital answers)
    - Participant demographics, gaming habits and opinions, thoughts on de-stigmatisation.

In-Person Stage: (Pseudonymised)

- Questionnaire (Hand-written answers)
    - Participant demographics, gaming habits and opinions, thoughts on de-stigmatisation.
    - Participant's prior experience with *Hellblade*
    - Participant's self-assessed knowledge and confidence in recognising characteristics associated with mental health and psychological issues.

- Interview (Audio answers recorded and transcribed)
    - Participant's experience and opinion of *Hellblade* after playtest.
    - Participant's thoughts on the use of de-stigmatising social issues using popular media, particularly mental health issues with video games.
    - Participant's thoughts on how such games would be received by the gaming community and the wider public.
    - Participant's thoughts on what improvements game publishers and developers should consider for future developments.

3.4 Specific Data Analysis Processes:

3.4.1 Online Survey:

- Upon closure, each survey question-and-answer set was evaluated for its benefit to the project prior to analysis.
- Each question-and-answer set deemed feasible was exported from the Survey Monkey Client as individual .XLS files, subsequently uploaded to the DCU Google Drive as reference copies.
    - Quantitative question-and-answer sets were formed into tables on Excel, accompanied by corresponding diagrams for illustrative purposes.
    - Qualitative question-and-answer sets underwent manual coding for common themes via the Survey Monkey 'Tag' function, which were subsequently formed into tables on Excel.

3.4.2 In- Person Playtest & Interview:

- Each interview was manually transcribed within Microsoft Word, with assistance through the programme's audio-to-text functionality. Each audio file and transcript were uploaded to the DCU Google Drive as reference copies.
- Each of the interviews were divided into the following four key themes (See Ch 4):
    - Participant playtest experience.
    - Participant understanding of key concepts.
    - Participant thoughts on reception of de-stigmatising games.
    - Participant considerations for future games.

- Relevant data from each interview, along with quotes, were placed into the corresponding theme as tables for a multi-faceted, cross referential thematic content analysis.
- This analytical approach was adopted and modified from Bellamy et al.'s (2006) guide and included the following sub-analyses:
    a) Designation Analysis: Focus here is on identifying the frequency by which specific objects or concepts are mentioned by the interviewees within each of the four interview question themes.
    b) Attribution Analysis: This involves identifying the common descriptors or characterizations that were used by interviewees when talking about a particular topic per question theme. These can include adjectives, metaphors, or any other words that add context or meaning to the object or concepts being discussed
    c) Assertion Analysis (a + b): As a combination of the previous two, this process involves identifying how often specific objects or concepts are described in particular ways. This is a cross-referencing of the objects/concepts (a) with the descriptors/characteristics (b) per question theme, in order to explore how often they coincide.

Chapter 4: Project Findings

This chapter segments the project findings in two stages:

Stage 1: Online Survey.

Stage 2: In-Person Playtest Interviews.

Stage 1: Online Survey:

Online Survey results are divided into three sections:

a) Survey Participant Demographics – Profiles participant characteristics: gender, age, education, and gaming group involvement.

b) Survey Participant Media Preferences, Habits & Opinions – Analyses participant consumption of media, particularly video game, including their preferences, habits and opinions.

c) Survey Participant Thoughts on Video Games as De-Stigmatizing Tools – Depicts participant perspectives on using games beyond entertainment.

Section a): Survey Participant Demographics

As depicted in **Table 4.1 and Figures 4.1(a)** and **4.1(b),** 78 survey responses were received, 50 (64.1%) of which were fully completed, with 28 missing data. Incomplete responses were flagged by Survey Monkey, verified manually, and then excluded from further analysis.[5]

- Regarding participant gender identity 31 (62%) identified as male, 14 (28%) as female, and 5 (10%) as Non-Binary (NB) No responses chose "other" or "prefer not to say." **[Fig. 4.1(a)]**

- Regarding participant age, 47 (94%) responses were from those aged 18-34. These were divided evenly between 18-24 years old and 25-34 years old groups, at 24 and 23 participants respectively **[Fig. 4.1(b)]**

[5] Incomplete responses which lacked both age and gender data are depicted as 'Unknown Additions' in Figure 4.1(a) (n=20), All completed responses were analysed under the term ‘Survey participant(s)’ (n=50)

Table 4.1: Table Showcasing Age and Gender Identity Distribution of Survey Participants.

Survey Participants	18-24	25-34	35-44	45-54	55+	Summary
Incomplete n= 28	**M: 2 F: 2 NB: 1**	**M: 1 F: 0 NB: 0**	**M: 1 F: 0 NB: 0**	**M: 1 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 5 F: 2 NB: 1 *Unknown Additions: 20***
Complete n= 50	**M: 12 F: 9 NB: 3**	**M: 16 F: 5 NB: 2**	**M: 2 F: 0 NB: 0**	**M: 1 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 31 F: 14 NB: 5**
Summary n= 78	**M: 14 F: 11 NB: 4**	**M: 17 F: 5 NB: 2**	**M: 3 F: 0 NB: 0**	**M: 2 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 36 F: 16 NB: 6 *Unknown Additions: 20***

Figure 4.1(a): Pie Chart Diagram Depicting Survey Participants Self-Reported Gender Identities

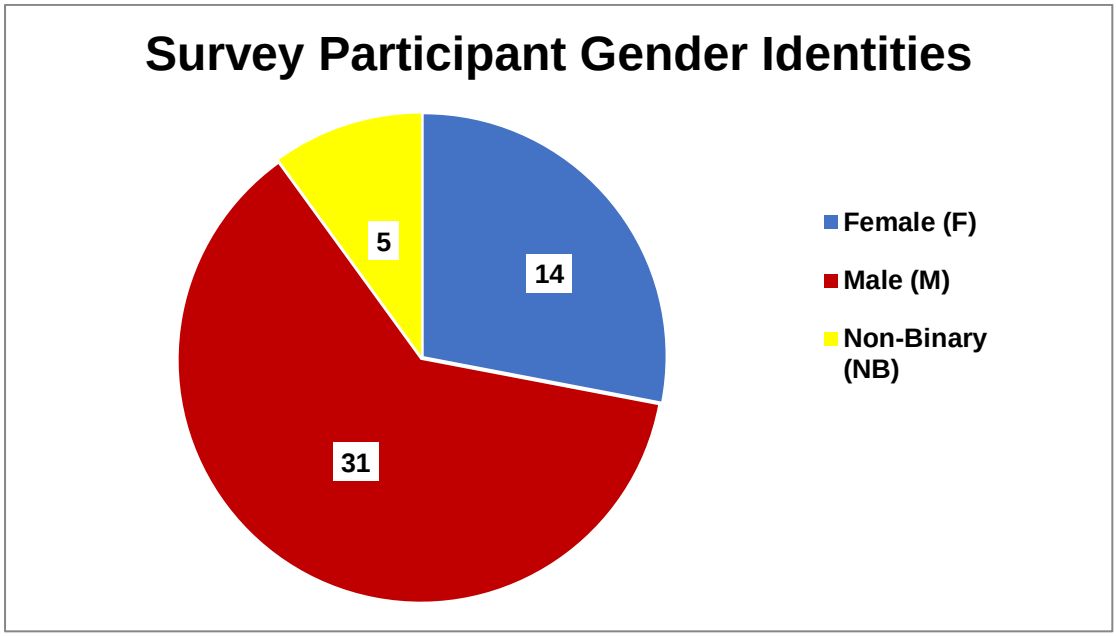
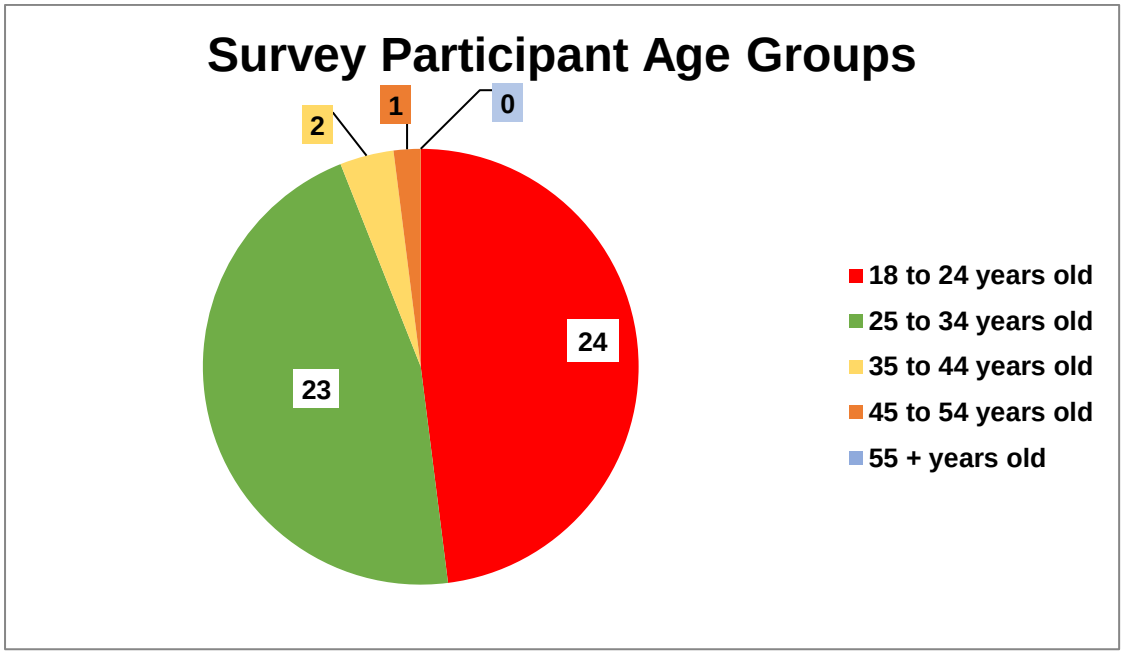


Figure 4.1(b): Pie Chart Diagram Depicting Survey Participants Self-Reported Age



Figures 4.2(a), 4.2(b), 4.2(c) & Fig 4.3 and **Tables 4.2 (a) and Table 4.2(b)** present the self-reported education demographics of survey participants under the following headings:

- Latest Education Level (ongoing or completed) – **[Fig. 4.2(a)]**
- Most Recent College / University Attended – **[Fig. 4.2(b)]**
- Video Game-Related Societies/Clubs Membership – **[Fig 4.2(c)]**

The majority of survey participants (36 responses; 72%) are completing or have completed either an Undergraduate Degree (19; 38%) or Post-Graduate Degree (17; 34%). Many survey participants (36; 72%) also stemmed from institutions based largely in County Cork primarily University College Cork (32; 64%). Notably, 5 survey participants (10%) most recently attended internationally based institutions. Finally, most participants (38; 76%) have been a member of at least one Video Game-Related Institutions Society/Club.

Figure 4.2(a) : Bar Chart Diagram Depicting Self-Reported Latest Education Level (Ongoing or Completed) of Survey Participants:

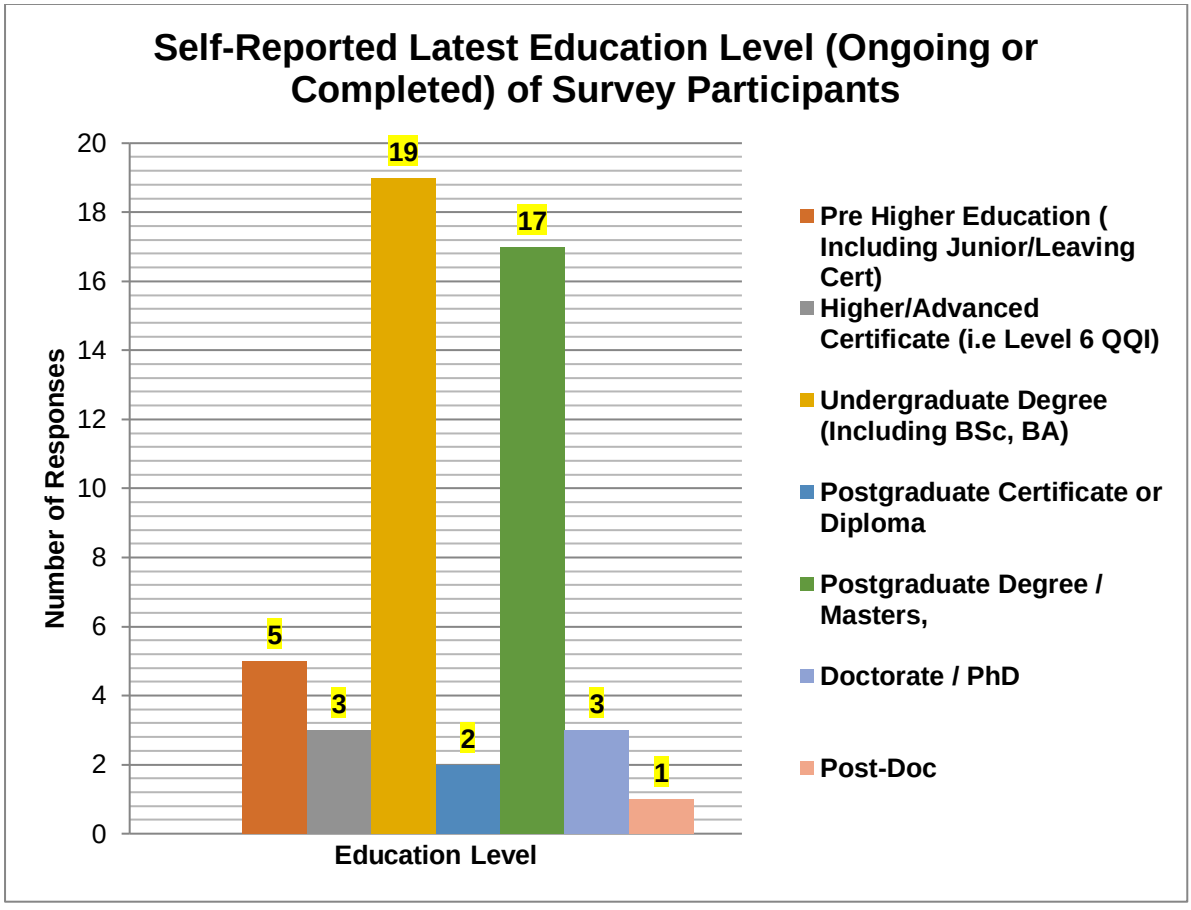


Table 4.2(a): Table Depicting Self-Reported Latest Education Level (Ongoing or Completed) of Survey Participants by Age and Gender Identity.

	Pre-Higher Education (Incl. Junior/Leaving Cert) (1)	Higher/Advanced Certificate (i.e. Level 6 QQI) (2)	Undergraduate Degree (Including BSc, BA) (3)	Postgraduate Certificate or Diploma (4)	Postgraduate Degree / Masters, (5)	Doctorate / PhD (6)	Post-Doc (7)	Summary (Per Age)
18-24yrs	**M: 0 F: 3 NB: 0**	**M: 1 F: 0 NB: 0**	**M: 7 F: 4 NB: 2**	**M: 0 F: 1 NB: 0**	**M: 4 F: 1 NB: 1**	**M: 0 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 12 F: 9 NB: 3**
25-34yrs	**M: 1 F: 1 NB: 0**	**M: 0 F: 1 NB: 0**	**M: 5 F: 0 NB: 0**	**M: 0 F: 0 NB: 1**	**M: 7 F: 3 NB: 1**	**M: 3 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 16 F: 5 NB: 2**
35-44yrs	**M: 0 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 1 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 1 F: 0 NB: 0**	**M: 2 F: 0 NB: 0**
45-54yrs	**M: 0 F: 0 NB: 0**	**M: 1 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 1 F: 0 NB: 0**
55+yrs	**M: 0 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 0 F: 0 NB: 0**	**M: 0 F: 0 NB:0**	**M: 0 F: 0 NB: 0**
Summary (Per Level)	**M: 1 F: 4 NB: 0**	**M: 2 F: 1 NB: 0**	**M: 13 F: 4 NB: 2**	**M: 0 F: 1 NB: 1**	**M: 11 F: 4 NB: 2**	**M: 3 F: 0 NB: 0**	**M: 1 F: 0 NB:0**	**M: 31 F: 14 NB: 5**
Education Level Total	**5**	**3**	**19**	**2**	**17**	**3**	**1**	**50**

Figure 4.2(b) : Bar Chart Diagram Depicting the Self-Reported Most Recent College / University Attended by Survey Participants.

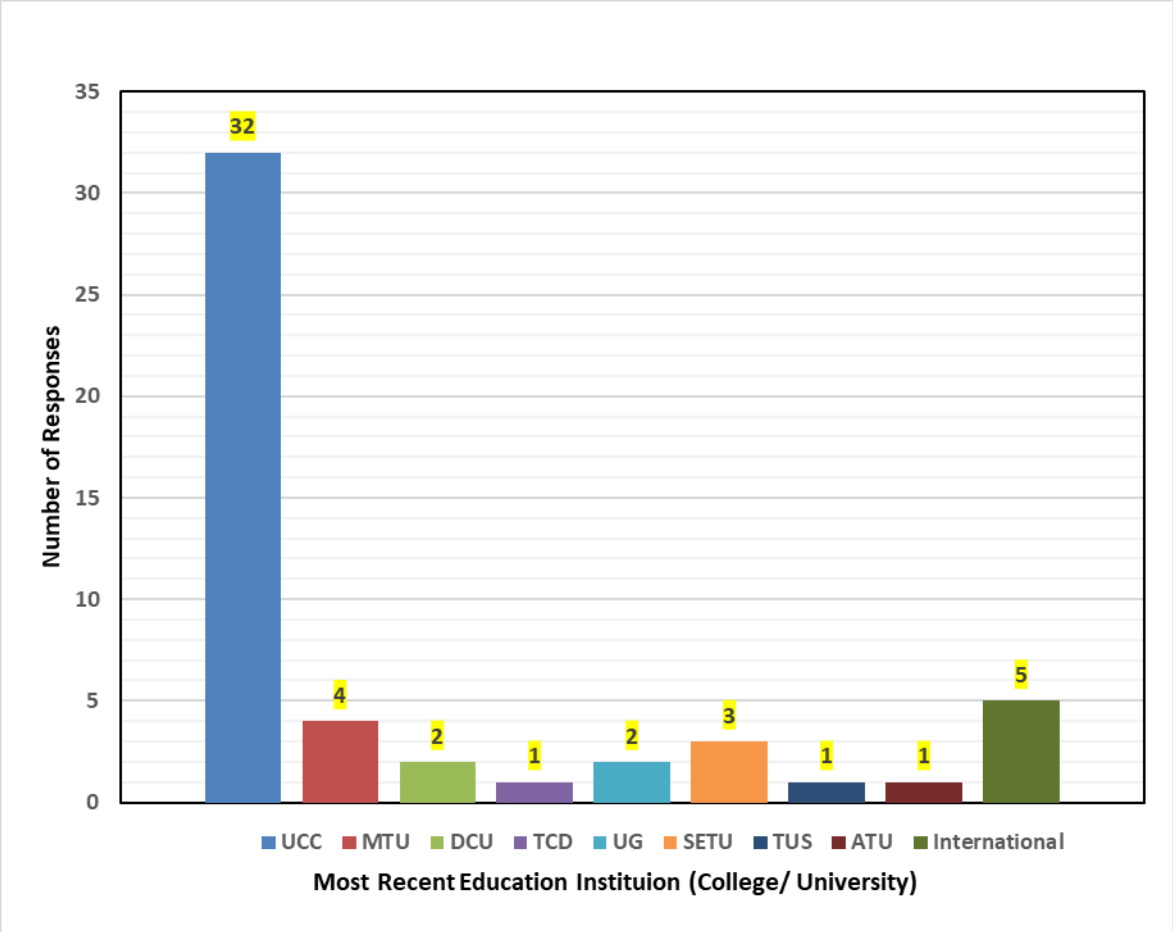


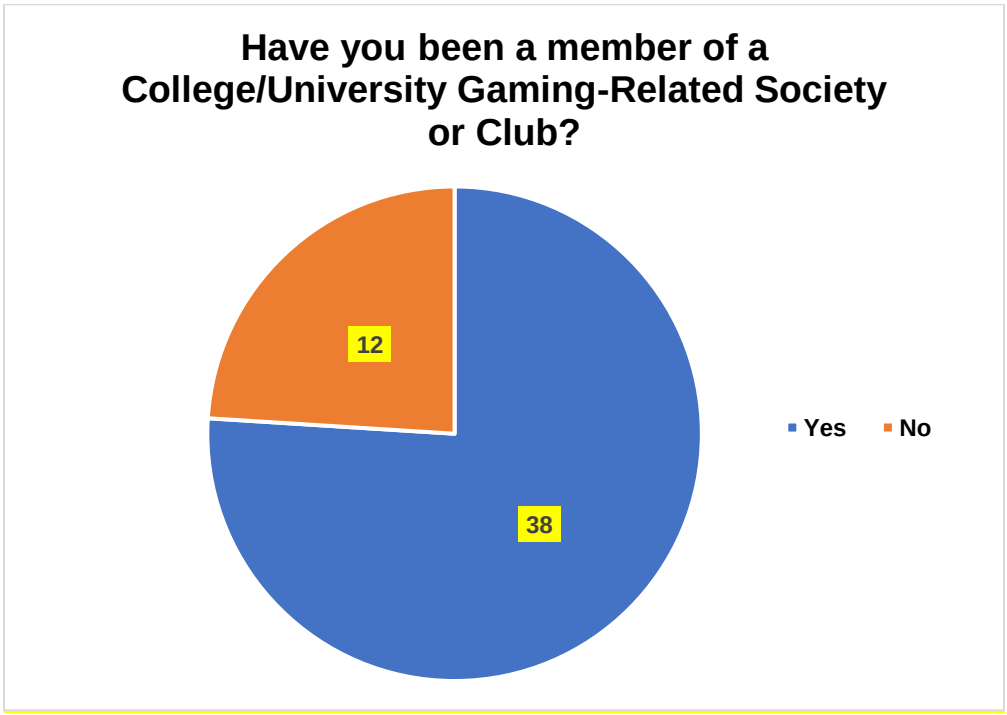
Figure 4.2(b)-1 Institution Key:

- University College Cork - UCC
- Munster Technological University – MTU
- Dublin City University – DCU
- Trinity College Dublin – TCD
- University of Galway - UG
- South East Technological University - SETU
- Technological university of the Shannon - TUS
- Atlantic Technological University – ATU
- International Institutions:
    - Friese Poort, NL
    - University of Groningen, NL
    - Massachusetts Maritime Academy, US
    - University of Colorado Boulder, US
    - University of Kent, UK

Table 4.2(b): Table Depicting the Self-Reported Most Recent College / University Attended by Survey Participants by Age and Gender Identity.

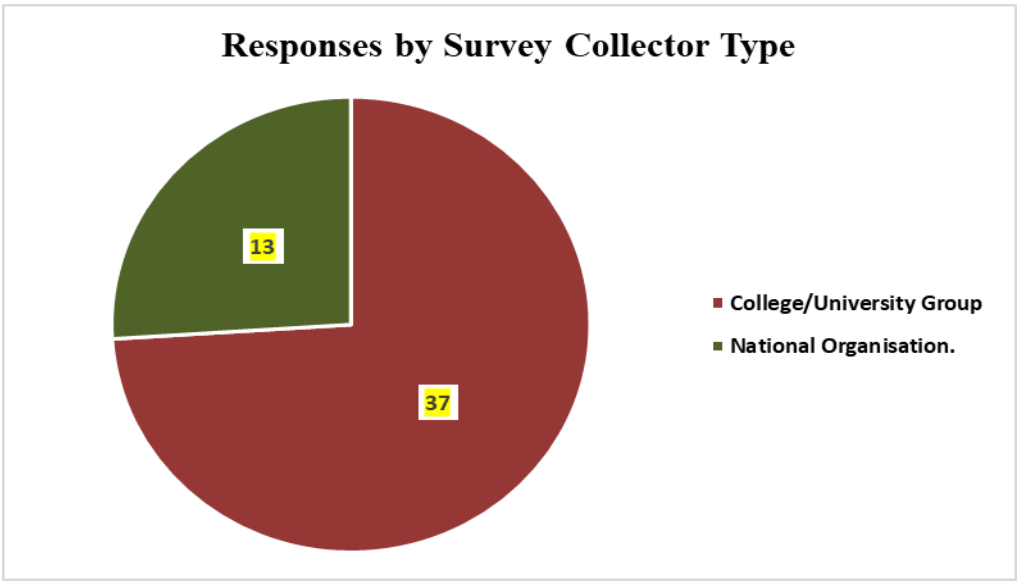
Age	UCC	MTU	DCU	TCD	UG	SETU	TUS	ATU	International	Summary
18-24	M: 9 F: 4 NB: 3	M: 2 F: 1 NB: 0	M: 0 F: 0 NB: 0	M: 0 F: 0 NB: 0	M: 0 F: 1 NB: 0	M: 0 F: 1 NB 0	M: 1 F: 0 NB: 0	M: 0 F: 0 NB: 0	M: 0 F: 2 NB: 0	M: 12 F: 9 NB: 3
25-34	M:12 F: 2 NB 2	M: 1 F: 0 NB: 0	M: 2 F: 0 NB: 0	M: 0 F: 0 NB: 0	M: 0 F: 1 NB: 0	M: 1 F: 0 NB:0	M: 0 F: 0 NB: 0	M: 0 F: 0 NB: 0	M: 0 F: 2 NB: 0	M: 16 F: 5 NB: 2
35-44	M: 0 F: 0 NB:0	M: 0 F: 0 NB:0	M: 0 F: 0 NB:0	M: 1 F: 0 NB: 0	M: 0 F: 0 NB:	M: 0 F: 0 NB:0	M: 0 F: 0 NB: 0	M: 0 F: 0 NB: 0	M: 1 F: 0 NB: 0	M: 2 F: 0 NB: 0
45-54	M: 0 F: 0 N 0	M: 0 F: 0 NB:0	M: 0 F: 0 NB:0	M: 0 F: 0 NB: 0	M: 0 F: 0 NB:	M: 0 F: 0 NB:0	M: 0 F: 0 NB: 0	M:1 F: 0 NB: 0	M: 0 F: 0 NB: 0	M: 1 F: 0 NB: 0
55+	M: 0 F: 0 NB 0	M: 0 F: 0 NB:0	M: 0 F: 0 NB 0	M: 0 F: 0 NB: 0	M: 0 F: 0 NB:0	M: 0 F: 0 NB:0	M: 0 F: 0 NB: 0	M: 0 F: 0 NB: 0	M: 0 F: 0 NB: 0	M: 0 F: 0 NB: 0
Summary	M: 21 F: 6 NB:5	M: 3 F: 1 NB:0	M: 2 F: 0 NB:0	M: 1 F: 0 NB: 0	M: 0 F: 2 NB: 0	M: 1 F: 1 NB:0	M: 1 F: 0 NB: 0	M: 0 F: 0 NB: 0	M: 1 F: 4 NB: 0	M: 31 F: 14 NB: 5
Total	32	4	2	1	2	3	1	1	5	50

Figure 4.2(c): Pie Chart Diagram Depicting the Self- Reported Membership of Survey Participants in Video Game-Related Societies/Clubs.



As illustrated below **[Fig. 4.3],** completed survey responses mainly stemmed from these College/University Video Game-Related groups (37; 74%).

Figure 4.3: Pie Chart Diagram Depicting the Ratio of Survey Responses By Collector.



Section b): Survey Participant Media Preferences, Habits & Opinions

The first figure sets of Section b), **Figure 4.4 (a) & Tables 4.4 1-4 and 4.4(b)1-2** illustrate how survey participants compare their consumption of different media under the following headings:

- How do participants rank their preferences regarding different forms of media? **[Fig. 4.4(a) and Tables 4.41 – Fig. 4.4(a)4]**
- How do participants compare video games as a type of media to other forms of media? **[Fig. 4.4(b)1 – Fig.4.4(b)2]**

Figure 4.4(a) displays media preferences among the survey participants (n=50). Participants ranked each type of media based on their likelihood to consume such media (1st to 4th) and were given the option to indicate that they did not consume a type of media at all (' Not Consumed') :

- **Video Games:** 80% (35 responses) ranked games in the top two types of media.
- **Online Videos & Live Streams (e.g., YouTube, Twitch):** 82% (41 responses) ranked these as 1st or 2nd, with 54% (27 responses) ranking this form of media as 1st.
- **TV/Streamed Shows (e.g., Netflix):** Ranked 3rd or 4th by 70% (35 responses), with 6% (3 responses) not consuming this kind of media.
- **Films**: Ranked 3rd or 4th by 84% (44 responses), with one non-consumption response.

Figure 4.4(a): Stacked Bar Chart Diagram on How Survey Participants Rank Their Preferred Form of Consumable Media:

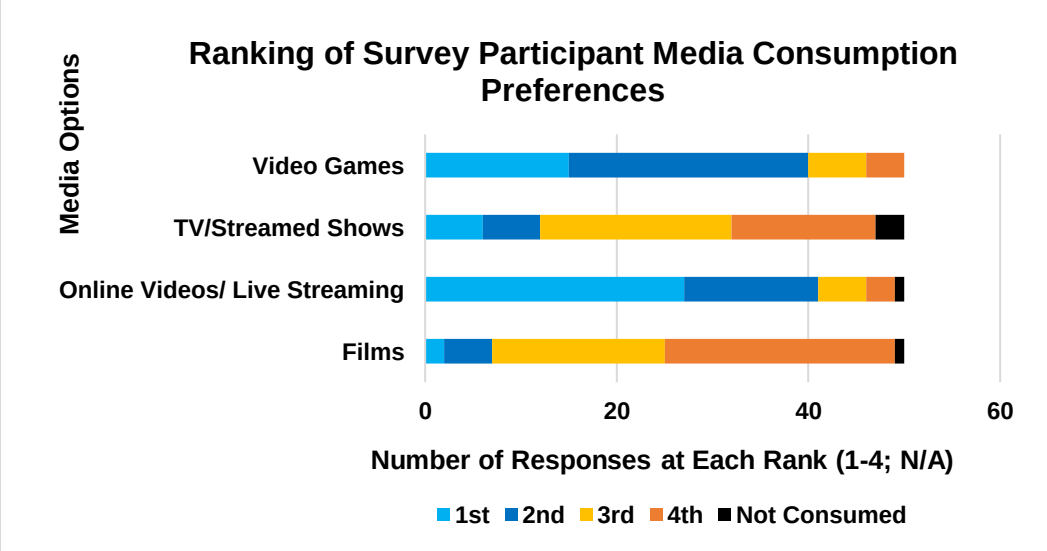


Figure 4.4(a) and Tables 4.4.(a) 1 to 3 present these media rankings, segmented by survey participant gender identity and age group.

Examining Gender:

- Among male-identifying survey participants (n=31):
    - **Online Videos & Live Streams:** Dominated 1st and 2nd ranks, 84% (26 responses)
    - **Video Games:** Also prominent in top two ranks, with 90% (28 responses).
    - **TV/Streamed Shows and Films**: Less favoured, with 28 (90%) and 26 (84%) responses respectively in the lower ranks or non-consumption category.
- Non-binary participants (n=5) mirrored male-identifying patterns, favouring Online Videos & Live Streams and Video Games in 1st or 2nd ranks; TV/Streamed Shows and Films ranked 3rd or 4th.
- Female-identifying participants (n=15) preferred Online Videos & Live Streams, with 8 (67%) placing them in top two ranks. TV/Streamed Shows and Video Games were more evenly spread across ranks. Films were less popular, with 11 (73%) ranking 3rd or 4th.

Examining Age Groups:

- Survey participants aged 18-34 years (first two age groups, n = 47): 39 responses (78%) ranked Online Videos & Live Streams and Video Games in top two ranks.
- Survey participants aged 35 years and older (n=3): Varied in their preferences, but unanimously ranked TV/Streamed Shows as their top choice.

Table 4.4(a)-1: Table Depicting Media Consumption Preference Of Male-Identifying Survey Participants By Age (yrs.)

Media	18 -24	25-34	35-44	45-54	55+	Summary
a) Films	1st: 0 2nd: 1 3rd: 5 4th: 6 N/A: 0	1st: 1 2nd: 1 3rd: 7 4th: 6 N/A: 1	1st: 0 2nd: 0 3rd: 1 4th: 1 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 1 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A:0	1st: 1 2nd: 2 3rd: 13 4th: 14 N/A: 1
b) Online Videos (Essays/ Live Streaming / VODs)	1st: 6 2nd: 5 3rd: 0 4th: 1 N/A: 0	1st: 12 2nd: 1 3rd: 2 4th: 1 N/A: 0	1st: 0 2nd: 2 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 1 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 18 2nd: 8 3rd: 3 4th: 2 N/A: 0
c) Shows	1st: 0 2nd: 0 3rd: 7 4th: 4 N/A: 1	1st: 1 2nd: 1 3rd: 5 4th: 7 N/A: 2	1st: 2 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 1 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 4 2nd: 1 3rd: 12 4th: 11 N/A: 3
d) Video Games	1st: 6 2nd: 6 3rd: 0 4th: 0 N/A: 0	1st: 2 2nd: 13 3rd: 1 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 1 4th: 1 N/A: 0	1st: 0 2nd: 1 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 8 2nd: 20 3rd: 2 4th: 1 N/A: 0

Table 4.4(a)-2: Table Depicting Media Consumption Preference of Non-Binary-Identifying Survey Participants by Age (yrs.)

Media	18 -24	25-34	34-44	44-54	55+	Summary
a) Films	1st: 0 2nd: 0 3rd: 1 4th: 2 N/A: 0	1st: 0 2nd: 1 3rd: 0 4th: 1 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 1 3rd: 1 4th: 3 N/A: 0
b) Online Videos (Essays/ Live Streaming/ VODs)	1st: 1 2nd: 2 3rd: 0 4th: 0 N/A: 0	1st: 1 2nd: 1 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 2 2nd: 3 3rd: 0 4th: 0 N/A: 0
c) Shows	1st: 0 2nd: 0 3rd: 2 4th: 1 N/A: 0	1st: 0 2nd: 0 3rd: 2 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 4 4th: 1 N/A: 0
d) Video Games	1st: 2 2nd: 1 3rd: 0 4th: 0 N/A: 0	1st: 1 2nd: 0 3rd: 0 4th: 1 N/A:0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 3 2nd: 1 3rd: 0 4th: 1 N/A: 0

Table 4.4(a)-3: Table Depicting Media Consumption Preference of Female-Identifying Survey Participants by Age (yrs.)

Media	18 -24	25-34	34-44	44-54	55+	Summary
a) Films	1st: 1 2nd: 2 3rd: 3 4th: 3 N/A: 0	1st: 0 2nd: 0 3rd: 1 4th: 4 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 1 2nd: 2 3rd: 4 4th: 7 N/A: 0
b) Online Videos (Essays/ Live Streaming/ VODs)	1st: 3 2nd: 2 3rd: 2 4th: 1 N/A: 0	1st: 4 2nd: 1 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 7 2nd: 3 3rd: 2 4th: 1 N/A: 0
c) Shows	1st: 2 2nd: 3 3rd: 2 4th: 2 N/A: 0	1st: 0 2nd: 2 3rd: 2 4th: 1 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 2 2nd: 5 3rd: 4 4th: 3 N/A: 0
d) Video Games	1st: 3 2nd: 2 3rd: 2 4th: 2 N/A: 0	1st: 1 2nd: 2 3rd: 2 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 0 2nd: 0 3rd: 0 4th: 0 N/A: 0	1st: 4 2nd: 4 3rd: 4 4th: 2 N/A: 0

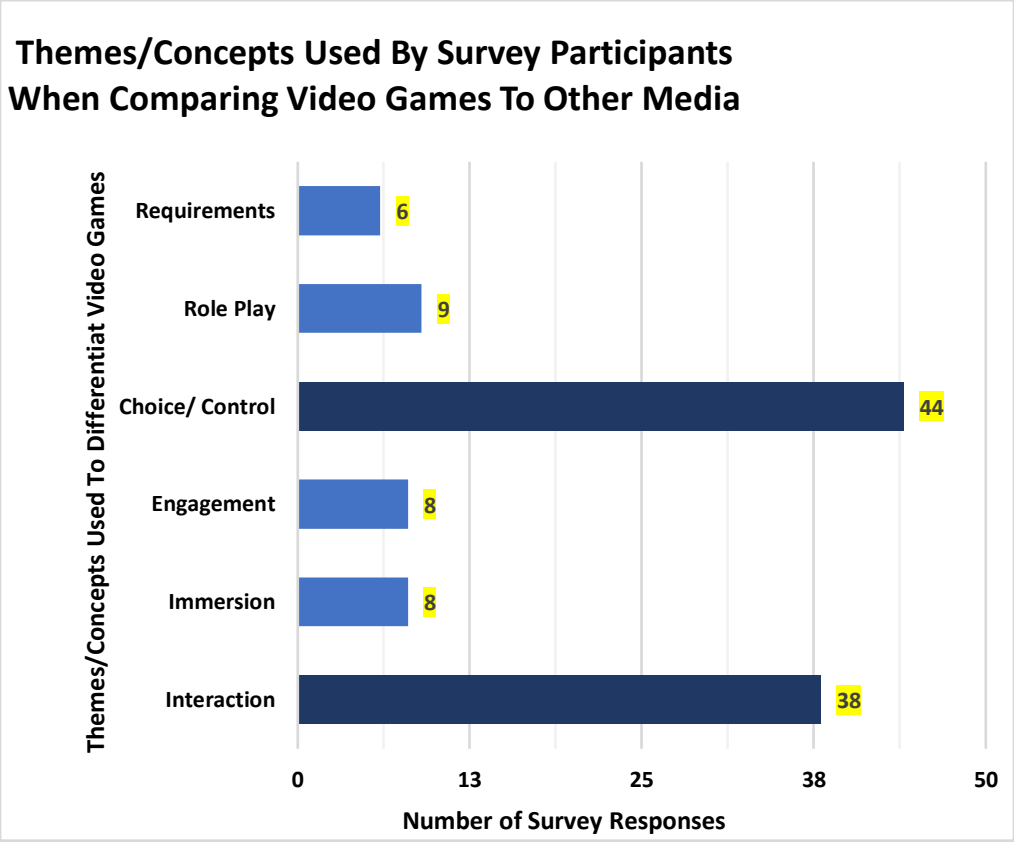
When reviewing the common themes/concepts used by survey participants in comparing video games to other forms of consumable media, the most prevalent themes/concepts (**Dark Blue)** are described below [**Fig. 4.4(b)**]:

- 44 responses (88%) noted that video games offer a greater degree of player choice and control both in the context of avatar movement within the game but in the context of players choosing the game's narrative path, particularly in story rich game experiences.

- 38 responses (76%) noted how video games allow for a more (inter)active experience in comparison to the more passive forms of media such as film and tv.

Additionally, 6 participants (12%) flagged how video games require more from the player, such as monetary cost or greater direct attention than other forms of media **(Light Blue).**

Figure 4.4(b): Bar Chart Depicting Themes/Concepts Used by Survey Participants When Comparing Video Games to Other Forms of Consumable Media



The **Table 4.4(b)** below expands on these common themes/concepts used by survey participants, segmented by gender identity and age group.

Table 4.4(b): Table Themes/Concepts Used By Survey Participants When Comparing Video Games To Other Forms Of Consumable Media, Segmented by Gender Identity and Age.

Themes/Concepts	Response Number (% Total)	Gender (% Gender)	Age Group (% Group)
Games Have Greater Levels of Player Interaction	38 (76%)	M: 22 (71%) F: 13 (98.2%) NB: 3 (60%)	18-24: 22 (91.67%) 25-34: 14 (60.87%) 35-44: 0 (0%) 45-54: 1 (100%) 55+: 0 (N/A)
Games Have Greater Levels of Player Immersion	8 (16%)	M: 4 (12.9%) F: 4 (28.57%) NB: 0 (0%)	18-24: 2 (8.33%) 25-34: 6 (26.09%) 35-44: 1 (50%) 45-54: 0 (0%) 55+: 0 (N/A)
Games Have Greater Levels of Player Engagement	8 (16%)	M: 5 (16.13%) F: 0 (0%) NB: 3 (60%)	18-24: 3 (12.5%) 25-34: 5 (21.74%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
Games Have Greater Levels of Player Choice/ Control	44 (88%)	M: 22 (71%) F: 13 (98.2%) NB: 5 (100%)	18-24: 24 (100%) 25-34: 20 (95.65%) 35-44: 1 (50%) 45-54: 0 (0%) 55+: 0 (N/A)
Games Allow Players to Role Play	9 (18%)	M: 6 (19.35%) F: 2 (14.29%) NB: 1(20%)	18-24: 5 (20.83%) 25-34: 4 (17.39%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
Games Require More from Players	6 (12%)	M: 3 (9.68%) F: 2 (14.29%) NB: 1(20%)	18-24: 3 (12.5%) 25-34: 3 (13%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)

The following figures and tables move on to highlighting what survey participants understand to be a "(Video) Gamer", along with if and why they identify as such.

This begins with **Figure 4.5(a)** below, showing that most survey participants (44; 88%) self-identified as a "(Video) Gamer"

Figure 4.5(a): Pie Chart Illustrating If Survey Participants Self-Identified as "(Video) Gamers"

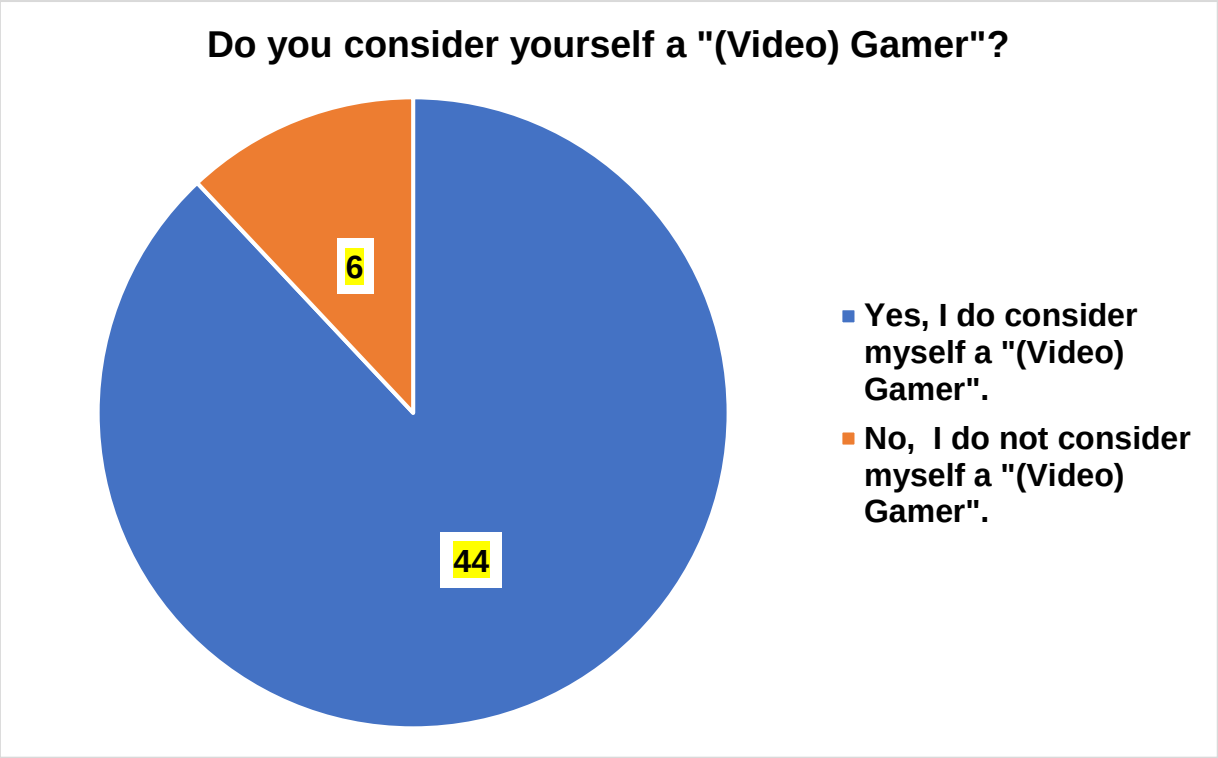


Table 4.5(a) elaborates further on this identity by segmenting survey participant answers by gender identity and age:

Examining Gender:

- Significantly, 30 male-identifying responses considered themselves "Gamers," representing 97%.
- All 5 non-binary responses identified as "Gamers" (100%),
- 9 female-identifying responses (64%) adopted this label.

Examining Age Groups:

- 42 participants aged 18-34 (84%) identified as “Gamers”.
- 2 of the 3 participants aged 35+ (66.6%) identified as "Gamers."

Table 4.5(a): Table Outlining if Survey Participants Self-Identify as a “(Video) Gamer”, Segmented by Gender Identity and Age

Do You Consider Yourself a “(Video) Gamer”?	Response Number (% Total)	Gender (% Gender)	Age Group (% Group)
Yes	44 (88%)	M: 30 (96.8%) F: 9 (64.3%) NB: 5 (100%)	18-24: 21 (87.5%) 25-34: 21 (91.3%) 35-44: 1 (50%) 45-54: 1 (100%) 55+: 0 (N/A)
No	16 (12%)	M: 1 (3.2%) F: 5 (35.7%) NB: 0 (0%)	18-24: 3 (12.5%) 25-34: 2 (8.7%) 35-44: 1 (50%) 45-54: 0 (0%) 55+: 0 (N/A)

Following this, survey participants expanded on their reasoning for identifying as “(Video) Gamers” or not.

- **Figure 4.5(b)** visualises prevalent phrases and keywords used in their elaborations,
- **Table 4.5(b)-** divides their answers based on the gender and gamer identity of participants, along with their age group.

As shown in **Figure 4.5(b):** below, the most common terminology used by participants to describe gamers is that they are seen to consistently play video games presently, constituting 34 responses (68%). Moreover, 20 responses (40%) also highlighted prolonged engagement with games as another associated quality of being a gamer.. As well, 10 (20%) noted that gamers are thought to consume other media, relating to gaming culture, relatively more.
5 responses (10%) linked their gaming-related professions (e.g., streaming, game development) to their heightened gamer identity, while 5 responses also mentioned that even though they like playing games, it is hard to identify as a gamer as it is presently more difficult for them to play games due to other commitments.
Of note, a couple of participants (4%) felt a societal bias against the “(Video) Gamer” label and were hesitant to self-label as such due to this perceived stigma despite actively gaming. Conversely, 2 other survey responses proactively mentioned their disagreement to any perceived stigma.

Figure 4.5(b): Bar Chart Highlighting Key Phrases Used by Survey Participants to Describe Their Self-Identification as a "Video Gamer":

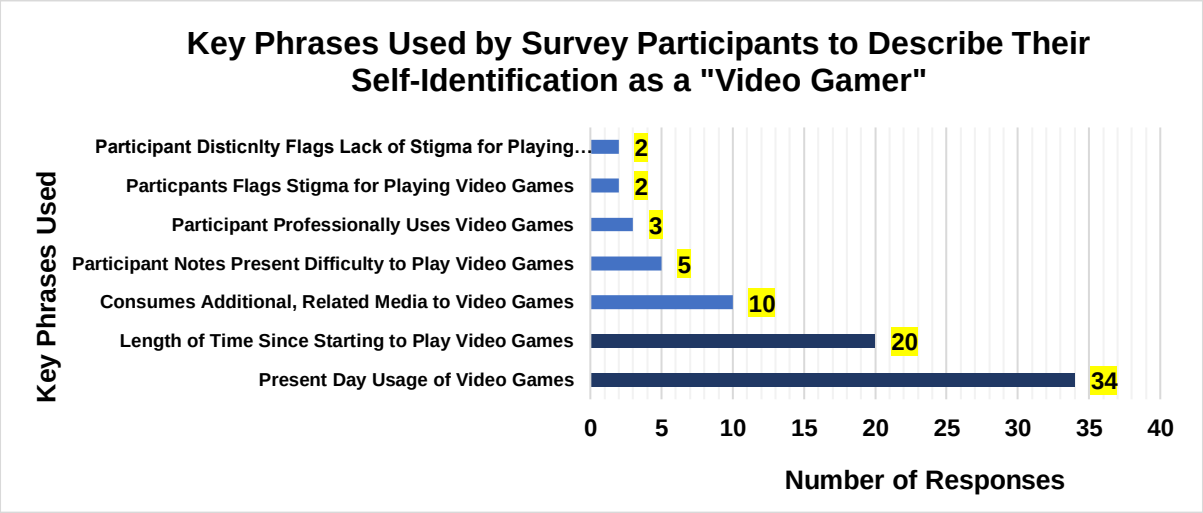


Table 4.5(b): Table Highlighting Key Phrases Used by Survey Participants to Describe Their Self-Identification as a "Video Gamer", Segmented by Gamer and Gender Identity & Age.

Noted Phrases Used by Survey Participants	Response Number (% Total)	Gamer (% Group)	Gender (% Gender)	Age Group (% Group)
Length of Time Since Starting to Play Video Games	20 (40%)	YES: 19 (43.2%) NO: 1 (16.7%)	M: 19 (61.3%) F: 1 (7.1%) NB: 0 (0%)	18-24: 7 (29.17%) 25-34: 11 (47.83%) 35-44: 2 (100%) 45-54: 0 (0%) 55+:0 (N/A)
Present Day Usage of Video Games	34 (68%)	YES: 32 (72.7% NO: 2 (33.3%)	M: 22 (70.1%) F: 10 (71.4%) NB: 2 (40%)	18-24: 16 (66.67%) 25-34: 15 (65.22%) 35-44: 2 (100%) 45-54: 1 (100%) 55+: 0 (N/A)
Consumes Additional, Related Media to Video Games	10 (20%)	YES: 10 (22.7%) NO: 0 (0%)	M: 1(3.2%) F: 6 (42.9%) NB: 3 (60%)	18-24: 6 (25%) 25-34: 4 (17.39%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
Professionally Uses Video Games	3 (6%)	YES: 3(6.8%) NO: 0(0%)	M: 2 (6.5%) F: 1(7.1%) NB: 0(0%)	18-24: 0 (0%) 25-34: 2 (8.7%) 35-44: 0 (0%) 45-54: 1 (100%) 55+: 0 (N/A)
Flags Stigma for Playing Video Games	2(4%)	YES: 2(4.6%) NO: 0(0%)	M: 1 (3.2%) F: 1(7.1%) NB: 0(0%)	18-24: 2 (8.33%) 25-34: 0 (0%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
Actively Flags Lack of Stigma for Playing Video Games	2(4%)	YES: 2 (4.6%) NO: 0(0%)	M: 2 (6.5%) F: 0 (0%) NB: 0 (0%)	18-24: 1 (4.17%) 25-34: 1 (4.35%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
Notes Present Difficulty to Play Video Games	5(10%)	YES: 4 (9%) NO: 1 (16.7%)	M: 4 (13%) F: 0(0%) NB: 1(20%)	18-24: 2(8.33%) 25-34: 1 (4.35%) 35-44: 2 (100%) 45-54: 0 (0%) 55+: 0 (N/A)

Survey participants were then asked to note their preferred device type to play video games on [**Figures 4.5(c) and Table 4.5(c)].**

Figure 4.5(c) illustrates the relative preferences between the four potential gaming 'Device Groupings' below:

- Personal Computer/PC – e.g., Desktop; Laptop
- Fixed Video Gaming Console – e.g., Xbox; PlayStation
- Handheld Video Game Console – e.g., Nintendo Switch; PlayStation Portable
- Mobile/Cell Phone

There is a clear majority of survey participants (45; 90%) that prefer using either a Personal Computer/PC (25; 50%) or Fixed Video Gaming Console (20; 40%).

Figure 4.5(c): Pie Chart illustrating the Preferred Video Game 'Device Groupings' Used by Survey Participants

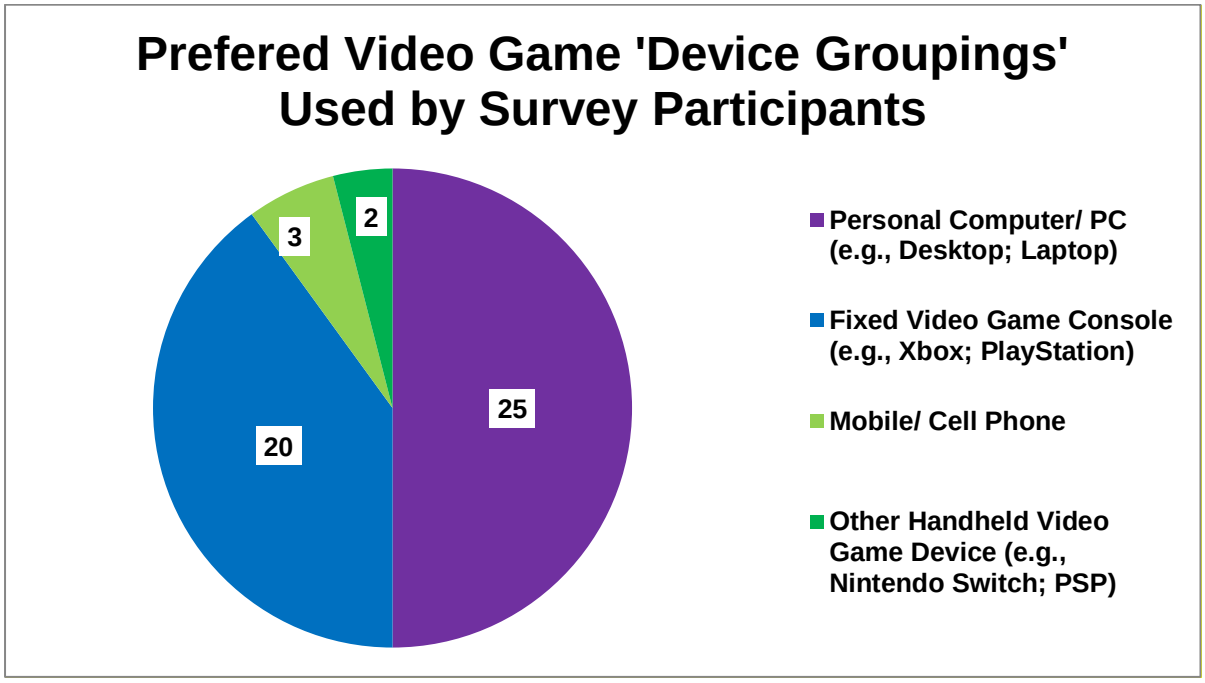


Table 4.5(c) subsequently provides further insight into such choices. Predominantly, "Choices of Available Games" (28; 56%), "Ease of Using Device" (18; 36%), and "Perceived Value of Device" (15; 30%) were cited by survey participants.

Table 4.5(c): Table of Provided Reasons for the Preferred Video Game 'Device Groupings' Used by Survey Participants:

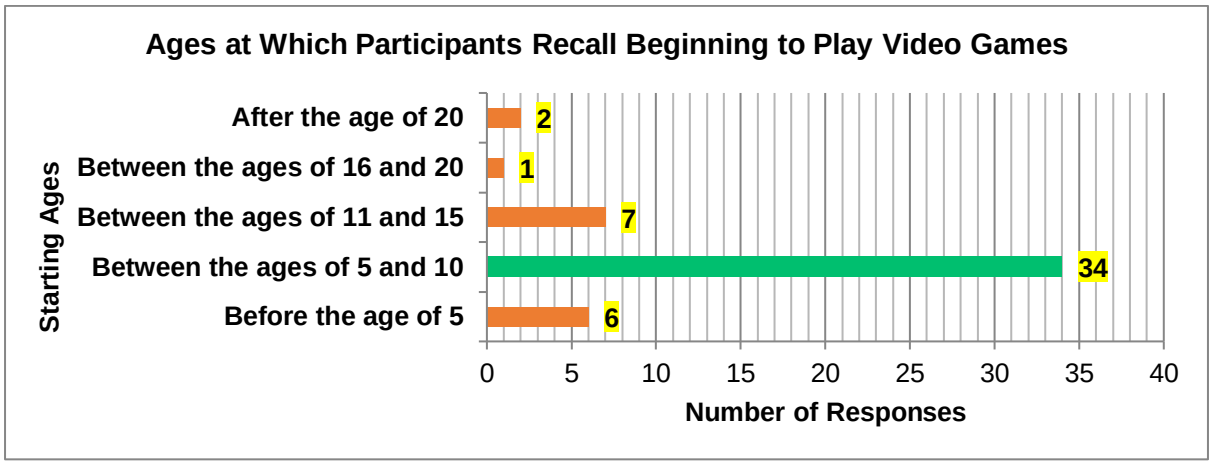
Common Phrases Used	Number of Responses (%) (n=50)
Choices of Games Available on Device	28 (56%)
Ease of Use of Device	18 (36%)
Perceived Value for Money for Using Device	15 (30%)
Has Used Preferred Device for a Significant Amount of Time	15 (30%
Additional Use of Device Beyond Gaming	8 (16%)

Following this, **Figures 4.5(d) and Table 4.5(d)** present data on the ages at which survey participants remember beginning their engagement with video games.

Within **Figure 4.5(d)**:

- A majority 40 (80%) survey participants note starting to play games before the age of 10 **(Green).**
- The age bracket of 5 to 10 years was the most common starting age, encapsulating 34 (68%) responses.
- This is followed by the 11 to 15 age range with 7 (14%) responses.
- 6 (12%) respondents began gaming before the age of five, while the remaining 3 (6%) started at 16 years or older.

Figure 4.5(d): Bar Chart Showing the Age at Which Survey Participants Recall Starting to Play Video Games:



The **Table 4.5(d)** below expands on their answers based on the gender and gamer identity of participants, along with their age group.

- Regardless of gamer status, most participants began playing games between 5 and 10 years old—31 self-identified gamers (70.5%) and 3 non-gamers (50%).
- This pattern extends to gender identity, with 22 male-identifying (71%) and 10 female-identifying (71.4%) responses. Non-binary responses are more diverse, with 2 starting between ages 5 and 10, with 1 response in each higher age group.
- Among participants aged 18-24 (62.5%) and 25-34 (78.3%), 15 and 18, respectively, started between 5 and 10. Older participants show broader distribution.

Table 4.5(d): Table Showing the Age at Which Survey Participants Recall Starting to Play Video Games, Segmented by Gender and Gamer Identity, & Age.

When did you start playing video games?	Response Number (% Total)	Gamer (% Group)	Gender (% Gender)	Age Group (% Group)
<5yrs	6 (12%)	YES: 5 (11.36%) NO: 1 (16.67)	M: 4 (12.9%) F: 2 (14.3%) NB: 0 (0%)	18-24: 3 (12.5%) 25-34: 3 (13.04%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
5-10yrs	34 (68%)	YES: 31 (70.45%) NO: 3 (50%)	M: 22(70.97%) F: 10 (71.43%) NB: 0 (0%)	18-24: 15 (62.5%) 25-34: 18 (78.26%) 35-44: 1 (50%) 45-54: 0 (0%) 55+: 0 (N/A)
11-15yrs	7 (14%)	YES: 5 (11.36%) NO: 2 (33.3%)	M: 5 (16.13%) F: 5 (16.13%) NB: 2 (40%)	18-24: 4 (16.67%) 25-34: 1 (4.35%) 35-44: 1 (50%) 45-54: 1 (100%) 55+: 0 (N/A)
16-20yrs	1 (2%)	YES: 1 (2.27%) NO: 0 (0%)	M: 0 (0%) F: 0 (0%) NB: 1 (20%)	18-24: 1 (4.17%) 25-34: 0 (0%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
>20yrs	2 (4%)	YES: 2 (4.55%) NO: 0 (0%)	M: 0 (0%) F: 0 (0%) NB: 1 (20%)	18-24: 1 (4.17%) 25-34: 1 (4.35%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)

The next set of questions explored survey participants' preferences in game selection, highlighting two key aspects of video gaming: **[Fig. 4.6(a) and 4.6(b)]**

- Preferred Video Game Genre – **[Fig 4.6(a)]**
- Preferred Video Game Components – **[Fig 4.6(b)]**

Figure 4.6(a) illustrates the most preferred genres reported by survey participants, including the Top 3 genre, each of which were mentioned by at least 70% of respondents **(Dark Red).**

- **RPGs (Role-Playing Games)** lead with 44 responses (88%). Such games allow players to assume the roles of characters and navigate complex narratives.
- **Adventure Games** follow closely at 42 responses (82%), and are characterised by exploration, puzzle-solving, and story-driven player experiences.
- **Action Games** round out this triumvirate, selected by 36 responses (72%), and are known for fast-paced gameplay and challenges requiring quick reflexes.

Figure 4.6(a): Bar Chat Depicting Preferred Video Game Genres of Survey Participants

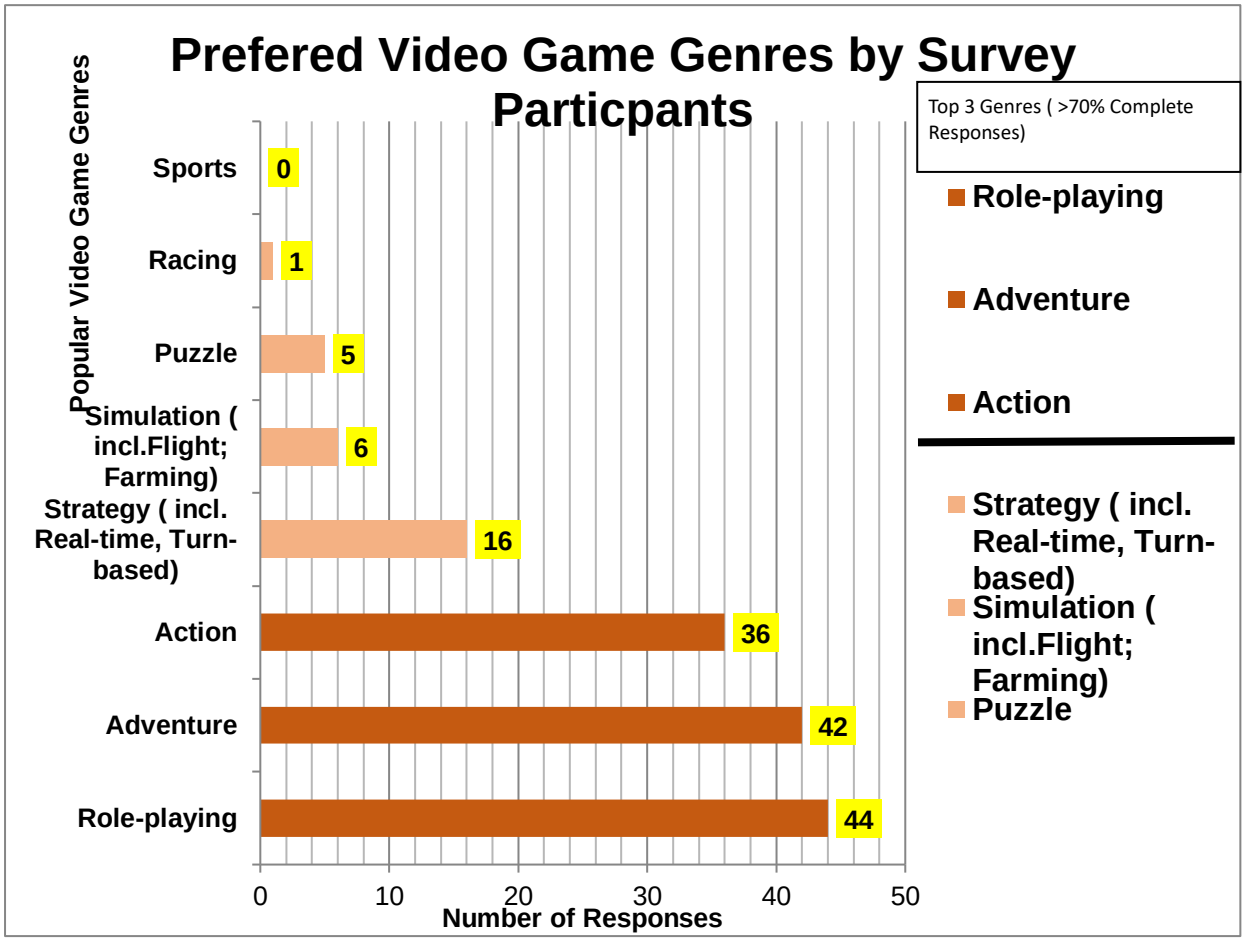
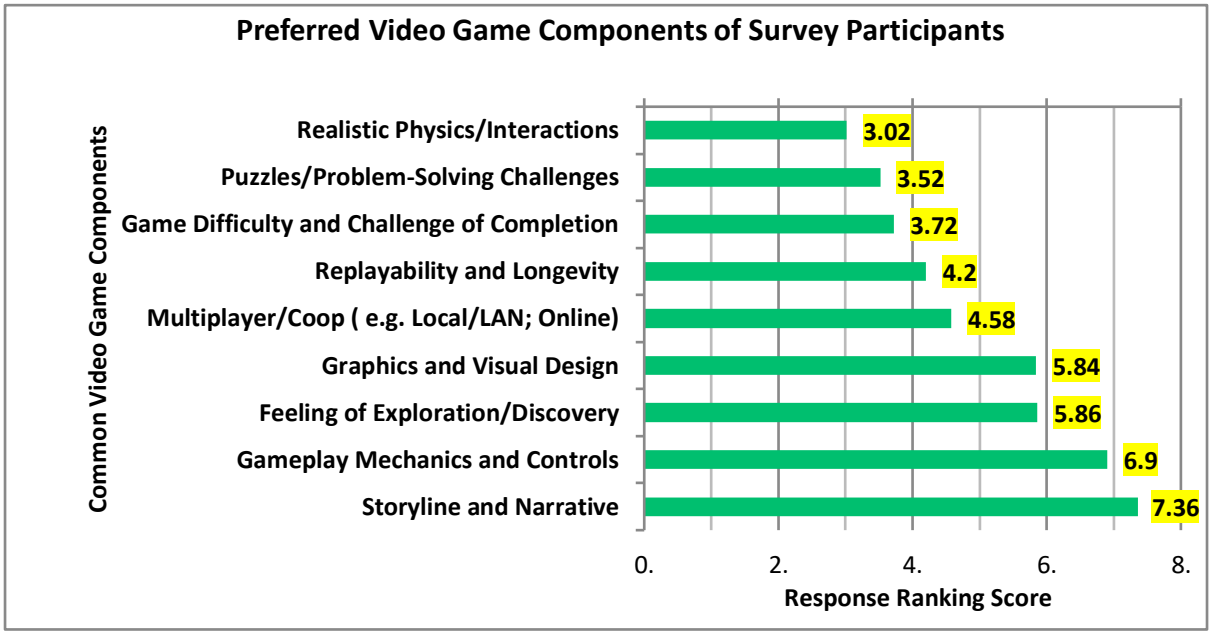


Figure 4.6(b) explores participant game preferences further, focusing on what specific components of video games are most favoured. It presents the weighted preferences of participants, ranked on a scale from 1 (most crucial) to 9 (least crucial) in terms of gaming enjoyment. SurveyMonkey used this weighted system, creating a Response Ranking Score. The highest-ranked component receives the maximum weight (9), while the lowest-ranked gets a weight of 1, (an inverse of the ranking order). This process functions to elucidate the most crucial components of games that can sway player choices.

The most common preferences are presented below:

- **Storyline and Narrative (7.36):** The overarching plot and the way it is conveyed to the player.
- **Gameplay Mechanics and Player Controls (6.9):** The in-game interfaces and physical systems that players interact with and manipulate during play.
- **Feeling of Exploration/Discovery (5.84):** The sense of wonder, journey, and newness experienced by players navigating the game world.
- **Graphics and Visual Design (5.86):** The visual aesthetics, art direction, and graphical fidelity of the game.

Figure 4.6(b): Bar Chat Depicting Preferred Video Game Components of Survey Participants



Staying within the realm of video game preferences, **Figures 4.7(a)** and **4.7(b)** provide data on what specific video games are known and played by survey participants.

- Video Games 'Heard Of' by Survey Participants – **[Fig 4.7(a)]**
- Video Games 'Played' by Survey Participants – **[Fig 4.7(b)]**

Both figures jointly illustrate the gap between participants' awareness of specific video games and their actual experience playing them. The **blue bars**, representing AAA games, consistently overshadow the **green bars**, which symbolize Indie games.
A common trend can be observed in the decline in numbers from games participants have 'heard of', to games they have 'played'. This trend between AAA and Indie games in the 'played' category closely mirrors visually their presence in the 'heard of' category.

- However, an exception is observed with the widely recognized Indie Game, *Stardew Valley*. A remarkable 45 participants (90%) were familiar with it, with 24 (48%) having played the game. This is the highest played Indie game.

- It's worth noting that *Hellblade* depicted by the **orange bar**, ranks second lowest in both familiarity and play experience.

Figures 4.7(a): Bar Chart Showing What Video Games Survey Participants Have 'Heard Of':

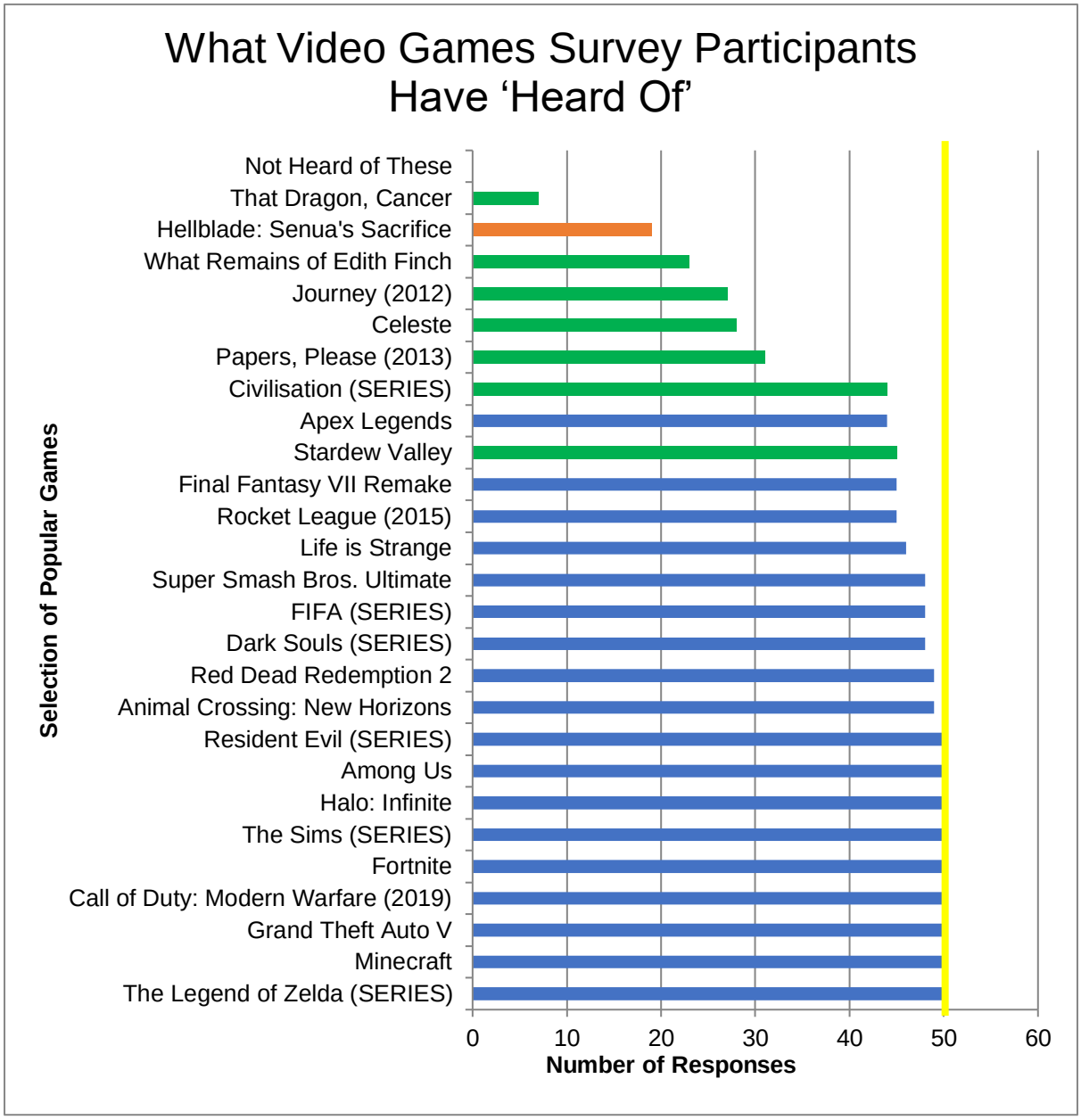


Figure 4.7(a) Key:

- Triple A/ 'AAA' – **Blue Bars**
- Independently Developed / 'Indie' – **Green Bars**
- *Hellblade, Senua's Sacrifice* (Independent AAA) – **Orange Bar**
- Total Completed Responses (n=50) – **Yellow, Vertical Line.**

Figures 4.7(b): Bar Chart Showing What Video Games Survey Participants Have 'Played':

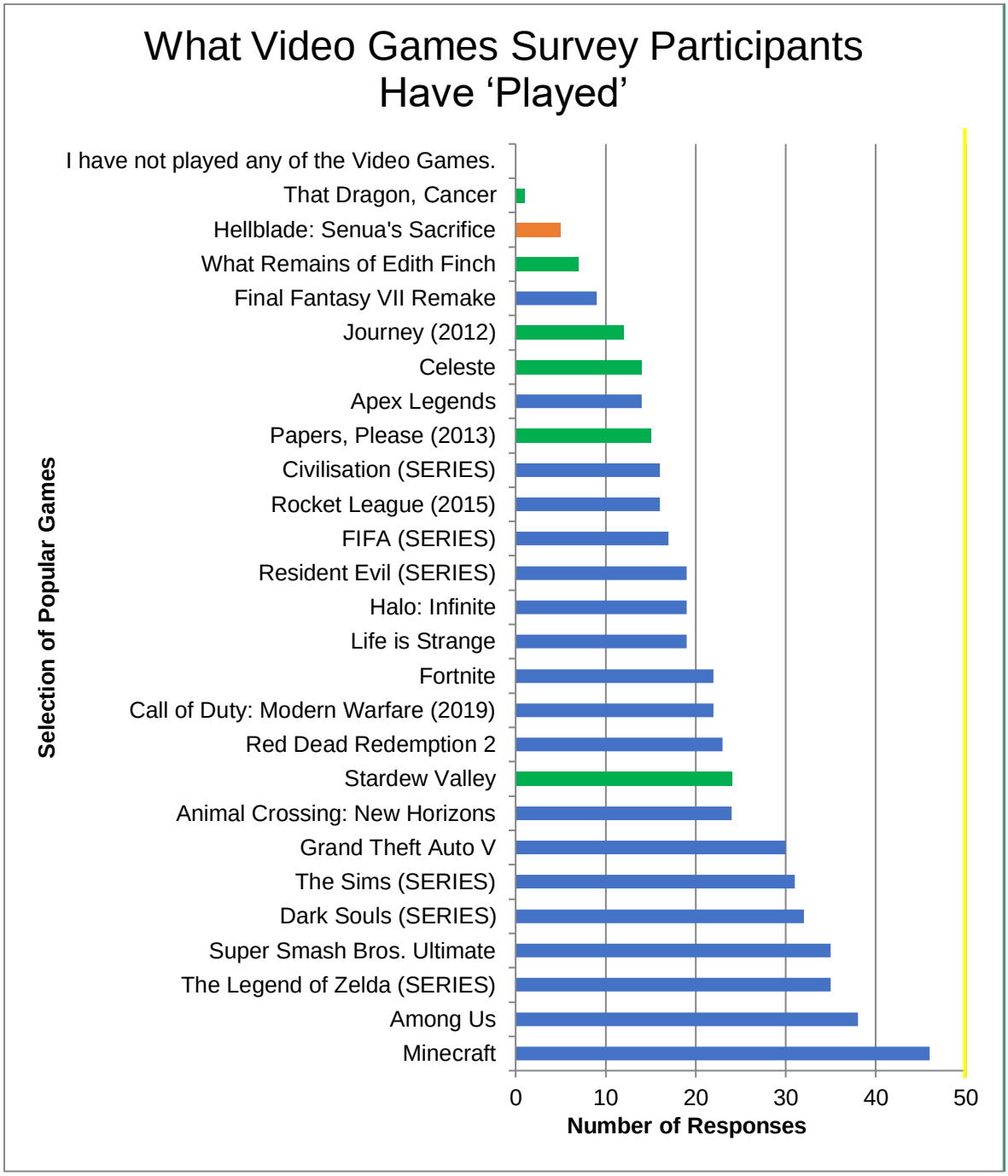


Figure 4.7(b) Key:

- Triple A/ 'AAA' – **Blue Bars**
- Independently Developed / 'Indie' – **Green Bars**
- *Hellblade, Senua's Sacrifice* (Independent AAA) – **Orange Bar**
- Total Completed Responses (n=50) – **Yellow, Vertical Line.**

To conclude this section on ***Media Preferences Habits & Opinions,*** **Figure sets 4.8(a)** to **4.8(d)** and **Tables 4.8 (a) to 4.8(d)** provide the detail on the self-reported average gaming behaviours of participants during a standard week.
Figures 4.8(a) to 4.8(d) are bar charts depicting the overall survey participant details, while the corresponding **Tables 4.8(a) to 4.8(d)** expand on this and present these habits through the lenses of gamer and gender identity, and age groups.

- **Figure 4.8(a)** shows that 32 responses (64%) allocate 1 to 5 hours for gaming on weekdays. This is divided into two main groups: 1 to 3 hours (17 responses) and >3 to 5 hours (15 responses). Notably, 47 responses (94%) engage in at least an hour of gameplay weekly.

- **Figure 4.8(b)** focuses on average weekend play. A similar peak proportion of 36 responses (72%) spend 3 to 7 hours gaming. This increase suggests more time allotted to weekend gaming than on weekdays.

- **Figures 4.8(c)** and **4.8(d)** go deeper into individual session frequencies and duration**.**

    - **Figure 4.8(c)** highlights that 39 responses (78%) play games at least three times weekly.

    - **Figure 4.8(d)** shows that 35 responses (70%) indicate that average sessions last between 1 to 4 hours.

Figure 4.8(a): Bar Chart Highlighting Reported Average Hours Spent by Survey Participants During Weekdays [Monday to Friday]:

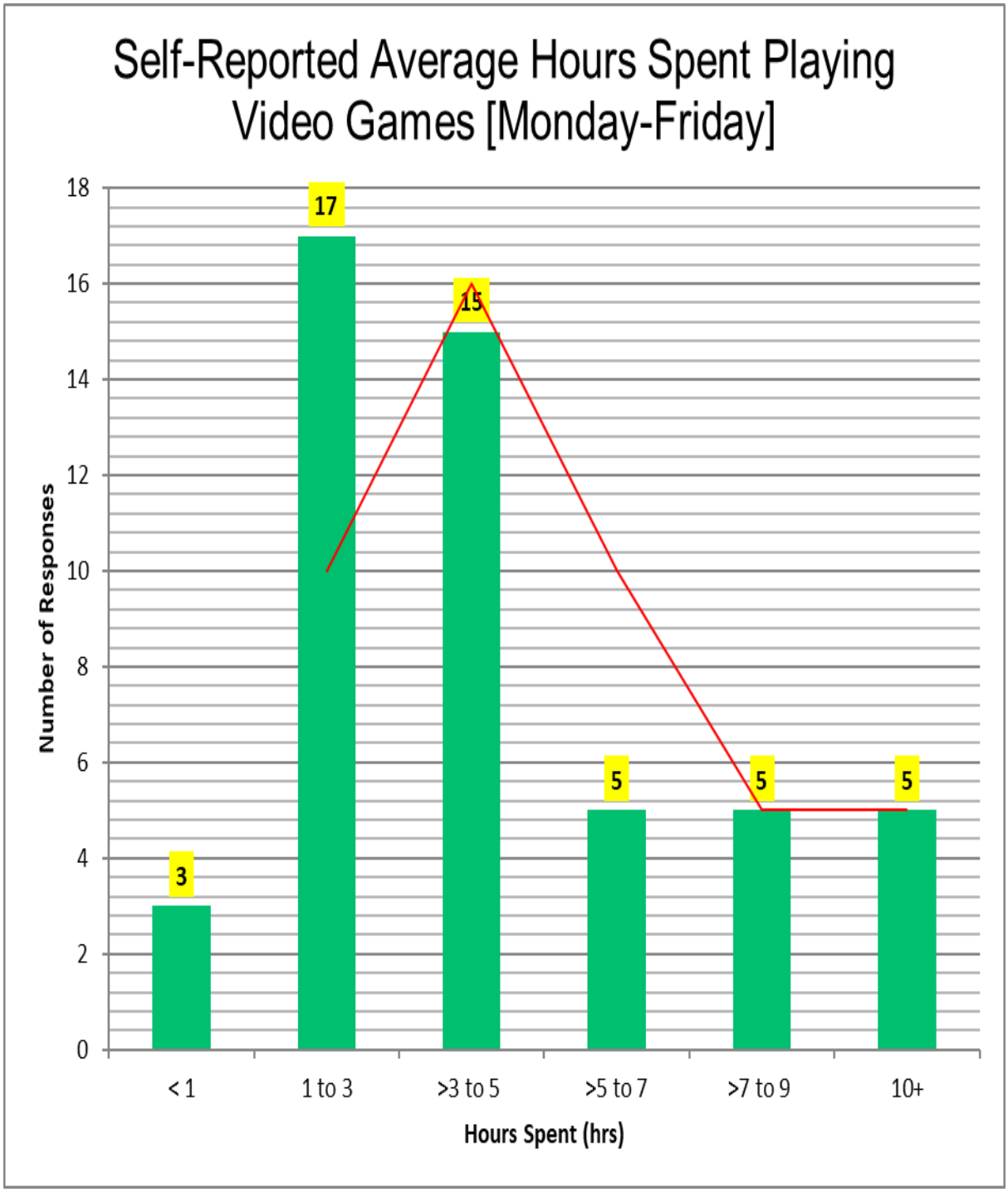


Table 4.8(a): Table Highlighting Reported Average Hours Spent by Survey Participants During Weekdays [Monday to Friday] by Gender, Age and Gamer Identity:

Mon-Fri Hours Played?	Response Number (% Total)	Gamer (% Group)	Gender (% Gender)	Age Group (% Group)
< 1hr	3 (6%)	YES: 1 (2.27%) NO: 2 (33.33%)	M: 1 (3.23%) F: 2 (14.29%) NB: 0 (0%)	18-24: 2 (8.33%) 25-34: 1 (4.35%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
1-3hr	17 (34%)	YES: 15 (34.1%) NO: 2 (33.33%)	M: 11 (35.48%) F: 4 (28.57%) NB: 2 (40%)	18-24: 8 (33.33%) 25-34: 8 (34.78%) 35-44: 1 (50%) 45-54: 0 (0%) 55+: 0 (N/A)
>3-5hr	15 (30%)	YES: 15 (34.1%) NO: 0 (0%)	M:10 (32.26%) F: 4 (28.57%) NB: 1 (20%)	18-24: 6 (25%) 25-34: 9 (39.13%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
>5-7hr	5 (10%)	YES: 5 (11.36%) NO: 0 (0%)	M: 3 (9.68%) F: 1 (7.14%) NB: 1 (20%)	18-24: 2 (8.33%) 25-34: 2 (8.70%) 35-44: 0 (0%) 45-54: 1 (100%) 55+: 0 (N/A)
>7-9hr	5 (10%)	YES: 3 (6.82%) NO: 2 (33.33%)	M: 3 (9.68%) F: 2 (14.29%) NB: 0 (0%)	18-24: 3 (12.5%) 25-34: 1 (4.35%) 35-44: 1 (50%) 45-54: 0 (0%) 55+: 0 (N/A)
10+ hrs	5 (10%)	YES: 5 (11.36%) NO: 0 (0%)	M: 3 (9.68%) F: 1 (7.14%) NB: 1 (20%)	18-24: 3 (12.5%) 25-34: 2 (8.7%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)

Figure 4.8(b): Bar Chart Highlighting Reported Average Hours Spent by Survey Participants During Weekends [Saturday + Sunday]:

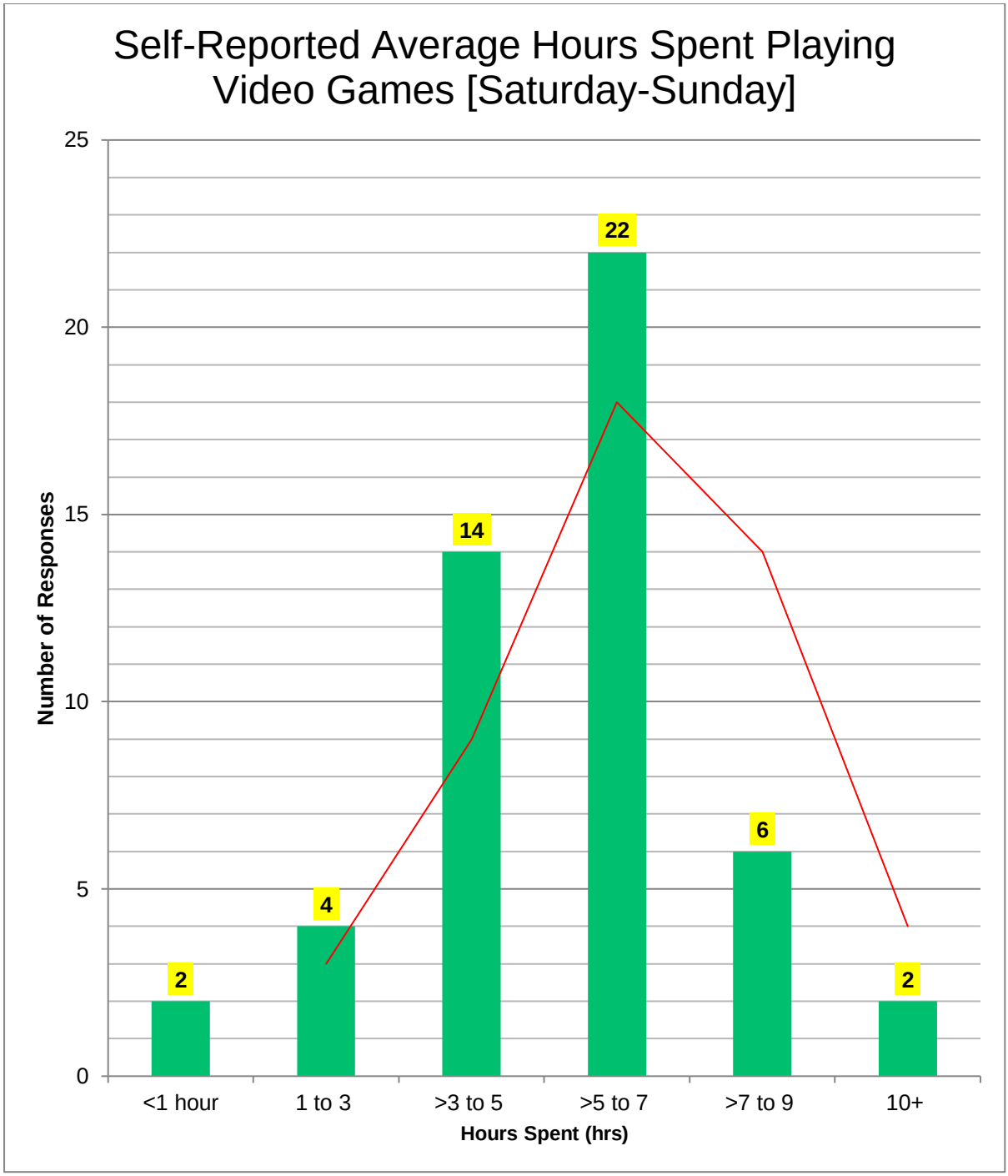


Table 4.8(b): Table Highlighting Reported Average Hours Spent by Survey Participants During Weekends [Saturday + Sunday] by Gender, Age and Gamer Identity:

Mon-Fri Hours Played	Response Number (% Total)	Gamer (% Group)	Gender (% Gender)	Age Group (% Group)
< 1hr	2 (4%)	YES: 0 (0%) NO: 2 (33.33%)	M: 0 (0%) F: 2 (14.29%) NB: 0 (0%)	18-24: 8.33%) 25-34: 0 (0%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
1-3hr	4 (8%)	YES: 3 (6.82%) NO: 1 (16.67%)	M: 1 (7.14%) F: 2 (6.45%) NB: 1 (20%)	18-24: 0 (0%) 25-34: 3 (13.04%) 35-44: 1 (50%) 45-54: 0 (0%) 55+: 0 (N/A)
>3-5hr	14 (28%)	YES: 13 (29.55%) NO: 1 (16.67%)	M: 7 (22.58%) F: 5 (35.71%) NB: 2 (40%)	18-24: 7 (29.17%) 25-34: 7 (30.43%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
>5-7hr	22 (44%)	YES: 20 (45.45%) NO: 2 (33.33%)	M: 17 (54.84%) F: 4 (28.57%) NB: 1 (20%)	18-24: 9 (37.50%) 25-34: 11 (47.83%) 35-44: 1 (50%) 45-54: 1 (100%) 55+: 0 (N/A)
>7-9hr	6 (12%)	YES: 6 (13.64%) NO: 0 (0%)	M: 4 (12.9%) F: 2 (14.29%) NB: 0 (0%)	18-24: 4 (16.67%) 25-34: 2 (8.7%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
10+ hrs	2 (4%)	YES: 2 (4.55%) NO: 0 (0%)	M: 1 (3.23%) F: 0 (0%) NB: 1 (20%)	18-24: 2 (8.33%) 25-34: 0 (0%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)

Figure 4.8(c): Bar Chart Highlighting Reported Average Number of Game Sessions Played by Survey Participants per Whole Week:

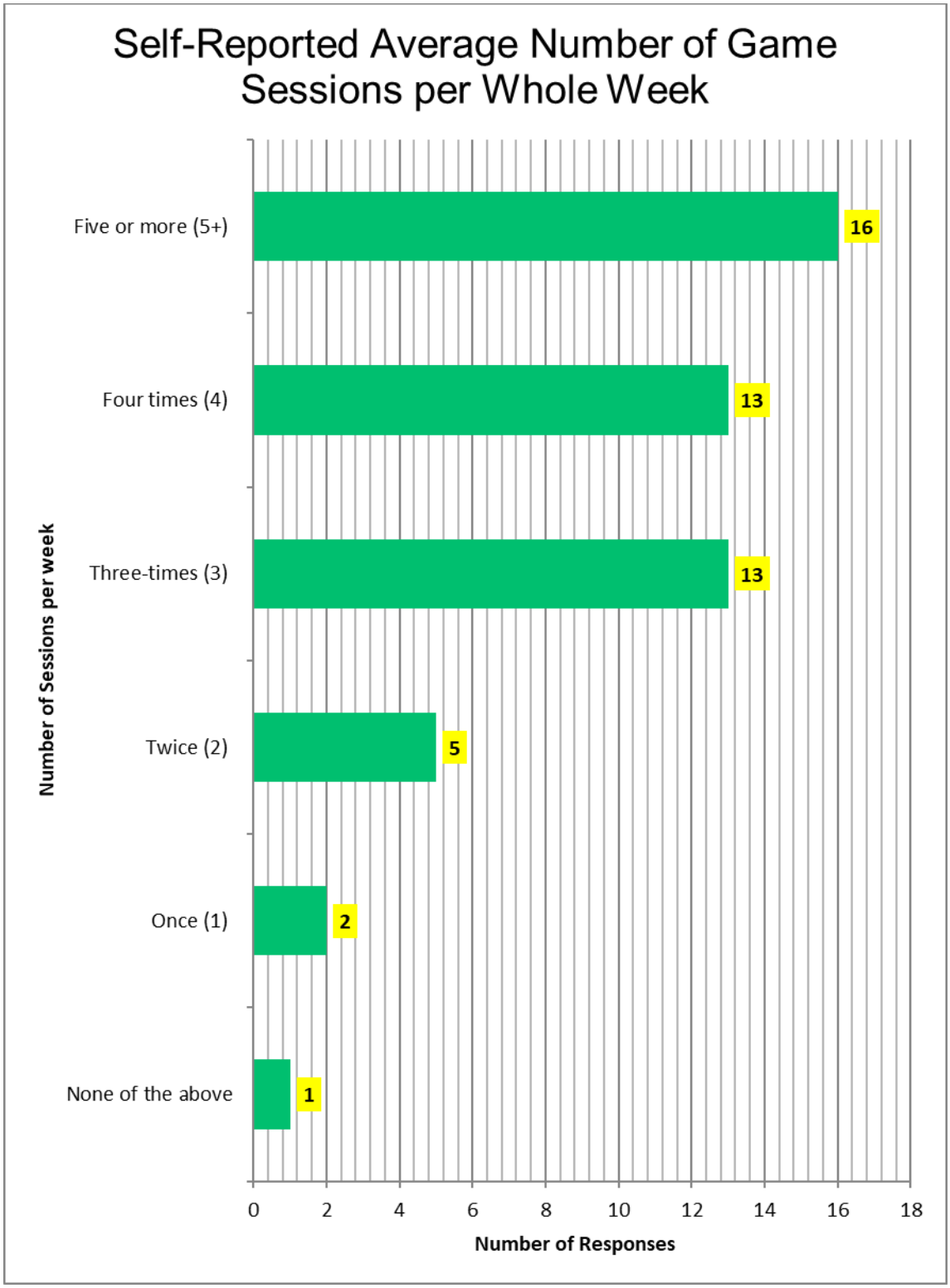


Table 4.8(c): Table Highlighting Reported Average Number of Game Sessions Played by Survey Participants per Whole Week by Gender, Age and Gamer Identity:

No. of Sessions Per Whole Week	Response Number (% Total)	Gamer (% Group)	Gender (% Gender)	Age Group (% Group)
1	2 (4%)	YES: 1 (2.27%) NO: 1 (16.67%)	M: 1 (3.23%) F: 1 (7.14%) NB: 0 (0%)	18-24: 1 (4.17%) 25-34: 1 (4.35%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
2	5 (10%)	YES: 3 (6.82%) NO: 2 (33.33%)	M: 1 (3.23%) F: 1 (14.29%) NB: 2 (40%)	18-24: 3 (12.5%) 25-34: 2 (8.7%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
3	13 (26%)	YES: 13 (29.55%) NO: 0 (0%)	M: 8 (25.81%) F: 3 (21.43%) NB: 1 (20%)	18-24: 4 (16.67%) 25-34: 9 (39.13%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
4	13 (26%)	YES: 13 (29.55%) NO: 0 (0%)	M: 10 (32.26%) F: 3 (21.43%) NB: 0 (0%)	18-24: 6 (25%) 25-34: 7 (30.43%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
5+	16 (32%)	YES: 14 (31.82%) NO: 2 (33.33%)	M: 11 (35.48%) F: 3 (21.43%) NB: 2 (40%)	18-24: 9 (37.50%) 25-34: 4 (17.39%) 35-44: 2 (100%) 45-54: 1(100%) 55+: 0 (N/A)
None of the Above	1 (2%)	YES: 0 (0%) NO: 1 (16.67%)	M: 0 (0%) F: 1(7.14%) NB: 0 (0%)	18-24: 1 (4.17%) 25-34: 0 (0%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)

Figure 4.8(d): Bar Chart Highlighting Reported Average Length of Time Spent by Survey Participants per Game Session:

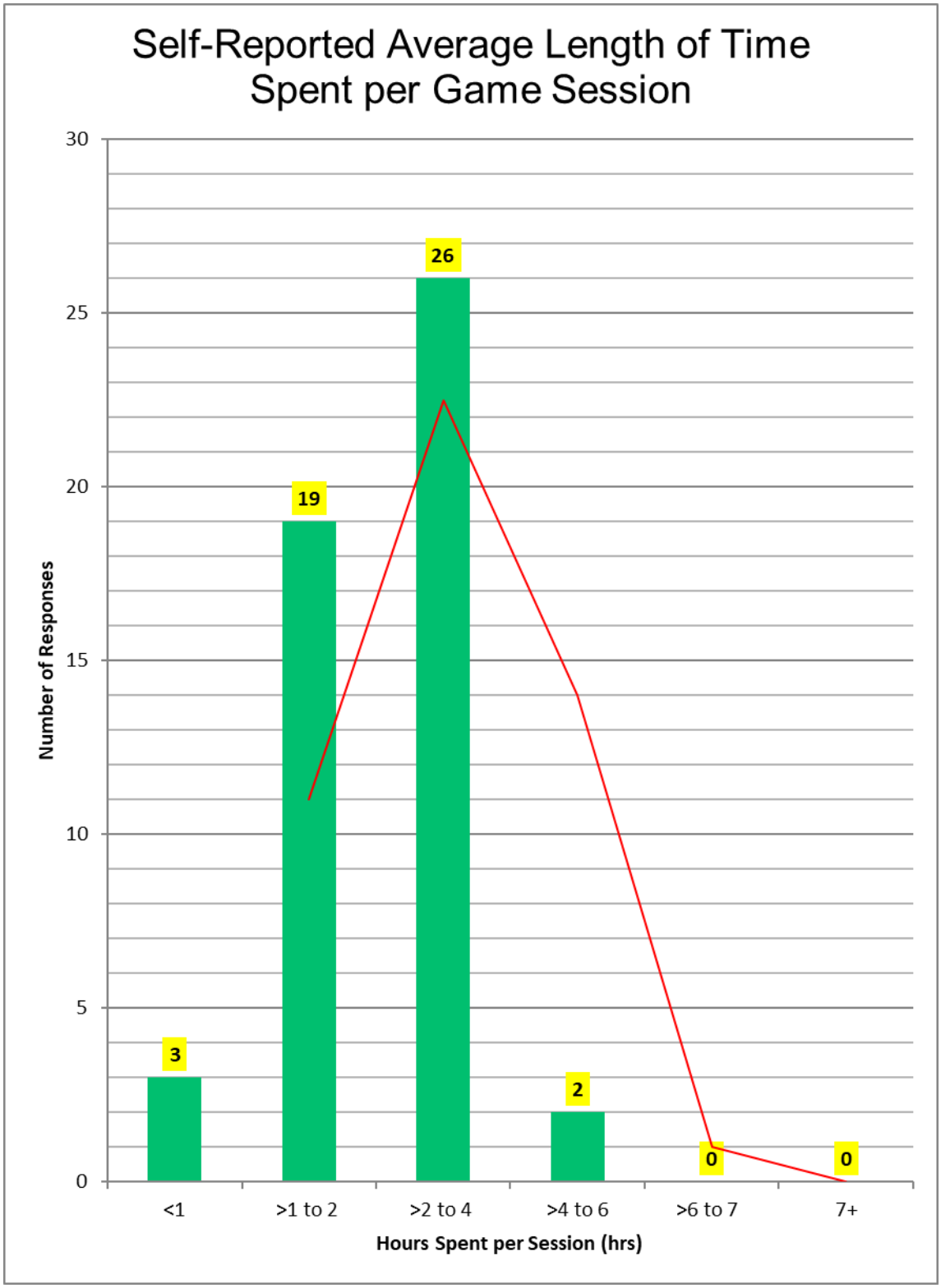


Table 4.8(d): Table Highlighting Reported Average Length of Time Spent by Survey Participants per Game Session by Gender, Age and Gamer Identity:

Length of Time per Session	Response Number (% Total)	Gamer (% Group)	Gender (% Gender)	Age Group (% Group)
< 1hr	3 (6%)	YES: 1 (2.27%) NO: 2 (33.33%)	M: 1 (3.23%) F: 2 (14.29%) NB: 0 (0%)	18-24: 2 (8.33%) 25-34: 0 (0%) 35-44: 1 (50%) 45-54: 0 (0%) 55+: 0 (N/A)
1-2 hrs	19(38%)	YES: 17 (38.64%) NO: 2 (33.33%)	M: 10 (32.26%) F: 5 (35.71%) NB: 4 (80%)	18-24: 9 (37.5%) 25-34: 9 (39.13%) 35-44: 0 (0%) 45-54: 1 (100%) 55+: 0 (N/A)
>2 - 4 hrs	26 (54%)	YES: 24 (54.55%) NO: 2 (33.33%)	M: 10 (58.06%) F: 7 (50%) NB: 1 (20%)	18-24: 13 (54.17%) 25-34: 12 (52.17%) 35-44: 1 (50%) 45-54: 0 (0%) 55+: 0 (N/A)
>4 - 6 hrs	2 (4%)	YES: 2 (4.55%) NO: 0 (0%)	M: 2 (6.45%) F: 0 (0%) NB: 0 (0%)	18-24: 0 (0%) 25-34: 2 (8.7%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
>6-7 hrs	0 (0%)	YES: 0 (0%) NO: 0 (0%)	M: 0 (0%) F: 0 (0%) NB: 0 (0%)	18-24: 0 (0%) 25-34: 0 (0%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
>7 hrs	0 (0%)	YES: 0 (0%) NO: 0 (0%)	M: 0 (0%) F: 0 (0%) NB: 0 (0%)	18-24: 0 (0%) 25-34: 0 (0%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)

Section c): Thoughts on Video Games as De-Stigmatising Tools

This final section from the survey results discusses participant opinions concerning the non-entertainment use of video games, structured around six key areas:

- Knowledge of "Serious Video Game" – **[Fig. 4.9; Tables 4.9(a),(b) & (c)]**
- Sources used for Mental Health Information – **[Fig. 4.10(a); Fig 4.10(b)]**
- Potential of Media to Raise Mental Health Awareness - **[Fig. 4.11(a); Fig 4.11(b)]**
- Ability of Games to Challenge Societal Norms **- [Fig. 4.12(a); Fig 4.12(b)]**
- Accuracy of Games in Depicting Mental Health Issues **- [Fig. 4.13(a); Fig 4.13(b)]**
- Views on Games for Mental Health De-Stigmatization **- [Fig. 4.14(a); Fig 4.14(b)]**

Initially, participants were asked if they were familiar with the term "Serious Video Game."

- **Figure 4.9(a):** illustrates that 35 (70%) of responses reported not being acquainted with the term.
- **Tables 4.9(a),(b) & (c)** reveal that this outcome is consistent across gamer and gender identity, and age groups.

Figure 4.9: Pie Chart Showing Awareness of the Term "Serious Game" Among Survey Participants:

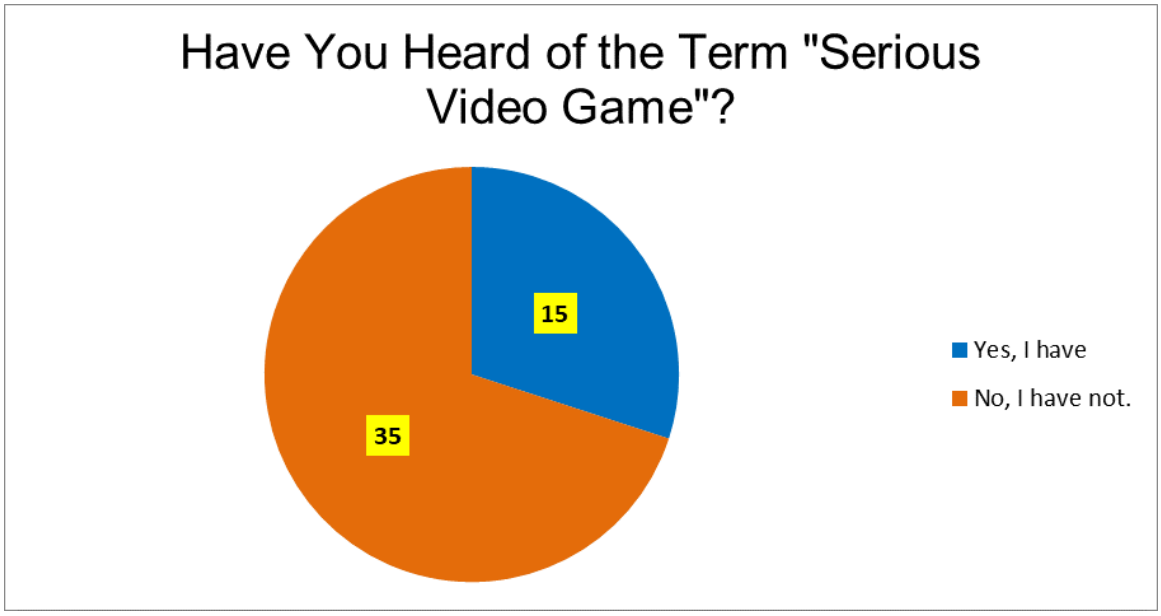


Table 4.9(a): Pie Chart Showing Awareness of the Term "Serious Game" Among Survey Participants by Gender, Age and Gamer Identity:

Have Participant Heard of the Term?	Response Number (% Total)	Gamer (% Group)	Gender (% Gender)	Age Group (% Group)
Yes	15 (30%)	Yes: 13 (29.6%) No: 31 (70.4%)	M: 7 (22.58%) F: 6 (42.86%) NB: 2 (40%)	18-24: 9 (37.5%) 25-34: 5 (21.74%) 35-44: 0 (0%) 45-54: 1 (100%) 55+: 0 (0%)
No	35 (70%)	Yes: 2 (33.33%) No: 4 (66.67%)	M: 24 (77.42%) F: 8 (57.14%) NB: 3 (60%)	18-24: 15 (62.5%) 25-34: 18 (78.26%) 35-44: 2 (100%) 45-54: 0 (0%) 55+: 0 (0%)

Survey participants were then invited to provide their personal interpretation of what is meant by a "Serious Video Game," irrespective of their prior familiarity with the term. The prevailing descriptions are presented in **Figures 4.9(b) – 1** and **4.9(b) – 2** below:

Table 4.9(b): Terminology Used to Describe "Serious Video Games" by Participants Unfamiliar with the Term

Most Common Concepts/Themes in Description	Response Number (% Group; n= 35)
A Game with a Function Beyond Entertainment	5 (14.28%)
A Game with a Specific Message for Players	8 (22.85%)
Games that Depict Intense; Sensitive; Taboo Topics	18 (51.43%)
A Game that is Less Casual; More Intense Gameplay	7 (20%)

Table 4.9(c): Terminology Used to Describe "Serious Video Games" by Participants Familiar with the Term

Most Common Concepts/Themes in Description	Response Number (% Group; n= 15)
A Game with a Function Beyond Entertainment	12 (80%)
A Game with the Specific Function to Educate; for Training	8 (53.33%)
Games that Depict Intense; Sensitive; Taboo Topics	5 (33.33%)
A Game that is Less Casual; More Intense Gameplay	2 (13.33%)

Subsequently, survey participants were asked what 'non-entertainment' avenues of information they typically use for discussing and obtaining information pertaining to mental health matters, shown in **Figures 4.10** and **Table 4.10.**

Figure 4.10: outlines prevalent sources and respective response counts.

- The most frequent sources include discussions with Friends and Family, with 43 responses (86%) followed by Online Video Essays/Opinion Pieces at 38 (76%) **(Dark Blue).**

- Notably, online-based platforms, such as Social Media (26 responses; 52%), Academic Articles (24 responses; 48%), and Forums (23 responses; 46%), were also favoured.

Figure 4.10: Self-Reported 'Non-Entertainment' Sources used by Participants in Acquiring and Discussing Information for Mental Health Issues:

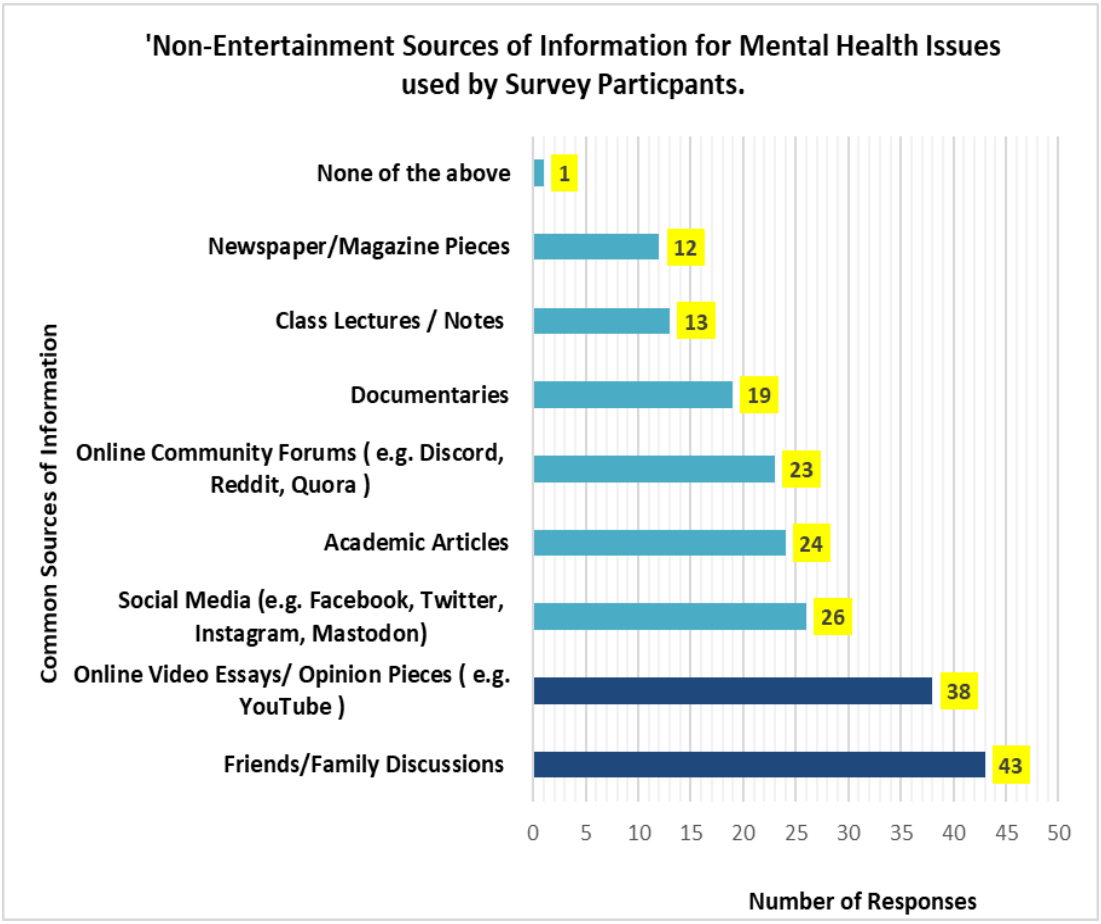


Table 4.10 below provides the most commonly self-reported reasons under which survey participants seek information regarding mental health. The following noteworthy factors emerged:

- ***Approachability and Accessibility*** (44% - 22 responses): Participants feel information sources need to be easy to engage with from the start.
- ***Trustworthiness*** (40% - 20 responses): Participants prioritise sources they perceive as reliable.
- ***Multiple Perspectives*** (40% - 20 responses): A significant portion of participants values diverse viewpoints in their information.
- ***Digestibility*** (14% - 7 responses): Sources like video essays or podcasts are preferred by participants for being easier to comprehend.
- ***Hearing Others' Experiences*** (12% - 6 responses): The opportunity to learn from others' own journeys is highly valued by participants.
- ***Professional or Educational Resources*** (8% - 4 responses): Some participants actively acquire information through their professional or educational background.

These varying criteria reflected participants' nuanced selection of information sources. Personal or online sources appear more favoured due to their accessibility, trustworthiness, and ease of providing diverse perspectives.

Table 4.10: Self-Reported Reasons for Survey Participant Usage of specific information avenues

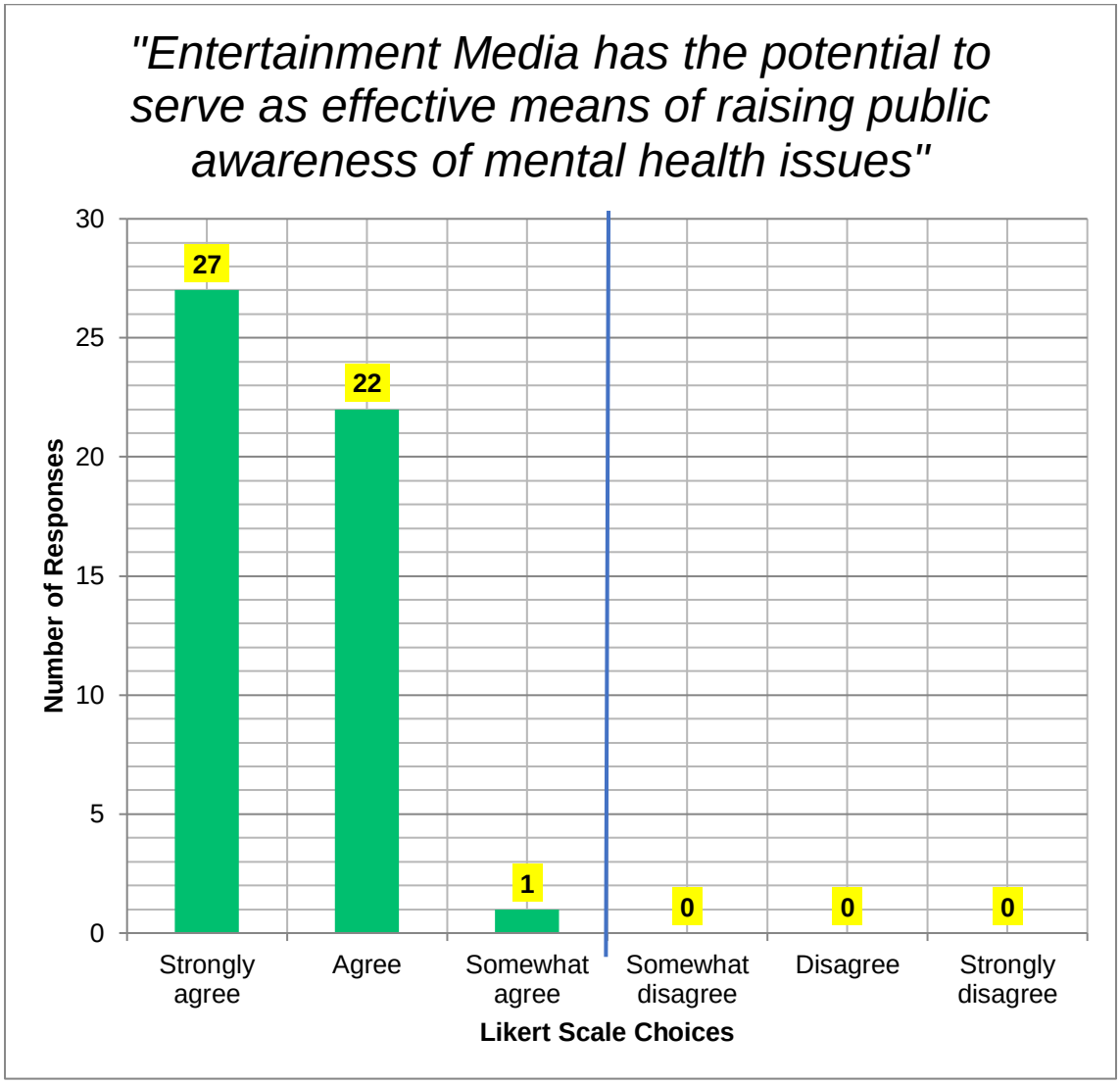
Common Reasons / Caveats Given	Response Number (% Total)
Sources must be Approachable/Accessible	22 (44%)
Sources must be Trustworthy	20 (40%)
Source Information from Multiple Perspectives	20 (40%)
Sources Easier to Digest	7 (14%)
Sources Allow for Hearing Others' Experiences	6 (12%)
Source Information through Participant's Education/ Profession	4 (8%)

The final four questions of this section, and of the survey, represented by **Figures 4.11(a)** through to **Fig 4.11(d),** employed modified Likert Scales, where survey participants were then asked to indicate if they agreed or disagreed with the following four phrases:

- *"Entertainment Media has the potential to serve as effective means of raising public awareness of psychological and mental health issues".* **– [Fig. 4.11(a)]**
- *"Video Games have the power to uniquely influence and challenge societal norms and beliefs within player groups".* **– [Fig. 4.11(b)]**
- *"Video Games tend to depict individuals suffering from mental health issues accurately".* **– [Fig. 4.11(c)]**
- *"Opinions on the Use of Video Games to Raise Awareness of Mental Health Issues*". **– [Fig. 4.11(d)]**

Figures 4.11(a)-1 to **4.11(d)**: Display the Likert Scale Responses from Survey Participants.
Tables 4.11(a) to **4.11(c):** Offer Detailed Explanations from Participants Regarding their Likert Scale Choices.

Figure 4.11(a): Bar Chart: *"Entertainment Media has the potential to serve as effective means of raising public awareness of psychological and mental health issues"* – Likert Scale Answers of Survey Participants



It is clear from the above chart **[Fig. 4.11(a)]** that there is a unanimous agreement within the surveyed group, indicating a solid agreement that entertainment media has the potential to raise awareness about mental health issues. Of the completed responses, 27 (54%) strongly agreed, 22 (44%) agreed, and a solitary response slightly agreed.

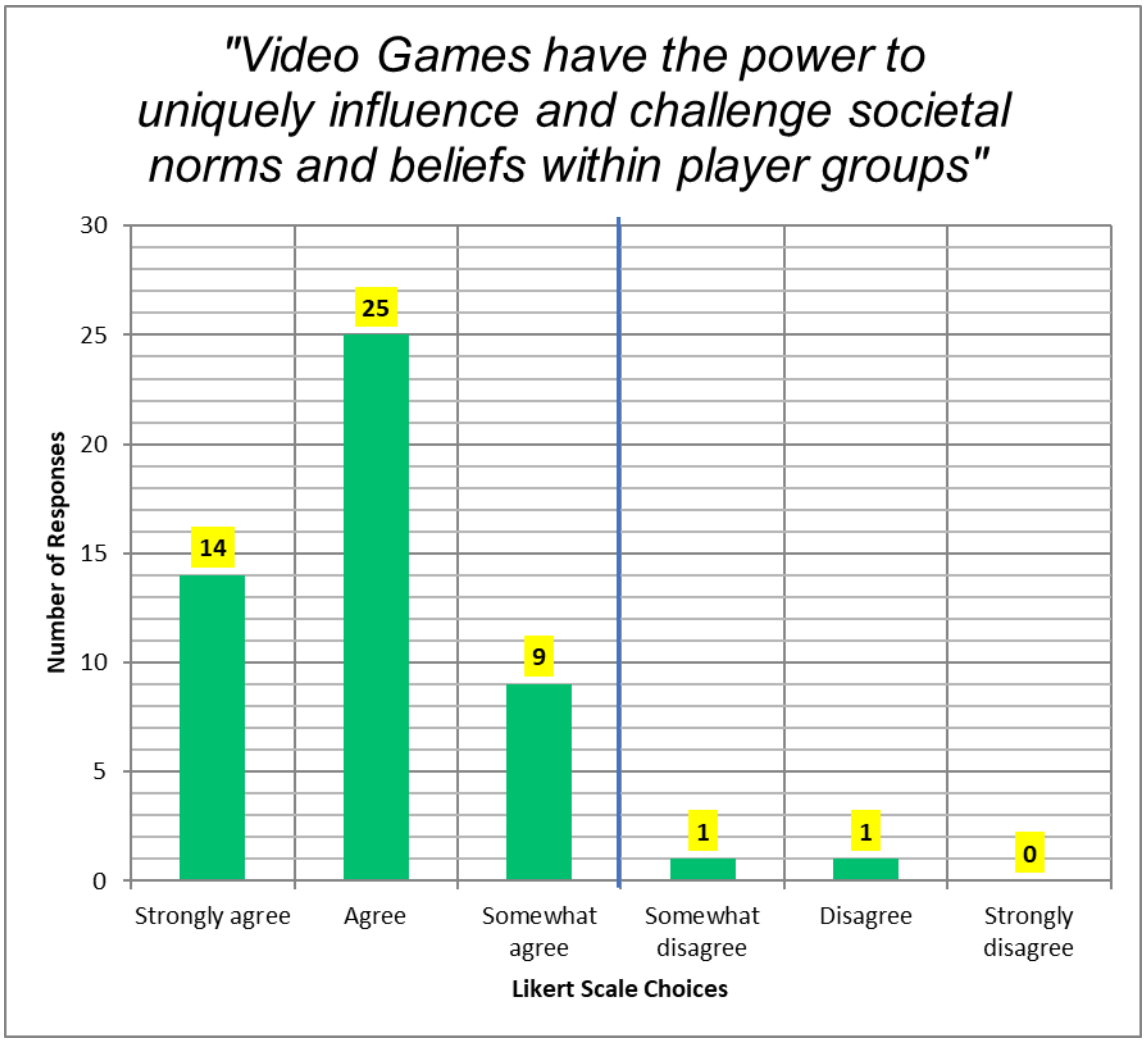
Table 4.11(a): Table of Common Concepts in Agreeing with *"Entertainment Media has the potential to serve as effective means of raising public awareness of psychological and mental health issues"* by Gender, Age and Gamer Identity of Survey Participants.

Shared Concepts (n=50 (100%))	Response Number (% Total)	Gamer (% Group)	Gender (% Gender)	Age Group (% Group)
Such media is engaging, so more can be taken away by audience	41 (82%)	Yes: 38 (86.36%) No: 3 (50%)	M: 26 (83.87%) F: 10 (71.43%) NB: 5 (100%)	18-24: 19 (79.17%) 25-34: 19 (82.61%) 35-44: 2 (100%) 45-54: 1 (100%) 55+: 0 (N/A)
Such media has a wide reach	25 (50%)	Yes: 21 (47.73%) No: 4 (66.67%)	M: 12 (38.71%) F: 10 (71.43%) NB: 3 (60%)	18-24: 13 (54.17%) 25-34: 10 (43.48%) 35-44: 1 (50%) 45-54: 1(100%) 55+: 0 (N/A)
Using such media must be handled responsibly	14 (28%)	Yes: 13 (29.55%) No: 1 (16.67%)	M: 8 (25.81%) F: 3 (21.43%) NB: 3 (60%)	18-24: 9 (33.33%) 25-34: 6 (26.09%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
Such media has great versatility and forms	11 (22%)	Yes: 9 (20.45%) No: 2 (33.33%)	M: 7 (22.58%) F: 3 (21.43%) NB: 1 (20%)	18-24: 6 (25%) 25-34: 4 (17.39%) 35-44: 1 (50%) 45-54: 0 (0%) 55+: 0 (N/A)
Such media has high prevalence today	10 (20%)	Yes: 9 (18.18%) No: 2 (33.33%)	M: 3 (9.68%) F: 5 (35.71%) NB: 2 (40%)	18-24: 6 (25%) 25-34: 4 (17.39%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
Such media is greatly approachable	7 (14%)	Yes: 6 (13.64%) No: 1 (16.67%)	M: 3 (9.68%) F: 2 (21.43%) NB: 1 (20%)	18-24: 4 (16.67%) 25-34: 2 (8.7%) 35-44: 1 (50%) 45-54: 0 (0%) 55+: 0 (N/A)

Regardless of age, gender, or gamer identity, a prevailing theme emerged. 41 participants (82%) asserted that such media inherently engages its audience, heightening the message's impact and retention. Half of the participants, i.e., 25, also highlighted the medium's extensive reach, promoting broader awareness. Furthermore, it's noteworthy that 14

responses (28%) underscored the necessity of a responsible approach when utilizing such media platforms to raise awareness.

Figure 4.11(b): Bar Chart *"Video Games have the power to uniquely influence and challenge societal norms and beliefs within player groups"* – Likert Scale Answers of Survey Participants



This diagram **[Fig. 4.11(b)]** highlights that a significant majority of the participant group (48; 96%) believe that video games hold the potential to shape player beliefs. Among these, 25 responses (50%) agreed, 14 responses (28%) strongly agreed, and 9 responses (18.8%) somewhat agreed. Conversely, a minority of 2 responses (4%) disagreed to varying extents.

Table 4.11(bi): Table of Common Concepts in *Agreeing* with *"Video Games have the power to uniquely influence and challenge societal norms and beliefs within player groups"* by Gender, Age and Gamer Identity of Survey Participants.

Shared Concepts **(n= 48 (96%))**	**Response Number (% Agreed)**	**Gamer (% Group)**	**Gender (% Gender)**	**Age Group (% Group)**
High Level of Engagement	28 (58.33%)	Yes: 25 (58.14%) No: 3 (60%)	M: 16 (55.17%) F: 9 (64.29%) NB: 3 (60%)	18-24: 16 (66.67%) 25-34: 12 (54.55%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
Provides Unique Perspectives through Gameplay	17 (35.42%)	Yes: 14 (32.56%) No: 3 (60%)	M: 11 (37.93%) F: 6 (42.86%) NB: 0 (0%)	18-24: 8 (33.33%) 25-34: 7 (31.82%) 35-44: 1 (100%) 45-54: 1 (100%) 55+: 0 (N/A)
Gamers are Already Fans of Games.	13 (27.08%)	Yes: 12 (27.91%) No: 1 (20%)	M: 12 (41.38%) F: 1 (7.14%) NB: 0 (0%)	18-24: 5 (20.83%) 25-34: 8 (36.36%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
Must be Handled Correctly // Utilize Prior Research	10 (20.83%)	Yes: 10 (23.26%) No: 0 (0%)	M: 8 (27.59%) F: 2 (14.29%) NB: 0 (0%)	18-24: 5 (20.83%) 25-34: 4 (18.18%) 35-44: 0 (0%) 45-54: 1 (100%) 55+: 0 (N/A)
Player Control of the Games	9 (18.75%)	Yes: 7 (16.28%) No: 2 (40%)	M: 0 (0%) F: 7 (50%) NB:2 (40%)	18-24: 4 (16.67%) 25-34: 5 (22.73%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
Potential Risk of Push-Back from Gamers	5 (10.42%)	Yes: 4 (9.3%) No: 1 (20%)	M: 2 (6.9%) F: 2 (14.29%) NB: 1 (20%)	18-24: 3 (12.5%) 25-34: 2 (9.09%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)

As the table above **[Fig. 4.11(bi)]** demonstrates, regardless of gender, age, and gamer identification,

- 29 responses (58%) accentuated gameplay's immersive nature, allowing for enhanced engagement.
- 17 (34%) noted unique role games have in offering diverse perspectives through role-playing, thereby fostering greater understanding.
- 13 (26%) highlighted receptiveness of gamers due to their pre-existing affinity for the medium.

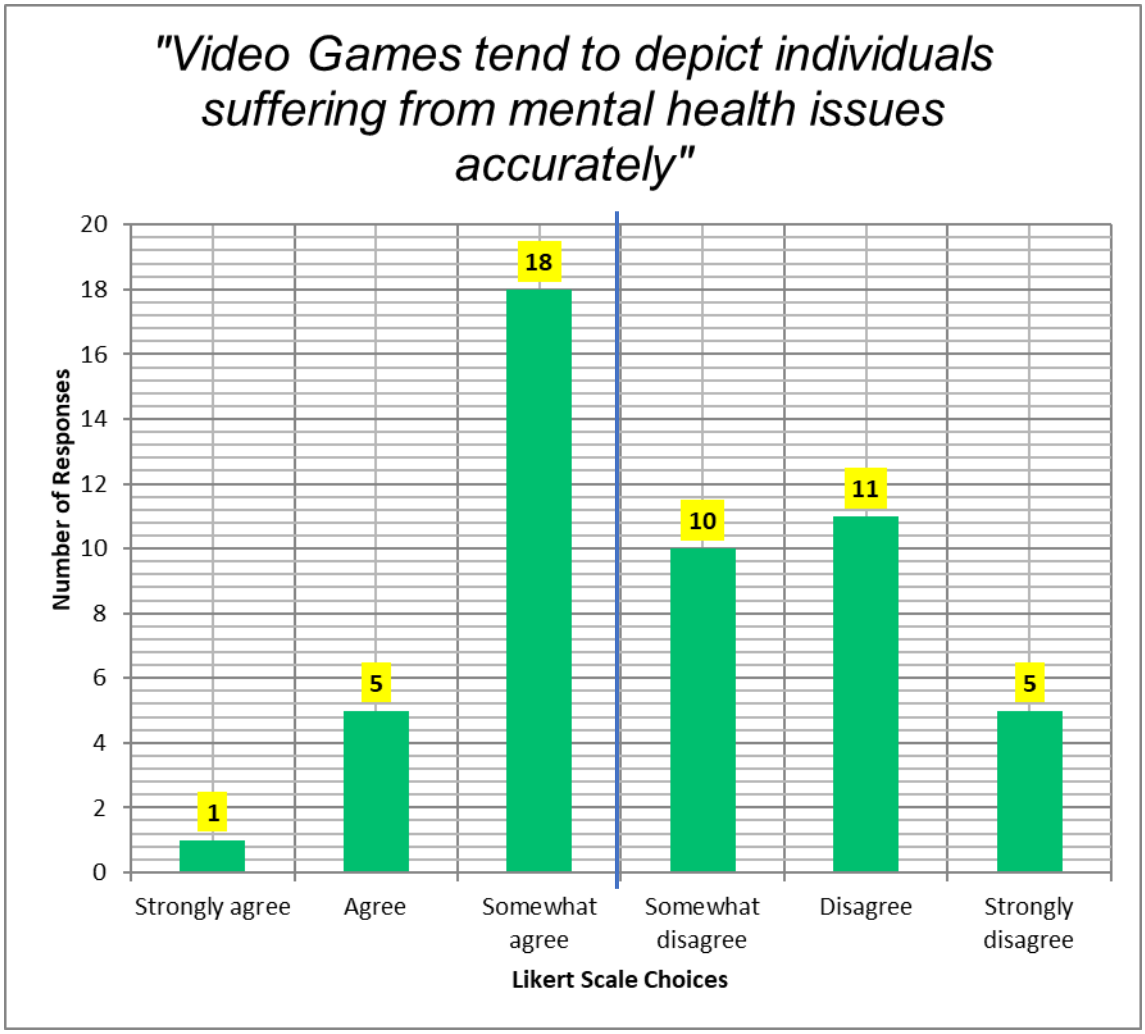
Table 4.11(bii): Table of Common Concepts in *Disagreeing* with *"Video Games have the power to uniquely influence and challenge societal norms and beliefs within player groups"* by Gender, Age and Gamer Identity of Survey Participants.

Shared Concepts **(n= 2(4%))**	**Response Number (% Disagreed)**	**Gamer (% Group)**	**Gender (% Gender)**	**Age Group (% Group)**
High Level of Engagement	1 (50%)	Yes: 1 (50%) No: 0 (0%)	M: 1 (50%) F: 0 (N/A) NB: 0 (N/A)	18-24: 0 (N/A) 25-34: 1(100%) 35-44: 0 (0%) 45-54: 0 (N/A) 55+: 0 (N/A)
Unsure of Efficacy	2 (100%)	Yes: 1 (50%) No: 1 (50%)	M: 2 (100%) F: 0 (N/A) NB: 0 (N/A)	18-24: 0 (N/A) 25-34: 1(100%) 35-44: 1(100%) 45-54: 0 (N/A) 55+: 0 (N/A)

Conversely, this table **[Fig. 4.11(bii)]** demonstrates, across gender, age, and gamer identification,

- Several participants (10; 20%) that disagreed emphasised the requirement for such a game to undergo in-depth research during its development.
- Participants (9; 18.8%) also raised concerns about the potential resistance from gaming communities if they perceive alternate agendas within specialised games.

Figure 4.11(c): Bar Chart *"Video Games tend to depict individuals suffering from mental health issues accurately."* – Likert Scale Answers of Survey Participants:



The above diagram **[Fig. 4.11(c)]** clearly diverges from the previous figures due to its wider spectrum of opinions on the accuracy of mental health issue depictions within video games. A slender majority of 26 (52%) disagreed, while 24 (48%) leaned toward agreement. Notably, the largest subset within the agreement category, 18 (75%), only "somewhat agreed."

Table 4.11(ci): Table of Common Concepts in *Agreeing* with *"Video Games tend to depict individuals suffering from mental health issues accurately."* by Gender, Age and Gamer Identity.

Shared Concepts **(n= 24 (48%))**	**Response Number** **(% Agreed)**	**Gamer** **(% Group)**	**Gender** **(% Gender)**	**Age Group** **(% Group)**
There is a Varied Quality of Games: Some Do it Well, Some Not.	14 (58.33%)	Yes: 13 (56.52%) No: 1 (100%)	M: 5 (45.45%) F: 6 (60%) NB: 3 (100%)	18-24: 6 (50%) 25-34: 8 (66.67%) 35-44: 0 (N/A) 45-54: 0 (N/A) 55+: 0 (N/A)
Depictions are Getting Better// Promising Direction	9 (37.5%)	Yes: 9 (39.13%) No: 0 (0%)	M: 6 (54.55%) F: 3 (30%) NB: 1 (33.33%)	18-24: 5 (41.67%) 25-34: 4 (33.33%) 35-44: 0 (N/A) 45-54: 0 (N/A) 55+: 0 (N/A)
Depictions can be Dramatized/Sensationalized	4 (16.67%)	Yes: 4 (17.39%) No: 0 (0%)	M: 2 (18.18%) F: 1 (10%) NB: 1 (33.33%)	18-24: 1 (8.33%) 25-34: 3 (25%) 35-44: 0 (N/A) 45-54: 0 (N/A) 55+: 0 (N/A)
Depictions can be Inaccurate	4 (16.67%)	Yes: 4 (17.39%) No: 0 (0%)	M: 3 (27.27%) F: 1 (10%) NB: 0 (0%)	18-24: 1 (8.33%) 25-34: 3 (25%) 35-44: 0 (N/A) 45-54: 0 (N/A) 55+: 0 (N/A)
Developers can be Sensitive to Such Topics	3 (12.5%)	Yes: 3 (13.04%) No: 0 (0%)	M: 3 (27.27%) F: 0 (0%) NB: 0 (0%)	18-24: 1 (8.33%) 25-34: 2 (16.67%) 35-44: 0 (N/A) 45-54: 0 (N/A) 55+: 0 (N/A)
Mental Health is Increasingly Promoted Outside of Games	2 (8.33%)	Yes: 2 (8.7%) No: 0 (0%)	M: 1 (9.09%) F: 1 (10%) NB: 0 (0%)	18-24: 2 (16.67%) 25-34: 0 (0%) 35-44: 0 (N/A) 45-54: 0 (N/A) 55+: 0 (N/A)

Regardless of gender, gamer identity or age, agreeing survey participants here **[Table 4.11(ci)]** emphasise that while there does exist a mixed quality of game depictions on mental health issues presently (14; 58.33%) several do also note that such depictions are getting better, and that this is a promising direction for the development of games with more accurate and sensitive depictions of such issues (9; 37.5%).

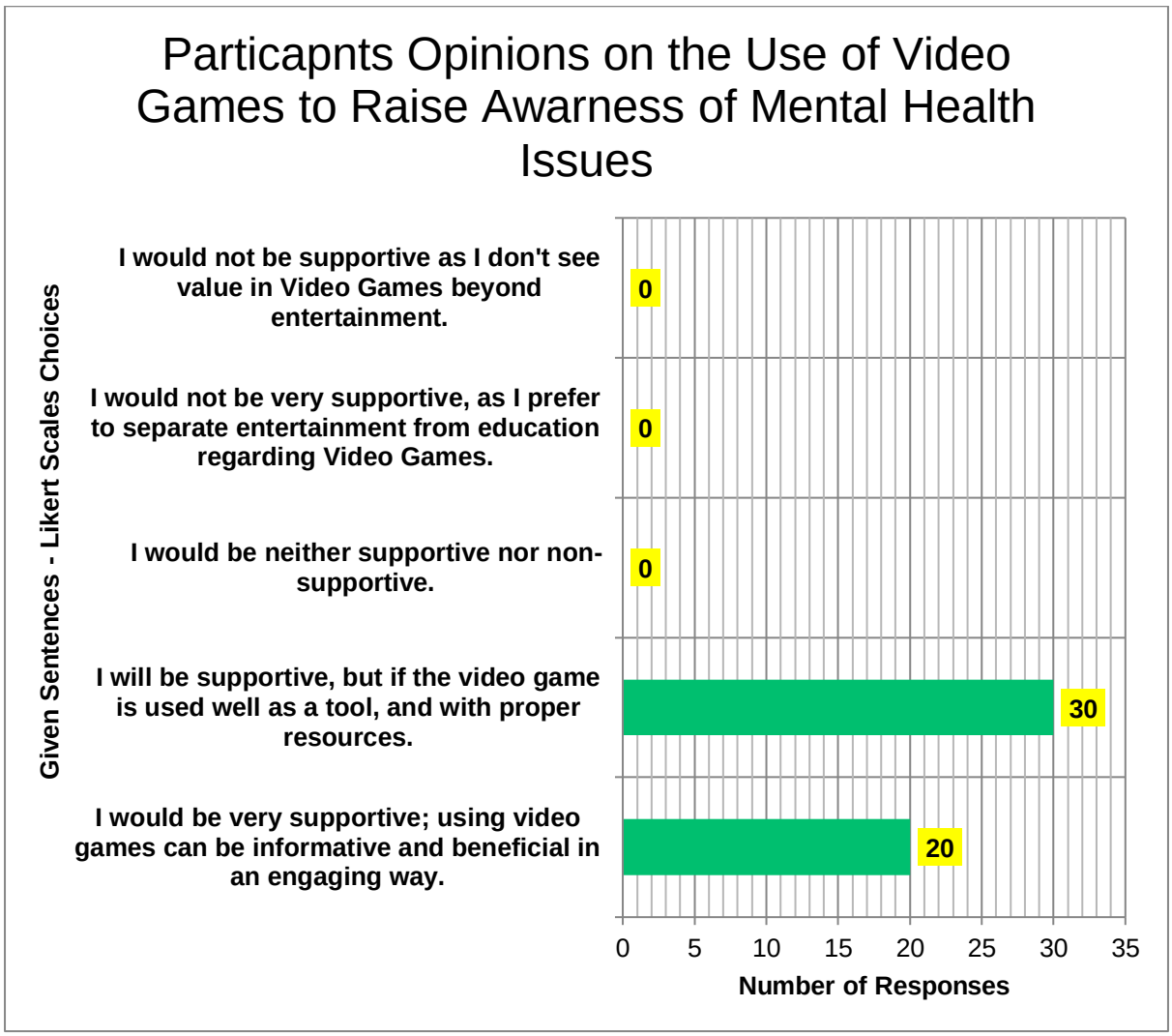
Table 4.11(cii): Table of Common Concepts in *Disagreeing* with *"Video Games tend to depict individuals suffering from mental health issues accurately."* by Gender, Age and Gamer Identity.

Shared Concepts **(n= 26 (52%))**	**Response Number (% Disagreed)**	**Gamer (% Group)**	**Gender (% Gender)**	**Age Group (% Group)**
Depictions can be Dramatized/Sensationalized	11 (42.31%)	Yes: 9 (42.86%) No: 2 (40%)	M: 8 (40%) F: 2 (50%) NB: 1 (50%)	18-24: 7 (58.33%) 25-34: 3 (27.27%) 35-44: 0 (0%) 45-54: 1(100%) 55+: 0 (N/A)
Depictions used for Comic Relief	9 (34.62%)	Yes: 8 (38.1%) No: 1 (20%)	M: 7 (35%) F: 1 (25%) NB: 1 (50%)	18-24: 6 (50%) 25-34: 3 (27.27%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
Horror Genre of Games Notably Poor Regarding Depictions	9 (34.62%)	Yes: 9 (42.86%) No: 0 (0%)	M: 8 (40%) F: 1 (25%) NB: 1 (50%)	18-24: 5 (41.67%) 25-34: 4 (36.36%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
Depictions Play into Stereotypes	9 (34.62%)	Yes: 9 (42.86%) No: 0 (0%)	M: 9 (45%) F: 0 (0%) NB: 0 (0%)	18-24: 3 (25%) 25-34: 6 (54.55%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
Depictions are Usually Inaccurate	8 (30.77%)	Yes: 7 (33.33%) No: 1 (20%)	M: 6 (30%) F: 1 (25%) NB: 1 (50%)	18-24: 5 (41.67%) 25-34: 3 (27.27%) 35-44: 0 (0%) 45-54: 0 (0%) 55+: 0 (N/A)
There is a Varied Quality of Games: Some Do it Well, Some Not.	7 (26.92%)	Yes: 5 (23.81%) No: 2(40%)	M: 5 (25%) F: 1 (25%) NB: 1 (50%)	18-24: 2 (16.67%) 25-34: 4 (36.36%) 35-44: 1 (50%) 45-54: 0 (0%) 55+: 0 (N/A)

On the other hand, those that disagree [**Table 4.11(cii)]** above often cited sensationalism (11; 42.3%), stereotyping (9; 34.6%), or comic relief use (8; 34.6%) in portrayals of mental health issues in video games.

Across both groups, 10 responses (20%), 9 of whom disagreed, noted that the horror genre more often misrepresents mental health issues than not. This is even seen as an inside joke by participants.

Figure 4.11(d): Bar Chart of Survey Participants Likert Scale Answers on 'Opinions on the Use of Video Games to raise awareness of Mental Health Issues:



This final diagram **[Fig. 4.11(d)]** indicates a robust agreement within the participant group in support of the use of video games as tools to raise awareness about mental health issues. Notably, 30 responses (60%) supported this approach, but with a distinct emphasis on the necessity for meticulous execution and robust resource allocation to such initiatives.

Stage 2: In-person Playtest Interviews:[6]

The second half of this results section delves into the insights gained from the in-person playtest and interview sessions (n=7). The findings are organised into the following four major thematic categories:

Theme a) ***Playtest Experience:*** This subsection addresses the unique experiences each participant had while playing *Hellblade: Senua's Sacrifice.*

Theme b) ***Conceptual Understanding:*** This subsection explores how participant comprehend key terms and concepts that are central to the study, such as de-stigmatization tools.

Theme c) ***Reception of De-Stigmatizing Video Games*****:** This subsection investigates how participants think such de-stigmatisation games might be received by players and the wider public.

Theme d) ***Development Assessment:*** In this subsection, participants give their thoughts on the development of de-stigmatising games, offer suggestions for best practices in the development of future games, share their general thoughts on the research project, and propose potentialirections for future related game research.

Table 4.12: Interview Participant Demographics

Demographic	Gender Identity	Self-Identified Gamer	Heard/Played *Hellblade* Prior	Age Group
Interview Participants	M: 5 F: 1 NB: 1	Yes: 7 No: 0	P1: Bought it when it came out but hasn't played it P2: Heard of it, not played it. P3: Played it full years ago with poor audio; Can't remember. P4:Heard; Not Played P5:Heard; Not Played P6:Haven't heard of it. P7:Briefly played years ago (<30mins).	18-24: 1 25-34: 6 35-44: 0 45-54: 0 55+: 0

[6] Participant interview transcripts can be made available upon request via Google Drive link as per recommended DCU guidelines.

Theme a): Playtest Experience of *Hellblade*

The interview participant experiences of the playtest session are presented here within 10 subsections, with notable quotes provided when necessary.

1) **Enjoyment and Initial Reactions of *Hellblade:***

Participants uniformly reported positive experiences while playing Hellblade: Senua's Sacrifice. Terms such as "enjoyable", "interesting", and "very good" were commonly used. The game's immersive nature and its thrilling, and sometimes scary elements contributed to several participants wanting to continue playing.

"There's a very noticeable difference between 'I am playing this' and 'oh, I have stopped playing', and like, whoa, I did not realise there could be such a difference when coming back to reality" - Participant 4

2) **Expectations and Comparisons of *Hellblade* to Other Games:**

Expectations among the participants varied; some came in without any preconceived notions of the game's mechanics or themes, while others had minimal expectations. Participants were first informed about the game prior to the playtest activity, and the majority had never played the game before and had little prior exposure. Several likened the gameplay, particularly combat, to other popular fighting games such as Dark Souls and God of War, and several mentioned the Nordic art style was also similar to Elder Scrolls V: Skyrim. Pre-game material and word of mouth seemed to prime some participants for themes of mental health.

3) **Any Unique/Stand-Out Features of *Hellblade?*:**

The game's immersive representation of psychosis, particularly "the voices," was universally noted as a standout feature.

" It was just really interesting to experience what somebody potentially could be experiencing, like psychosis, and specifically the voices in their head. Like holy moly, imagine having to deal with all these voices all the damn time" - Participant 3

" Oh yea, like playing Senua, with the voices, kind of felt more connected I'd say. It was definitely an interesting experience." - Participant 2

One of the participants had an interesting interpretation of the positionality of the voices and the player.

"As a player, it feels more that you're one of the voices following/controlling Senua, rather than her or another outside person" - Participant 4

4) **Thoughts on Game Mechanics and Interfaces of *Hellblade*:**

No participant criticised the absence of 'Heads-Up Displays' (HUDs)[7], traditional tutorials, or clear objective markers within the context of their own experience of *Hellblade*. Several participants mentioned the absence of a hand-holding tutorial also contributed to a more immersive experience.

"For seasoned gamers, navigating the game might not present much difficulty, but for me, it felt like being thrown into the deep end. I still enjoyed it though, and discovering that fire served as a directional indicator was a eureka moment for me, and I do appreciate the game's balance in difficulty; it was challenging but not insurmountable, and it reminded me of Dark Souls, where you're not provided with a tutorial" - Participant 7

"I didn't mind the lack of a HUD or anything, as it seemed to align well with the game's intent to immerse the player in Senua's experiences. After all, real life doesn't come with a HUD. The game is quite linear, and the guiding voices serve as effective cues for navigation.

[7] A Heads-Up Display is a transparent interface, presenting real-time information within a player's field of vision, commonly used to show changing metrics like health, ammo, and maps.

I think this makes you rely on Senua's own perception of her world to navigate through it as a shared experience with the character. The lack of a tutorial felt unconventional but entirely appropriate given the game's context" - Participant 4

5) **Influence of Participants' Previous Gaming Experience Before *Hellblade:***

All participants agreed that prior gaming experience helped them adapt more quickly to *Hellblade'*s controls and gameplay mechanics, particularly with the lack of an obvious tutorial.

"Definitely! my prior gaming experience helped me quickly grasp what was happening in the game" - Participant 2

"Yea, like the games that I've played for sure helped me here, and they were especially useful in understanding how the combat worked" - Participant 5

6) **Puzzles and Combat Scenarios Within *Hellblade:***

Opinions about puzzles and combat varied. While most found the puzzles intuitive and engaging, others had more mixed feelings. Combat was mostly described as standard or simple, if a bit repetitive.

"Yeah, like the gameplay itself was slightly clunky. All very soon after the first combat encounter, maybe even at the end of the first one, I started understanding I can just click these buttons in this order, and literally win the fight every single time like solving an equation" - Participant 5

This however did not largely take away from the experience of any participant.

"The game wasn't boring. It had simple combat and was repetitive but that's because the main focus is getting in the character's head and the depiction of her mental state."
- Participant 4

7) **Participants' Understanding of the Plot and World of *Hellblade*:**

Participants expressed various interpretations of the plot and the game's world. Although common threads existed, such as revenge, or questing to help someone close to the character of Senua, a clear understanding of the game's narrative seemed to elude most. Several participants noted this as a form of ludo narration, where experiencing this lack of understanding of the world around Senua is proxied by the lack of understanding by the player.

"Even when you're aware of the voices whispering over your shoulder or the visual hallucinations you're experiencing, it raises the question: Is someone actually there? The game cleverly blurs the lines between what's happening internally and what's physically external, adding a layer of paranoia. You start to wonder if something—or someone—is truly present. It makes the experience quite compelling honestly" - Participant 4

8) **Would Participants Recommend *Hellblade* to Others?**

Most participants would recommend the game to others. However, caveats for consideration include age appropriateness, their level of experience and interest in gaming, along with their potentially sensitivity to mental health themes.

"It's fairly 'user friendly' It's something you can pick up and the 'difficulty curve' isn't too steep", but my older mother, who's never played a game in her life. I don't think she'd be able to figure it out" - Participant 7

"I would recommend the game to people but specifically to my friends or my roommates who are into gaming. I wouldn't recommend it universally to everybody, and certainly not to my mother or anyone who might be sensitive to the topics it explores" - Participant 5

"Highly recommended, but not for those with limited experience with games like my sister or mom. The game's complexity and lack of a traditional tutorial or HUD could make it challenging for someone unfamiliar with video games. However, if I were there to guide them through it, that might be a different story. Prior video game experience is definitely a plus to fully appreciate it" - Participant 6

9) Participant Descriptions of the Character, Senua, and Relation to Mental Health

Participants' descriptions of Senua varied, from being 'troubled' and 'hearing voices' to 'physically tired and stressed.' Terms like "psychosis" and "schizophrenia" were both used, sometimes synonymously, to describe Senua's mental state.

"It seems like they're (the voices) afraid of the world around them, yet she (Senua) seems very determined and scared, but she will push through. There was a whole scene of her pushing through the fear and at one point I noticed she talks back to the voices. It looks like she's about to go back into the canoe at the very start, but then she stares at the camera and then it shows her kicking the canoe off and then all the voices kind of panic a little" - Participant 6

"From playing the game, I find the character to be incredibly driven and accustomed to fear, yet always pushing through it. I'm not sure if these traits are inherent to the character herself or a representation of psychosis. I can't say how I would react if I met someone like her in real life because I've never encountered someone actively experiencing psychosis. So, it's difficult to gauge whether one would be wary in such a situation or not." - Participant 4

10) Participants' Emotional Connection to Senua

Participants exhibited a range of emotional connections to Senua, from "sympathy" and "empathy" to admiration for the character.

"...yea like I can't directly relate to Senua, as I've never gone through what she goes through in-game, but I think playing the game has given me a deeper understanding of her experience, not 100%, and I feel empathy for her in this situation" - Participant 3

Summary of Theme (a):

Overall, participants universally praised *Hellblade,* both for its immersive gameplay and novel emotional depth. The lack of a heads-up display (HUD) and tutorials was not viewed as a universal drawback, but rather as a design choice that enriched the experience. However, it was noted that participants did rely on past gaming experiences to compensate for this drop into the deep end.

Nonetheless, each participant enjoyed their time playing the game, and the game's unique representation of psychosis, particularly the multiple voices, was flagged by participants as particularly impactful. While prior gaming experience was cited as beneficial for adapting to the game's mechanics, the intuitive nature of its puzzles and combat allowed for a broad range of engagement. Although combat was noted to be somewhat repetitive, it did not diminish the overall experience. Players drew varied comparisons with other popular games like *Dark Souls*, *God of War* and *Skyrim*, in terms of combat, worldbuilding and thematic elements.

Recommendations for the game were generally positive, though targeted towards individuals with some level of gaming experience and an openness to the game's themes and vivid imagery of mental health. Emotional connections to the protagonist, Senua, ranged from empathy to admiration. Together, this feedback gives credence to the game's success in crafting a compelling narrative that elicits complex emotional and thoughtful responses (See Chapter 5).

Theme b): Participants' Conceptual Understanding:

In this section, participants were asked for their understanding of the following terms critical to this project.

Table 4.13: Concept/Term Definitions by Interview Participant

Interview Participant	Serious Game	Commercially Viable Game	Stigma	De-Stigmatization Tool
Participant 1	"Adult or difficult themes"	"Aimed to a vast portion (of people)"	"Mark of Shame or Infamy"	"Instrument to eradicate prejudice"
Participant 2	"Tends to encompass difficult to speak about"	"Generally advertised online that are commercially available to the public"	"Biases held towards specific subgroups in society or topics of conversation"	"A medium between the public and taboo topics and or societal subgroups"
Participant 3	"Doesn't allow user to have any freedom"	"Heavily advertised and franchised"	"A negative stereotype"	"Readily available tool that shows belief in the stigma is false"
Participant 4	"Low on humour, greater number of heavy topics"	"Large-scale production and business driven"	"Conscious or Subconscious bias around a particular topic"	"Device used to progress conversations around stigmas"

Participant 5	"Competitive game or deals with real and powerful themes"	"Made primarily to be sold for a profit"	"Topic not openly spoken about in society due to a fear of association"	"A method to break down stigmas"
Participant 6	"Has dark or intense themes"	"Would do well in the social zeitgeist"	"A belief that detracts from people seeking to engage with a topic"	"A tool used to remove Stigma"
Participant 7	"Serious time investment and complexity"	" Wide market appeal and high grossing profits"	"Prejudice against a group of people, a trait or movement"	"People are exposed to preconceived ideas they may have and how those can be wrong and harmful"

As delineated in **Table 4.13**, participants provided a nuanced range of definitions for the key terms. Serious games were predominantly linked with either heavy or difficult themes, or more complex gameplay suited for competitive or intense players. On the other hand, commercially viable games had garnered a more unified understanding among participants, characterised by broad marketability and orientation for high profit. Stigma was primarily conceptualised as a form of prejudice or negative stereotyping, while de-stigmatization tools were regarded as instruments to counteract these biases. Notwithstanding the variances in viewpoints, a unifying theme emerged: a recognition of gaming's capacity to engage with intricate social challenges, including the stigma surrounding mental health.

In relation to the participants' comprehension of psychosis, the trigger warning provided at the game's onset likely influenced their understanding. Common traits associated with the experience of psychosis was a disconnect from reality, along with not being able to trust one's own senses. Notably, participants frequently acknowledged their own limited knowledge regarding mental health, as well as their restricted capability to accurately identify specific mental health issues or conditions. On a scale of 1 to 5, these questionnaire self-assessments averaged 2.43 and 2.36 respectively, suggesting a moderate level of self-awareness about the limitations of their knowledge in this complex area **(Table 4.14).** Prior interest within the realm of mental health, along with their field of study, were also noted by participants as major factors that influenced such values.

Table 4.14: Questionnaire Self-Assessments

Interview Participant	**Knowledge of Mental Health Issues. (Out of 5)**	**Ability to Accurately Recognise Mental Health Issues. (Out of 5)**
Participant 1	4	2.5
Participant 2	3	3
Participant 3	3	4
Participant 4	2	2
Participant 5	2	1
Participant 6	3	2
Participant 7	2	2
Average	2.43	2.36

Summary of Theme (b):

Having explored the conceptual understandings of interview participants surrounding key terms like 'Serious Games,' 'Commercially Viable Games,' 'Stigma,' and 'De-Stigmatization Tools.', this section first notes a broad spectrum of interpretations, with the sole consensus on the commercial viability of games being tied to broad marketability and orientation towards profit. Participants primarily viewed stigma as a form of negative bias or prejudice, and de-stigmatization tools as means to counteract these. Regarding their understanding of 'Psychosis', participants appeared expressed moderate self-awareness of their limited expertise, averaging scores of 2.43 and 2.36 on their ability to understand and identify mental health issues **(Table 4.14).** This section underscores not only the complexity of mental health topics and the existence of multiple interpretations of key terms related to the study of games and mental health, but also highlights the potential role of educational background and prior interest in shaping such views. Importantly, throughout the diverse perspectives, a unifying theme became evident: an acknowledgment from the participants of the potential power of gaming as a medium capable of engaging with complex social issues, including mental health stigma.

Theme c) Participants' Thoughts on the Reception of De-Stigmatizing Video Games:

In this section, participants, being regarded as expert witnesses due to their experience as playing video games, were queried about how they thought gamer groups would receive video games specifically designed to raise awareness and mitigate stigma associated with mental health issues. The focus then expanded beyond the gaming community to include how such games might be received by the wider public.

1) Thoughts on Gaming Community's Reception: "Game First"

Participants generally opined that de-stigmatising games, exemplified by *Hellblade: Senua's Sacrifice,* would be largely received warmly within gaming circles. A recurring sentiment however was the crucial nature of the game's quality and prior player preconceptions. For Example, Participant 1 expressed confidence in the game's reception, attributing it to its *"clear, focused design."* They also brought in the significance of player maturity, mentioning that younger players might not *"fully appreciate the nuances"* due to neurological factors related to the development of the prefrontal cortex.

Meanwhile, Participant 2 acknowledged the risk of the mental health theme being overshadowed by the game's entertainment value, thereby risking over-sensationalism. They flag the importance of emphasising the game's entertainment value first and foremost, saying *"how players consider the game beforehand, before playing, is crucial to how players interpret the game or their sense of enjoyment at the end of the game."* Participant 3 shared a similar view, cautioning against marketing these games primarily as de-stigmatization tools. They advised, *"Don't phrase it as a de-stigmatization. I think, for gamers, if you just put a game in front of them and say, 'Here's a cool concept, try it out', they're more likely to try it out."*

The game's message of mental health awareness was also thought of as a potential double-edged sword. While Participant 2 agreed that gamers would be open to playing such a game, they also warned that the game's engaging depiction of the psychosis experience, i.e its entertainment value, might overshadow its underlying mental health message, thus diluting its impact, and risking "over-sensationalisation". Similarly, Participant 6 mentioned that

while games like these could appeal to “fans of narrative-based PlayStation titles like God of War”, the mental health theme might not be the primary draw for players.
Participants also underscored that while mental health themes add value, the notion should not overpower the gaming elements. As Participant 3 put it, referring to such a game as a “de-stigmatization tool” from the get-go could be off-putting to gamers, for whom the primary appeal would likely be the entertainment value and challenge of them. For them, the science of it could be "too science-y and not gamey."
Participant 5 provided an excellent metaphor to anchor this apparent necessity to build a good game first for the theme rather than the other way around, saying, *"Imagine a game as a table, and you then put the theme of mental health on top of the table. If the table is not well-built (as a game), then placing any 'heavy' theme would cause the whole thing to fall apart."*

2) Thoughts on Wider Public Reception: Accessibility and Unfamiliarity as Barriers

While participants consider that de-stigmatising games, such as *Hellblade*, would be generally accepted by gaming circles, such games were seen to face multiple barriers when it comes to wider public engagement.
A significant one being the cost and accessibility. Participant 1 points out, “Video games are generally a little bit harder to get into... they’re more expensive than other forms of entertainment, especially if played on a console.” These economic and technological barriers were mentioned by other participants as dissuading those who are not already inclined towards gaming.
Generational differences within this potential audience also present another nuanced layer to this issue. Participant 1 mentions, “Younger audiences are generally more open to mental health themes, but the game's complexity could be a challenge for those who aren't accustomed to gaming, regardless of age.” Here, the problem isn't just financial or generational; it's also about the complexity of the game itself. Participant 4 amplifies this point, stating, “I think such games would be a slightly harder sell to the public... it's quite heavy. It's not what your immediate thought is when you think of video games.”
The awareness and interest gap between gamers and the public were also flagged. Participant 2 highlights this by saying, “If you're playing video games, you wouldn't start with something like this... they need to make a video game first, so they need to keep video gamers in mind

primarily.” Participant 5 echoes this sentiment, indicating that the reach of such games is likely confined to the gaming community and their immediate social circles: "...(such games) would be kept at gamers plus whatever non-gaming people, that portion of those gamers would talk to you and discuss games with."

Despite the hurdles, alternative modes of engagement were offered as potential solutions. Participant 6 suggests the use of different mediums for people who aren't naturally inclined towards gaming. *“I believe it's best to engage them through different mediums like informative posts, influencer endorsements, TV shows, online video essays, and the like,”* they recommend. They also provided vivid metaphor to illustrate the inefficiency of tailoring games for a non-gaming audience: *“It is like trying to tailor Fanta to people who hate fizzy orange drinks; you would lose all your fans of Fanta in the process”*

Participant 7 agrees that there may be potential of using video essays and streams to reach a broader audience beyond the gaming community but was also positive that the public could engage with such games, albeit with some adjustments to reduce the difficulty curve, not the entertainment factor. *“I believe they would generally be well-received by the public, but further attention to gameplay mechanics is crucial. Early-stage tweaks will be needed to ensure its accessible yet still challenging, like a tutorial that is informative but not patronising. Additionally, in the vein of Dark Souls, incorporating cues or markers on the ground that provide brief hints could be helpful while not breaking the game environment."*

Nonetheless, participants generally believed that while games like *Hellblade* may not be the perfect fit for everyone due to the barriers mentioned above, the message they carry can still find other channels for wider dissemination, external to the act of playing the game.

Summary of Theme (c):

Overall, participants generally agreed that, while de-stigmatizing video games can hold immense potential for raising public awareness, they face substantial barriers, largely inherent of the media type, its higher thresholds of entry and its lower (yet slowly increasing) public interest. Participants note that such challenges suggest that, for now, such games may best serve as de-stigmatization tools within specific, already-engaged gaming communities, rather than the general public, but that the barrier between such groups is porous, with connections, such as online videos and streaming channels, that can be utilised during future tool development.

Theme d) Development Assessment & Recommendations

For this section, participants, as players of video games, were asked if they had any suggestions or ideas that game developers would consider in regard to the effectiveness of future de -stigmatisation games. They were also asked for their thoughts on a long-term goal of the researcher, an open source 'conceptual framework' to guide in making video games as stigmatisation tools.

1) Participants' Future Suggestions for Games like *Hellblade*:

Several participants flagged that developers should continue this idea of using entertaining games as a unique experience to raise awareness of societal issues, including mental health issues, but they also warned that developers must be careful to not impose any form of moral values to the experience. Instead, developers would find more success focusing on the player experience first, with the hope to then spark player curiosity for further information.

"... pretty much any art, including video games, has always been formed to transmit a message, or at least create interest, which probably is the best thing to do to raise awareness of things, but it must just be awareness, and not transmitting the artist's morals. I cannot suffer that because I mean, there's an entire faculty that studies ethics and now someone comes in with a couple of notes like 'I solved the problem'. It's kind of arrogant…I didn't feel any kind of morals or things like that in this game, but if the morals are related to the plot of the game, i.e., game first, I think that will be okay." - Participant 1

"...the game felt informative about the experience (of psychosis). It felt like it was an informative statement from the start. So, it's priming me with facts, as opposed to priming me with morals or opinions" - Participant 2

Additionally, several of the participants suggested that future games could include greater player autonomy, whether in the realm of character creations or allowing greater in-game movement. They were aware that the game was more limited in gameplay mechanics and player input for the purpose of the player - character shared experience, but that increasing player autonomy and choice could be effectively accomplished without taking away from the intended experience and from the intended message of the game as a de-stigmatising tool. Participant 5 articulated it particularly well below.

"5/5 for the message, 4/5 for the gameplay - you just need a little bit of extra choice on what the player can do. I agree with there being no HUD, since health is not something you need to care about apart from combat, but even just giving a 'jump-button' would be something that would enhance the game…I understand, obviously, the game layout would need to be edited to include the ability to jump and such, but the message would literally be fine. Though, if you add any more mechanics than that, you're then draining from the message a little bit, but you do then risk draining the gamers' attention and engagement towards the message because they're focusing on the other things, not the game, since the gameplay is not as exciting as usual, if that makes any sense?" - Participant 5

Overall, participants universally praised the developers of *Hellblade* for the degree and good faith by which they sourced their information. Particularly they appreciate how they included both professionals and those that have experienced psychosis as consultants through the production process, and that they trust their audience to interpret the game in their own way.

There were a couple of suggestions given regarding other potential avenues to consider. A couple participants suggested that persons who have experienced others who themselves have experienced states of psychosis could be consulted to provide further viewpoints on such experiences. This could be done to help create non-player characters (NPC) that the player could interact with. They also noted that such 'third-party' people would likely be involved in the process already, especially if they are living with or close to those psychosis experiences that are being consulted.

Another suggestion was to take on board those that perhaps those that have initially experienced stigma towards those experiencing psychosis. This was primarily suggested as an extension of the 'two sides of the coin' concept regarding 'those who study and those who have experienced psychoses', where it then becomes ' those who experience stigma, and

those who promote it'. However, there was a greater degree of contention over that last option, with participants also noting that the potential difficulty in acquiring interested participants would likely not match the value of the potential information received. Regardless of suggestion, participants emphasised that asking those who study and those that have experienced psychosis should take priority over others as a minimum.

Overall, what Ninja Theory has done in through the good- faith development of *Hellblade*, along with making it public knowledge, is seen as the gold standard by participants, all of whom largely support the use of video games as de -stigmatising tools. One participant even suggested that such effort should be legally binding and a requirement for the future.

"... it's obvious they took a lot of their work into account, asking people about their own experience of psychosis and having a mental health advisor on a game that deals with mental health issues. I feel like there should be sort of a legal requirement at this point. Both to make sure you're not talking nonsense, and also for just the mental well-being of those involved in creating such a game, that's going to be tough for some people." - Participant 7

2) Participants' Thoughts on Research Goal

Participants are also supportive of the potential long-term goal of the researcher, in that they support the establishment of a 'Conceptual Framework' for video games de-stigmatisation tools This is described as an open-source tool, compiling a list of do's and don'ts. This would be accessible by any developer or other video game stakeholders, where persons can share their successes and failures to help promote the overall development of the niche market of de-stigmatising games.

Several participants highlight the necessity for interdisciplinary collaboration, incorporating insights from fields beyond just STEM. One of the participants sees a clear parallel between this proposed framework and existing structures in bioinformatics. They suggest that a fruitful avenue for further research into the efficacy of de-stigmatising games would be to partner with a game development company in the creation of a development model. This idea gained traction with other participants' recommendation to include non-academic professionals, such as business experts, to ensure the framework's real-world applicability.

A strong undercurrent in the participants' responses to the idea of such a framework could mitigate repeated mistakes in the development and release of such games. One participant noted that this would limit potential discouragement of external stakeholders who are considering investing in this emerging niche. Participants do think there is a market for such games, but that it is still presently small and that there is a risk of future over-saturation. Other mitigation suggestions include framework trial runs, promotion of interdisciplinary professional dialogues, and having a strong focus on specific elements such as a) the inclusion of various mental health topics in their own but connected framework potions and b) the various potential geographical contexts and cultural values that could influence the development of de-stigmatising games .

While some reservations exist among interview participants, the overarching sentiment is optimistic. There is a consensus that a well-designed, comprehensive conceptual framework has the potential to guide future successful development in de-stigmatizing games, thereby facilitating the goal of such games - a net positive social impact on reducing stigma and raising awareness about mental health issues in a uniquely engaging way.

Summary of Theme (d):

Overall, participants were collectively supportive of the development of video games as tools to de-stigmatize mental health. However, they emphasise a player-first approach and greater player autonomy. *Hellblade* was lauded for its credible, empathetic design. Participants also showed support for the goal of an open source 'Conceptual Framework' for the collective development of de-stigmatising games. In essence, the participants are optimistic about the potential for games to positively impact mental health

Chapter 5: Discussion

5.1 General Participant Demographics [Survey & Interview]:

This section focuses on the general demographics of both survey and interview participants, comparing the two groups. Exploring and defining such details provides a starting point to understand the gaming landscape, i.e., the those that play video games, and how this form of media can be utilised effectively for a greater dissemination beyond this cohort into the general public.

Specifically, this cohort was comprised university students involved in gaming societies and members of national Irish gaming groups. This particular demographic was chosen for several compelling reasons. Not only are they likely to be early adopters or front line users of new video games and therefore potential de-stigmatising tools, but their established expertise in gaming also facilitates a focus on the study's core questions rather than on the technical aspects of gameplay. As willing adults, this group adheres DCU's research guidelines, and this particular demographic, i.e., gamers and their opinions, was found to be unrepresented in previous literature on mental health de-stigmatization. The expectation is that insights from this experienced group could contribute to the development of a more nuanced and effective de-stigmatizing video game.

In terms of demographic details, the majority of the survey participants (n = 50) were male and aged between 18 and 34. This trend was mirrored in the interview group (n = 7). While this gender and age distribution might reflect the broader global gaming community, it is accepted that it can be attributed to variables like sample size or differing interest levels in survey and interview participation across genders and age groups. Almost all participants identified as gamers and had either completed or were in the process of completing a tertiary-level course.

When it came to media preferences, video games and online videos/live streams outranked films and TV shows. This trend held true across male and non-binary participants, whereas females leaned more toward online videos. Age also played a role; those aged 18-34 favoured online videos and video games, while those above 35 (n = 3) showed a distinct preference for TV shows. Intriguingly, despite largely identifying as gamers, online videos/live streaming

took precedence over video games in this sample cohort. Interview participants later attributed this to the convenience and lower attention requirements of online videos compared to the immersive focus needed for video games. YouTube videos have been praised for their effectiveness as learning media (Lam et al., 2017; Rahmatika et al., 2021) and so in the context of de-stigmatization, this trend suggests that online videos could be leveraged alongside de-stigmatizing video games, a point elaborated on in the game design topic section.

Participants also highlighted that video games allow for greater user choice, interaction, and immersion, but require more sustained attention. This reveals the cohort's nuanced understanding of media consumption choices and can inform researchers of their selective approach to entertainment based on situational needs, as the per the Uses and Gratifications audience theory (Sherry et al., 2012). Since participants are selective based on situational needs, de-stigmatizing games in particular must offer an experience that aligns with these needs to effectively engage their target audience.

5.2: Interview Participants Experience of Playing *Hellblade:*

As elaborated on in Ch. 2 (Review), *Hellblade* was selected for this project as it has been lauded for its sensitive and accurate portrayal of psychosis (as a proxy for mental health issues), shown to reduce stigma toward mental health issues through emotional engagement and reduced desire for social distancing (Ferchaud et al., 2020), and was developed in consultation with mental health professionals and individuals who have experienced psychosis. However, it must be acknowledged that this player cohort has 7 members total, and while providing intriguing feedback on their experience in this section, this sample size is still relatively small, potentially limiting the generalisability of these findings to a broader gaming population. Nevertheless, this can still be seen as a form of a pilot study to help generate and streamline lines of enquiry for future research.

In regard to the playtest, participants' prior experience of the game varied, most had not played the game, with few having heard of it prior **[Table. 4.12].** Nonetheless, each one reported having an enjoyable and positive experience of the game, with all players wishing to continue playing the game beyond the allotted time. The portrayal of psychosis, particularly the implementation of 'the voices', was found to be the main stand out feature for this enjoyable experience by players. It reportedly provided an interesting yet challenging experience, along with a wide interpretation of the positionality of the voices as well as the player. Far from being afraid, platers reported greater levels of engagement and interest in the themes and mechanics of the game as a result of this innovative gameplay aspect. Such responses align with the broader conversations around de-stigmatization video games, where, as a medium, video games are increasingly seen as a powerful tool for fostering empathy and engagement around complex issues by leveraging the uniquely high levels of interaction found in video games (Ferrari et al., 2019; Anderson, 2020; Ferchaud et al., 2020).

Participant remarks about not relating to Senua's situation, yet they had an empathetic reaction to her experience, which suggests another crucial point. The empathy that players felt for Senua indicates the power of interactive media to foster deeper emotional connections through shared experiences, a factor which is thought to aid in the de-stigmatization of mental health issues. This emotional connection is particularly important in the context of an

issue like psychosis, which is often misunderstood and stigmatized. For instance, several players used terms like ‘psychoses and ‘schizophrenia’ often interchangeably. Additionally, *Hellblade* provoked thoughtful conversations with the players about mental health, as evidenced by their nuanced interpretations of Senua's experiences during their playthrough. This in turn suggests that games like *Hellblade* can not only serve as genuine forms of entertainment, but also serve as means of raising awareness and empathy towards others who may suffer from various mental health issues – the goal of de-stigmatisation as per Ferchaud et al., 2020)

Moreover, *Hellblade’*s narrative complexity was heavily deliberated on during the interviews. The presence of varying player interpretations on what’s actually going on within the game’s reality did not reportedly take away from their enjoyment of the game. This demonstrates that *Hellblade* can still successfully engage with players as a form of entertainment, albeit in a dialogue that is heavy with ambiguity. In fact, its narrative structure allows players to grapple with uncertainty and multiple perspectives, much like those who experience psychosis might grapple with their own perception and understanding of reality – a noted form of ludo narration by several players, tying into Toh (2015). Such applicable ambiguity can be seen to serve a dual purpose: it first enriches the gameplay experience by offering depth and layers of meaning for players to explore on their own while also providing an empathetic lens through which players can begin to understand the complexities of mental health issues. This is again particularly significant for de-stigmatization. From the player reports and comments, while the experience of psychosis is not easily defined or understood in this player group, *Hellblade* could still act as a conduit for open and nuanced conversations around mental health issues. Rather than portraying a monolithic or stereotypical frightening experience, the narrative complexity of *Hellblade* offered players the opportunity to engage with the subject matter critically and empathetically with the researcher.

Finally, the absence of traditional gaming features like a Heads-Up Display, obvious tutorial or objective markers did not detract from the play experience. Rather, this appeared to actually amplify the game's immersive quality for players. Interestingly, players were also less concerned about being “thrown into the deep end”. Instead, they reported their heavy reliance on previous gaming experiences, such as playing *God of War* or *Dark Souls,* which helped them navigate the complexities of the game, particularly the puzzles and combat encounters. Yet, while players endorsed the game for its potential for entertainment and de-

stigmatisation, they also specified that their recommendations would come with caveats. In essence, players would recommend the game to friends and fellow gamers who are already familiar with gaming technology, and whom they feel would not be easily perturbed by the exploration of mental health themes.[8]

In sum*, Hellblade: Senua's Sacrifice*, was experienced positively through it unique gameplay and narrative features. Despite the ambiguity, the game still managed to immerse players in a world that promotes empathy and understanding of psychosis. The players' feedback confirms that the game succeeds in generating emotional and intellectual engagement, thereby highlighting the potential of video games as a medium for addressing and de-stigmatizing mental health issues.

[8] Interestingly, examples given by players of those they would not consider suitable for this game predominantly included their mothers and sisters, regardless of player gender identity. This begs the question, is the 'Irish Mammy' still pervasive even through Irish gaming culture?

5.3: Designing the Best ‘De-Stig’ Game from Participant ‘Intel’:

This section aims to integrate insights from both survey and interview participants to then identify the facets that would underpin the development of the most accessible and engaging video game, that can also serve to destigmatise mental health, based on players' gaming habits and preferences.

- In regards to how participants play, the game would have to be ported to be played on either a personal computer, such as a desktop or laptop, and/or a fixed, dedicated gaming console, such as the Xbox of PlayStation **[Fig. 4.5(c)]**.
- Concerning what kind of games are popular amongst participants, the top three game genres were Role-Playing, Adventure and Action. The game would therefore increase its potential popularity upon release as one or more of these genres **[Fig. 4.6(a)].**
- In terms of preferred gameplay components, the game would likely gain the most popularity if it featured a compelling, multi-layered narrative, intuitive gameplay mechanics and responsive player controls. Additionally, high-fidelity graphics along with immersive visual designs should go in tandem with a sense of exploration and discovery for players **[Fig. 4.6(b)].**
- From the reported weekly gaming habits of participants, the majority play at least one session a week, which last at least an hour, regardless of the day of the week. Therefore, the game would have great success if it caught the attention of players within the first hour. **[Figs. 4.8(a) to Fig 4.8(d)]**

What is an interesting here is that *Hellblade*, already chosen as the playtest game for previously cited reasons, appears to actually fulfil the above requirements. By successfully engaging players in an immersive experience, combining high quality graphics, nuanced visuals along with a compelling narrative structure, the game illustrates a sensitive and humanising picture of a character experiencing psychosis. Therefore, *Hellblade* can easily serve as a prototype de-stigmatising tool. It shows how video games can uniquely contribute to changing societal attitudes towards mental health issues proactively.

5.4: Participants [Survey + Interview] Thoughts on De-Stigmatisation Tools for Mental Health and Tool Reception

Survey participants solely agreed, albeit to varying degrees, that they believe that "entertainment media has the potential to raise awareness of mental health issues" **[Fig 4.ll(a)]** largely due to the wide reach and engaging nature of such media. This obviously includes multiple forms of media, not just video games. When subsequently questioned about the unique power that video games may have to "influence and challenge societal norms and beliefs within player groups", a significant majority agree, but to varied extents **[Fig. 4.11(b)]** Participants largely understood the advantages of the immersive and diverse perspectives provided by videogames, along with the pre-existing affinity that gamers have to the medium. However, those who agreed less strongly also flagged that such games require in-depth research during their development cycle, and that warned of potential resistance from gaming communities if alternative agendas within such games are perceived. This is particularly compounded by the points made during the interviews, where participants emphasis the requirement for games to limit sensationalism and provide an informed experience rather than prime players with morals or opinions on mental health issues.

Even with the varied participants on the accuracy of mental health depictions within videogames **[Fig. 4.11(c), Table 4.11 (ci) and (cii)]**, all survey participants reported their support for the use of "video games to raise awareness of mental health issues". The sole caveat again was that such videogames necessitate a meticulous execution and proactive resource allocation for research prior its development. Fears raised included fears that such games could run the risk of playing to stereotypes, typecast characters as comic relief in their portrayals, such as the inside joke that is the horror genre.

Interview participants were asked to expand from here, exploring how they think both gamers and those of the wider public would receive such games. Largely speaking, those interviewed suggested that gamers, regardless of the theme or message, would perceive that game either as a good or bad game first and foremost. This could mean that developers then would have to focus on marketing a enjoyable game that then has a cool concept, rather than a 'de-stigmatising' tool from the get-go. Participants understandably appealed for games to balance being a good game while also avoiding being too 'science-y and not game-y', that the game, like a table, be sturdy enough to carry a heavy theme like mental health.

Alternatives. Interview participants flagged that such games, in the current format would likely face multiple barriers when attempting to engage with the wider public, including financial costs and mobility requirements, such as knowing how to and be able to use a controller. A notable warning stemmed from participants fear that pandering the wider public audience would have the inverse of the desired effect, potentially making the game not for gamers. Such de-stigmatising games themselves were seen to still be solely within the reach of the gaming community and their immediate circles, yet participants did provide possible solutions for wider dissemination. This included the application of online videos and informative posts and influencer endorsement. Remarkably, this is what the developers of *Hellblade* did by producing a feature documentary along with a developer diary, posted online during development. Another suggestion involved reducing the difficulty curve of the game which they thought would be possible without hindering the entertainment factor of the game, such as a non-patronising tutorial, that has in-world reasons to exist, providing guidance on gameplay controls and mechanics.

A final note would be that the commercial market for de-stigmatising games may have to develop as a niche within the broader gaming ecosystem. Even so, as gaming continues to become mainstream and the lines between "gamer" and "non-gamer" blur, these games may find unexpected audiences, particularly in light of COVID-19. Such exposure to these games can include audiences watching player personalities online rather than playing themselves, as hypothesised by Ferchaud et al. (2020). Another bridge between gamer and non-gamer can be achieved through positive reviews of de-stigmatising games in more publicly accessible environments such as YouTube. Moreover, even if these games do not become universal hits, they can still serve as important cultural artifacts, sparking future online and in-person discussions, and raising awareness about mental health issues both within and beyond the gaming community.

In sum, participants are outgoingly supportive of the use of videogames as de-stigmatising tools. However, potential pitfalls and solutions have been highlighted by participants, thereby demonstrating the complexity and challenge of designing and implementing such games, coupled alongside the potential benefits for reducing stigma.

5.5: Participant Suggestions for Future Mental Health 'De-Stig' Games:

As previously noted, participants recognized that video games like *Hellblade* have significant potential as tools for de-stigmatizing mental health issues, but they also pointed out some challenges these games face. According to participant feedback, two key areas for future development emerged: enhancing player autonomy and broadening the sources of information used to portray mental health experiences authentically.

Participants suggested that increasing player autonomy could attract a larger, more diverse gaming audience. They argued that many players may initially be drawn to the game for its gameplay rather than its message. However, by offering features like character customization—either aesthetic or functional—the game could be more engaging for a broader range of players, thus widening the potential reach of its de-stigmatization message within the gaming community. Yet, upon reflection, customization could run the risk of lessening players' emotional connection when compared to the potential connection with a pre-designed character. Some even made the comedic suggestion of the addition of a "jump button" as a means to increase engagement. This again could risk diluting the game's core message if not implemented carefully.

Additionally, participants praised *Hellblade's* developers for consulting individuals who have experienced or studied psychosis to create a more authentic game experience. They suggested that this approach could even be expanded upon. For example, developers could also consult those who are close to individuals who have experienced psychosis, or even those who have previously held stigmatized views toward such individuals. These perspectives were said to potentially enrich the game by providing material for the development of non-playable characters, thereby broadening the portrayal of experiences related to psychosis. However, sourcing this information, particularly from those who have stigmatized mental health issues in the past, could present ethical and logistical challenges.

While the potential for using games like *Hellblade* as de-stigmatization tools is immense, achieving this goal may require developers to consider a wider range of player experiences and viewpoints, even as they navigate the complexities of authentically representing mental health issues.

5.6 Summary of Discussion:

In conclusion, this exploration of the findings has provided valuable insights into participant demographics, gaming habits, and preferences, though it is still important to acknowledge the limitations posed by the sample size in both the survey and interview groups. From the perspectives gathered, it is evident that games like *Hellblade* are moving in the right direction as effective de-stigmatization tools for mental health issues. While all game participants supported the use of video games for this purpose, they also emphasized substantial barriers to wider public adoption. These challenges include not only financial constraints but also a general lack of familiarity with gaming technology. To overcome these barriers, alternative methods—such as the utilization of online videos or influencer endorsements—were suggested for reaching a broader non-gaming audience. To engage an even wider gaming community simultaneously, further recommendations included enhancing player autonomy. A final suggestion to increase the de-stigmatising capabilities of video games involved incorporating more diverse information sources to authentically represent various experiences of psychosis. As the gaming industry continues to evolve, it is clear now that the potential for video games to serve as meaningful tools for social change, particularly in the realm of mental health, has become increasingly possible.

Chapter 6: SUMMARY, CONCLUSION & FUTURE DIRECTIONS

6.1 Thesis Summary:

This thesis investigated whether video game players would support the use of games specifically designed as tools to de-stigmatise mental health issues. An extensive literature review found that video games have not only reached mainstream popularity but have also found applications in educational contexts. Importantly, the prevalence of mental health issues has continued to rise, exacerbated by factors like the COVID-19 pandemic. Concurrently, research exploring video games as tools for mental health de-stigmatisation has also grown in prominence. However, focus has primarily been on the depictions of mental health issues (Anderson, 2020) and the psychological effects of such depictions on players (Ferchaud et al, 2020). This project adds to the knowledge by focusing on the thoughts and suggestions of the players themselves, the first line audience to such games.

For this study, a specific cohort was selected—individuals with strong interest and/or expertise in video gaming. They were recruited from university societies and Irish national gaming groups through a modified snowball sampling method. Data was collected via an online survey and subsequent playtest interviews where participants played the game *Hellblade: Senua's Sacrifice (*Ninja Theory, 2017). The primary research question was to explore gamers' perceptions of *Hellblade* as a tool for mental health stigmatization, further divided into four sub-questions for ease of study:

- Sub RQ1: How do participants respond to the portrayal of psychosis in Hellblade: Senua's Sacrifice?
- Sub RQ2: How do participants view the role of video games in destigmatizing of mental health?
- Sub RQ3: How do participants, acting as expert commentators, believe gaming communities and the broader public would receive video games aimed at de-stigmatizing mental health?
- Sub RQ4: What suggestions do participants have for enhancing video games as tools for mental health de-stigmatization?

While reviewing the findings of this study, it became apparent that the topics covered could easily exceed the boundaries of a single Master's thesis. However, given the novel nature of this research, it was essential to establish a robust foundation. As a physiology graduate, entering the field of Social Science without a background in psychology, laying this solid groundwork was crucial for subsequent data interpretation. Most notably, the absence of pre-existing demographic data on this specific cohort contributed to the extensive methodology

and findings section of the thesis. Despite its density, this demographic information was indispensable for providing practical ancillary information on what to focus on in this study as well as providing avenues for future research.

The majority of participants were experienced male gamers aged between 18-34, with 90% having completed 3rd-level education. Participants universally supported the idea of using video games for de-stigmatisation. Based on their input, an ideal de-stigmatising game would fall under role-playing, action, or adventure genres, and would feature a compelling storyline, intuitive controls, and high-fidelity graphics. Interestingly, *Hellblade* met these criteria, further validating its selection as a representative game.

However, participants also warned against potential pitfalls, such as over sensationalising mental health issues for drama or dark comedy. They stressed that the portrayal of mental health in such games should be authentic and well-researched, and that presently there is still a mixed bag in the quality and accuracy in depictions of mental health issues, particularly within the horror genre of games. While participants could detect inauthentic portrayals, they were sceptical that the broader public would be as discerning.

Regarding barriers to widespread adoption, participants noted that current gaming technology might be too complicated and costly for the general public. Solutions included adding in-game tutorials and leveraging popular media like online videos or live-streaming by online influencers to attract a broader audience. Remarkably, despite being avid gamers, the cohort reported that video games were not their most frequented form of media, attributing this to the time and focus required for gaming. If the goal is to use video games for mental health de-stigmatization, focus should be placed on these alternative aspects in-tandem with game development for a broader reach. Participants also recommended that greater degrees of player autonomy and the further incorporation of diverse perspectives on mental health issues in the development process would keep and increase player engagement and potential enlightenment.

In conclusion, video games show promise as de-stigmatising tools, albeit with some caveats and challenges. While games can serve this purpose effectively among seasoned gamers, other forms of media, when used concurrently with video games, have been suggested to be more efficient for quickly disseminating the de-stigmatization message to a wider, non-gaming audience.

6.2 Thesis Conclusion:

With all sub-research questions answered, video games, when carefully constructed and designed, are acceptable as de-stigmatization tools for mental health issues within a specific subsection of a sample population of gamers, largely male-identifying, 18–34-year-olds. This acceptance comes with caveats which will help future research in exploring how best to disseminate de-stigmatising media to a wider audience.

The limitations of the sample size and the specificity of the choice of study population prevent applicability of findings to a more general population. However, by choosing this cohort of experienced gamers, along with a previously researched game, Hellblade, the focus was able to remain on the research questions and thesis aim, and was not undermined by a sample group potentially unfamiliar with such technology. The results have added to the collective knowledge of using video games as de-stigmatising tools for mental health issues by allowing this understudied gamer subgroup to share their thoughts, opinions and expertise.

While this research suggests that 'one game fits all' is not possible, the results here act as a starting point by crystalizing the relevant characteristics and opinions of the experts – i.e. gamers, their patterns of video game usage, the requirements of a video game both as a entertaining game and as a de-stigmatization tool, what development pitfalls should be avoided and what the potential barriers are to the use of such video games in this context for the wider population presently.
While the technology for the alternative solutions proposed to reach a wider population is already available, the caveats raised are enough to conclude that further research even on the use of online videos and live streams is crucial to sidestep potential pitfalls.

Based on the feedback and suggested improvements, video games like *Hellblade* are headed in the right direction as de-stigmatizing tools. However, further investment and research by developers should focus on enhancing player autonomy, increasing engagement and interest, and ensuring critically authentic representations of mental health issues from a holistic set of perspectives. While this study demonstrates the potential of video games in mental health de-stigmatization, it also underscores the need for further research. This is essential to determine the most effective strategies going froward for employing both video games and other media types as de-stigmatization tools before rolling them out to a broader audience.

6.3 Pathways for Future Research- where to from here?

While this study offers valuable insights into the use of video games as de-stigmatization tools for mental health, several avenues for future research are evident.

Firstly, the sample size in this study may not fully represent the broader gaming community in Ireland and the wider world. Subsequent research could benefit from larger, more diverse samples to validate the findings further in terms of age, gender and education.

Secondly, adopting a multi-game approach, analogous to Anderson (2020), could provide a richer understanding of how different games might impact mental health stigma.

Participants in this study expressed support for long-term goal of the researcher - creating an online 'Conceptual Framework.' This open-source database would serve as a collaborative space for gaming industry and community members alike, to share best practices in de-stigmatizing game development. The aim would be to reduce redundancies and encourage more effective de-stigmatisation tools, akin to presently used systems in bioinformatics.

Given the increased adoption of various technologies in the peri-COVID era, a variation of this study's methodology could be applied to non-gaming populations. Such research could also explore the efficacy of 'simpler'/ more approachable kinds of media, like online videos, in de-stigmatizing mental health.

Alternative research approaches could also include the development of programmes targeting a broader audience. A blended, tiered program could combine short video games, tutorials, and shorter online videos, such as the development of a 'trilogy' to wherein a transition would occur seamlessly from simpler shorter online videos to a longer video game, building up exposure to and knowledge regarding mental health issues, as one moves between the different sections of the program, from A to C.

Finally, another option is to focus on a cohort-specific de-stigmatising programme. Video games and other forms of media would be developed with particular cohorts in mind- taking into consideration that appreciation and familiarity with novel technology has grown within

the population as a result of the COVID-19 pandemic. Programmes would be made selectively across population sections. This would be achieved by setting up a national group/ think tank of stakeholders comprising university, industry, educational, medical and members of the general and gaming populations to then collectively address the potential for de-stigmatization at different age levels– supported by University, Depts of Health and Education, and Industry stakeholders.

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Appendices:

Appendix 1: Online Survey Plain Language Statement:

Exploring Player Responses to Commercial Video Games as Contemporary Mental Health De-Stigmatisation Tools. An MSc Dissertation Project.

Part 1: Survey

1. Survey Plain Language Statement - *Context for Survey and Overall Project*

Please Read the Plain Language Statement (PLS) Below Before Completing this Survey.

Title of Project:
Perception Game-Changers: Exploring Player Responses to Commercial Video Games as Contemporary Mental Health De-Stigmatisation Tools.

Introduction to Project:
The goal of this project is to explore how video game players perceive and respond to the use of commercial video games as tools to challenge public stigmas associated with mental health and psychological issues. While previous academic research has looked into this topic in experimental settings, there is a need to gather insights from the gaming community as they are the primary audience for these games.

Researcher:
Luke Simeon Pierce, Dublin City University, School of Communications.
Supervisor:
Dr Debbie Ging, Dublin City University, School of Communications

Can I Participate?:
Participants must be over the age of 18yrs and be comfortable with the general use of video game equipment (e.g. Controler)

Overview of Project:
This project has two stages:

a) This Online Survey - Questions include participants' gaming habits, preferences, and thoughts on using video games beyond entertainment as tools for raising awareness and de-stigmatising mental health and psychological issues.

b) Subsequent In-Person Playtest and Interview - Involves participants playing a specific commercial game and is followed by an interview regarding the participant's thoughts and experience. Sessions can be held either in Cork or Dublin. Interest in taking part can be flagged by each participant at the end of this survey.

You can complete the survey stage without committing to completing the in-person stage.

What about my data?:
As a participant in this survey, your data will be kept completely anonymised. Your e-mail and name will not be kept on file.
If you choose to partake in the subsequent in-person stage, all recorded data, including audio recordings of interviews, will be pseudonymised solely for analytical purposes.
All data will be stored on the assigned DCU Google Drive, and all data collected during this project will be deleted upon completion of the MSc. Deletion will commence when the DCU exam board confirms the results of the corresponding dissertation.

Participation in the project is entirely voluntary.

You can leave this study at any point. You will not incur any penalty, and any participants wishing to leave will not be met with any prejudice.

If you have any further questions about your role in this research or how your data is processed in the project, please e-mail Luke Pierce at luke.pierce3@mail.dcu.ie

If participants have concerns about this study and wish to contact an independent person, please contact:
The Chair,
DCU Humanities & Social Science Faculty Research Ethics Committee,
c/o Dublin City University, Dublin 9.
Tel 01-7008000,
e-mail hss-frec@dcu.ie

Appendix 2: Consent Form for Online Survey:

Exploring Player Responses to Commercial Video Games as Contemporary Mental Health De-Stigmatisation Tools. An MSc Dissertation Project.

Part 1: Survey

2. Consent Form to Participate in Survey

Please Read and Fill out the Following Consent Form *Before Completing the Survey and Click 'OK'*

1. **I am over the age of 18yrs.**

   - Yes [ ]
   - No [ ]

2. **I have read and understood the Plain Language Statement provided.**

   - Yes [ ]
   - No [ ]

3. **I understand that even if I agree to participate now, I can withdraw at any time without any consequences of any kind.**

   - Yes [ ]
   - No [ ]

4. **I understand that I am free to contact any people involved in the research to seek further clarification and information.**

   - Yes [ ]

   - No [ ]

5. **I have been informed and understand what is expected of me and what I should expect from partaking in the online survey.**

   - Yes [ ]

   - No [ ]

6. **I confirm that I freely consent to participate in this online survey, the first stage of the project.**

   - Yes [ ]

   - No [ ]

Appendix 3: List of Online Survey Questions

Exploring Player Responses to Commercial Video Games as Contemporary Mental Health De-Stigmatisation Tools. An MSc Dissertation Project.

Part 1: Survey

3. Survey Start

*** 1. Please select your age range from the options below:**

18 to 24 years old

25 to 34 years old

35 to 44 years old

45 to 54 years old

55 to 64 years old

65 + years old

*** 2. Please select the gender that you most identify with:**

Female

Male

Non-Binary

Prefer Not to Say

Other (please specify)

*** 3. What is the highest level of Level Education that you have completed to date or ongoing? (full-time or part-time)**

Pre Higher Education (Including Junior/Leaving Cert)

Higher/Advanced Certificate (i.e Level 6 QQI)

Undergraduate Degree (Including BSc, BA)

Postgraduate Certificate or Diploma

Postgraduate Degree / Masters,

Doctorate / PhD

Post-Doc

*** 4. Please select the most recent college/university that you have attended (at the time of this survey):**

Munster Technological University (MTU)

Dublin City University (DCU)

University College Cork (UCC)

I have not attended a college/university at the time of the survey.

Other Institution. (Please specify)

*** 5. If you have ever been a member of a college society related to gaming or gaming-related subjects, please click on the relevant organisation(s) below.**

University College Cork (UCC) - Sci-Fi, Horror, Fantasy and Anime Society “Scifi Soc”

University College Cork (UCC) – War, Action & Roleplaying (Gaming) Society “WARPS”

University College Cork (UCC) – Networking, Technology and Gaming Society “NetSoc”

Munster Technological University (MTU) - Sci-Fi Society Munster Technological University

Munster Technological University (MTU) - Guild Gaming Society

Dublin City University (DCU) - Games Society

I am/have been a member of a different society or group not mentioned (please specify)

I have not been a member of college societies or clubs related to gaming or gaming-related subjects.

***6. Please rank the following types of media based on your average usage, with 1 being the most consumed and 4 being the least consumed (You can use the arrows or drag each using the multiple lines icon on the left side. Click the 'N/A' box on the right if you do not consume the media regularly)**

Watching Films (e.g. Hollywood movies, Independent / Foreign films, Documentaries)

Watching Online Videos/ Live Streaming/VODs: (e.g. Twitch streams, YouTube videos, Mixer streams, live gaming events/Sports)

Watching Shows: (e.g. TV series, Web series, Docuseries) N/A // I do not consume this media. Playing Video Games: (e.g. Action-adventure games, role-playing games (RPGs), first-person shooters (FPS), puzzle games)

*** 7. How would you distinguish Video Games from other forms of entertainment media like Films, TV shows, and Online Videos? Please highlight the unique characteristics or aspects of video games that you believe set them apart.**

*** 8. Do you consider yourself a '(Video) Gamer'?**

- Yes [ ]

-No [ ]

*** 9. Please briefly explain your answer to Q.8 (Include if you said Yes or No)**

*** 10. When did you start playing video games regularly? Please select the closest option from the following:**

Before the age of 5

Between the ages of 5 and 10

Between the ages of 11 and 15

Between the ages of 16 and 20

After the age of 20 I can't remember when I first started playing Video Games

I have never played Video Games.

*** 11. On average, how many hours do you typically spend playing video games during the standard work week (Monday - Friday)?**

Less than 1 hour

1 to 3 hours

>3 to 5 hours

>5 to 7 hours

>7 to 9 hours

10+ hours

*** 12. On average, how many hours do you typically spend playing video games on the weekend (Saturday + Sunday)?**

Less than 1 hour

1 to 3 hours

>3 to 5 hours

>5 to 7 hours

>7 to 9 hours

10+ hours

*** 13. On average, how many sessions per whole week do you play video games?**

Once (1) per week

Twice (2) per week

Three-times (3) per week

Four times (4) per week

Five or more (5+) per weeks

None of the above

*** 14. On average, how long are your typical gaming session(s) in a single sitting?**

Less than 1 hour

Between 1 to 2 hours

Between >2 to 4 hours

Between > 4 to 6 hours

Between >6 to 7 hours

More than 7 hours

*** 15. What are your top three favourite genres of Video Games? Please select three of the following general genres.**

Action

Role-playing

Adventure

Strategy (including Real-time, Turn-based)

Sports

Puzzle

Racing

Simulation (e.g. Flight; Farming; EuroTruck)

*** 16. When considering why you enjoy playing Video Games, how would you prioritise the following aspects? Please assign a rank from 1 to 9 to each aspect, with 1 being the most critical and 9 being the least critical to your overall enjoyment (You can use the arrows to move each option or drag each using the multiple lines icon)**

Gameplay Mechanics and Controls

Storyline and Narrative

Graphics and Visual Design

Game Difficulty and Challenge of Completion

Multiplayer or Cooperative Features (including Local/LAN and Online Features)

Realistic Physics/Interactions

Feeling of Exploration/Discovery

Puzzles/Problem-Solving Challenges

Replicability and Longevity

*** 17. Can you please briefly explain the basis of your rankings to the previous question (Q.16)?**

*** 18. Which of the following Video Game 'Device Groupings' would you most likely use to play Video Games?**

PC (e.g., Desktop; Laptop)

Fixed Console (e.g., Xbox; PlayStation)

Mobile/ Cell Phone

Other Handheld Devices (e.g., Nintendo Switch; PSP)

*** 19. Can you please briefly explain your choice of device from the previous question (Q.18)?**

* 20. Have you heard of any of the following games/series?

The Legend of Zelda (SERIES)

Minecraft

Grand Theft Auto V

Call of Duty: Modern Warfare (2019)

Fortnite

Dark Souls (SERIES)

Hellblade: Senua's Sacrifice

Animal Crossing: New Horizons

Journey (2012)

Papers, Please (2013)

Rocket League (2015)

Life is Strange

The Sims (SERIES)

Halo: Infinite

What Remains of Edith Finch

Final Fantasy VII

Remake Red Dead Redemption 2

Among Us

Apex Legends

FIFA (SERIES)

Celeste Civilisation (SERIES)

Resident Evil (SERIES)

Stardew Valley

Super Smash Bros. Ultimate

That Dragon, Cancer

I have not heard of any of the Video Games

*** 21. Have you played of any of the following games/series?**

The Legend of Zelda (SERIES)

Minecraft

Grand Theft Auto V

Call of Duty: Modern Warfare (2019)

Fortnite

Dark Souls (SERIES)

Hellblade: Senua's Sacrifice

Animal Crossing: New Horizons

Journey (2012)

Papers, Please (2013)

Rocket League (2015)

Life is Strange

The Sims (SERIES)

Halo: Infinite

What Remains of Edith Finch

Final Fantasy VII

Remake Red Dead Redemption 2

Among Us

Apex Legends

FIFA (SERIES)

Celeste Civilisation (SERIES)

Resident Evil (SERIES)

Stardew Valley

Super Smash Bros. Ultimate

That Dragon, Cancer

I have not heard of any of the Video Games

*** 22. Now, Excluding Video Games and other forms of 'Entertainment Media' (eg Films, TV), have you ever used the following options to access information about mental health or psychological issues? (e.g. Depression, Anxiety, Psychosis and/or Schizophrenia) Please tick each that applies, or if none apply, please tick 'None'.**

Class Lectures / Notes

Documentaries

Online Video Essays/ Opinion Pieces (e.g. YouTube)

Academic Articles

Newspaper/Magazine Pieces

Social Media (e.g. Facebook, Twitter, Instagram, Mastodon)

Online Community Forums (e.g. Discord, Reddit, Quora)

Friends/Family Discussions

None of the above

*** 23. Please briefly explain your answer to the previous question (Q.22).**

*** 24. Have you heard the term "Serious Video Game" before this survey?**

- Yes [ ]

- No [ ].

***25. If you have heard of the term, how would you define "Serious Video Game"? If you have not heard of the term, Type 'N/A' and move to Q.26**

***26. If you have not heard of the term, how would you define "Serious Video Game"? If you have heard of the term, Type 'N/A' and move to Q.27**

*** 27. Would you agree or disagree with the statement: “Entertainment Media a (including Films, TV series, and Video Games) have the potential to serve as effective means of raising public awareness of psychological and mental health issues?”**

Strongly agree.

Agree.

Somewhat agree.

Somewhat disagree.

Disagree.

Strongly disagree.

*** 28. Can you please explain why you Agree or Disagree with the previous statement (Q.27)?**

*** 29. Would you agree or disagree with the statement: "Video Games have the power to uniquely influence and challenge societal norms and beliefs within player groups”?**

Strongly agree.

Agree.

Somewhat agree.

Somewhat disagree.

Disagree.

Strongly disagree.

***30. Can you please explain why you Agree or Disagree with the previous statement (Q.29)?**

*** 31. Would you agree or disagree with the statement: "Video Games tend to depict individuals suffering from psychological or mental health issues accurately"?**

Strongly agree.

Agree.

Somewhat agree.

Somewhat disagree.

Disagree.

Strongly disagree.

*** 32. Can you please explain why you Agree or Disagree with the previous statement (Q.31)?**

*** 32. Which of the following sentences would you agree with the most concerning Video Games as tools for raising awareness of various health issues, including psychological or physical issues?**

I would be very supportive; using video games can be informative and beneficial in an engaging way.

I will be supportive if the video game is used as a tool well and with proper resources.

I would be neither supportive nor non-supportive.

I would not be very supportive, as I prefer to separate entertainment from education regarding Video Games.

I would not be supportive as I don't see value in Video Games beyond entertainment.

*** 33. Thank you kindly for completing this survey! Would you consider participating in this project's next stage, involving an in-person play-test session of a specific commercial game, followed by an interview? (See details on following page)**

- Yes [ ]

- No [ ]

Appendix 4: Playtest & Interview Plain Language Statement:

Plain Language Statement - Context for MSc Dissertation Project Stage 2: Playtest & Interview

Please Read the Plain Language Statement (PLS) Below Before Continuing:

Title of Project:

Perception Game-Changers: Exploring Player Responses to Commercial Video Games as Contemporary Mental Health De-Stigmatisation Tools.

Introduction to Project:

This project aims to explore how video game players perceive and respond to commercial video games as tools to challenge public stigmas associated with mental health and psychological issues. While previous academic research has looked into this topic in experimental settings, there is a need to gather insights from the gaming community as they are the primary audience for these games.

Researcher:

Luke Simeon Pierce, Dublin City University, School of Communications.

Supervisor:

Dr Debbie Ging, Dublin City University, School of Communications

Can I Participate?

Participants must be over the age of 18yrs and be comfortable with the general use of video game equipment (e.g., Controller).
Participants are also asked to have completed the previous stage: Online Survey.

Overview of Second Stage: Playtest & Interview:
A Consent Form will be Provide Prior to the Commencement of this Stage. There are three parts to this Stage:

1) Brief Contextual Questionnaire

- - This involves completing a quick questionnaire before the playtest.
- - This will contain questions similar to the online survey.
- - You are not obligated to remember your exact answers to the previous Online Survey stage.

2) Video Game Playtest

- - This involves participants playing a specific section of a commercial video game.
- - This will last between 45mins to 1 hour.
- - This will be completed using the recent PlayStation 5 Console System, a standard

  Controller and Headset setup.

- - The video game will provide a Trigger Warning regarding themes of mental health.

3) Post-Playtest Interview

- This involves participants taking part in an interview after undergoing the playtest.

- - Questions wil primarily revolve around participants' thoughts on using Commercial Video Games as Mental Health destigmatising tools and participants' experiences of the Video Game Playtest.
- - The interview audio will be recorded for transcription and analysis.

  What about my data?:

  As a participant in this interview & playtest stage, all recorded data, including audio recordings of interviews, will be pseudonymised solely for analytical purposes.
  All data will be stored on the assigned DCU Google Drive, and all data collected during this project will be deleted upon completion of the MSc.
  Deletion will commence when the DCU exam board confirms the results of the corresponding dissertation.

  Participation in the project is entirely voluntary.

  You can leave this study at any point. You will not incur any penalty, and any participants wishing to leave will not be met with any prejudice.

  If you have any further questions about your role in this research or how your data is processed in the project, please e-mail Luke Pierce at luke.pierce3@mail.dcu.ie

  If participants have concerns about this study and wish to contact an independent person, please contact:
  The Chair,
  DCU Humanities & Social Science Faculty Research Ethics Committee,

  c/o Dublin City University, Dublin 9. Tel 01-7008000,
  e-mail hss-frec@dcu.ie

Appendix 5: Consent Form for Playtest and Interview:

Consent Form for Participating in MSc Dissertation Project Stage 2: Playtest & Interview

Please Read the Accompanying Plain Language Statement (PLS) Before Continuing with this Consent Form:

Title of Project:
Perception Game-Changers: Exploring Player Responses to Commercial Video Games as Contemporary Mental Health De-Stigmatisation Tools.

Consent Form:

This form must be completed fully to be able to participate in this session.

Please read each statement carefully and mark each box '[ ]' that you agree with:

1. I am over the age of 18yrs old. **[ ]**
2. I have read and understood the Plain Language Statement provided. **[ ]**
3. I understand that even if I agree to participate now, I can withdraw without any consequences**. [ ]**
4. I understand that I am free to stop the session at any time. **[ ]**
5. I understand that I am free to contact any people involved in the research project to seek further clarification and information. **[ ]**
6. I have been informed and understand what is expected of me and what I should expect from partaking in this stage of the project, including:
   - a) *Completing the Pre-Playtest Questionnaire,*
   - *b) Participating in the Playtest,*
   - *c) Engaging in the Interview.* **[ ]**
7. I confirm that I freely consent to participate in this session for the 2nd stage of this dissertation project. **[ ]**

Once you have completed the above and are satisfied, please sign below:

---------- ----------

Participant Primary Investigator

Date: / / Luke Simeon Pierce

Appendix 6: Questionnaire for Playtest and Interview:

MSc Stage 2 Playtest & Interview: a) Pre-Playtest Questionnaire

Please Complete the Following Questionnaire Below Before Starting b) Video Game Playtest:

Title of Project:
Perception Game-Changers: Exploring Player Responses to Commercial Video Games as Contemporary Mental Health De-Stigmatisation Tools.

If you have any questions related to this document or the process as a whole, feel free to ask.

Questionnaire:

1) **Demographics:**

- Please note your **Age** and the **Gender** that you most identify with:

- What is the highest level of **Level Education** that you have completed to date or ongoing? (full-time or part-time):

- What has been your **Primary Field of Study**?:

2) **Game Habits/Opinions:**

- Do you consider yourself a **"Gamer"**? Why/Why Not?

- How often would you watch **Online Video Essays** (e.g. YouTube) relative to playing video games?

- How would you define the term **“Serious Video Game”?**

- How would you define the term **“Stigma”?**

- How would you define the term **“Commercially Viable Video Game”?**

- How would you define the term **“Public De-Stigmatising Tool”?**

- Do you think that **Video Games tend to depict individuals suffering from psychological or mental health issues accurately?**

- Do you think that *Video Games have the potential to serve as **effective means of raising public awareness of psychological/mental health issues and disorders?***

3) Playtest Game Questions:

- Have you used a **PlayStation** system before?

- Have you **Heard of and/or Played** the game “Hellblade, Senua’s Sacrifice” before today?

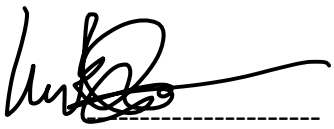
- Please briefly mention **what you know about the game**, “Hellblade, Senua’s Sacrifice”? [NOTE: If you are not familiar with the game, leave ‘N/A’]

4) Knowledge of Mental Health:

- How would you rate your **knowledge of *psychological/mental health issues and disorders*** on a scale from 1 – 5, with 1 being not knowledgeable and 5 being very knowledgeable?

- How would you rate your **confidence in accurately recognising characteristics associated with *psychological/mental health issues and disorders* in media (including Video Games)** on a scale from 1 – 5, with 1 being not confident and 5 being very confident?

Once you have completed the above and are satisfied, please sign below:



Participant

Date: / /

Primary Investigator

Luke Simeon Pierce

Appendix 7: Semi-Structured Interview Question Guide

MSc Stage 2: Semi Structure Interview Guide

The Main Questions *(i.e. The Three Sections Below)* are to be asked by the Primary Investigator in a non-leading manner, with room for tangential or related queries to maintain the flow of discussion.

Game: Hellblade, Senua's Sacrafice (2018) Developed by Ninja Theory

3 Main Sections:

1) Participants' Experience of the Playtest
2) Various Aspects of Concept of Video Games as Public Mental Health De-Stigmatising Tools
   2.A: Participants' Own Thoughts on the Concept
   2.B: Does Participants' views on 1) and 2.A) Change or Influenced by New Contextual Information Concerning Hellblade's Development, Marketing and Previous Related Research (i.e. Ferchaud et al, 2020)?
   2.C: Participants' Thoughts on Potential Future Responses of i) Gaming Communities and ii) Wider Public to the Use of Such Games as Tools
   2.D: Participants' Thoughts on the Future Use of Such Games; Developer Considerations etc
3) Participants' thoughts on the Project itself along with its Long-Term Goal(s)

Section 1: Playtest Experience (~9 Questions)

- What was it like to play the game? /**How would you describe the experience?**
- Did you have any expectations before you commenced playing?
  ➔ How do these expectations compare to your experience?
- Did anything stand out to you about the game?
  ➔ Thoughts on lack of HUD, Objective Marker, Tutorials; weird camera positioning
  ➔ The voices as guides -> audio idications of the game mechanics
  ➔ Combat and Puzzles
- Can you describe Senua for me? /// Can you describe her experience?
  ➔ *Asses if they can accurately identify Psychosis etc*
  ➔ *Can also ask where they get their information! *
- Can you tell me what happened during the game?
- How would you describe the game to a friend?
- Did you enjoy playing the game?
  ➔ why / why not? – was it confusing/gimmicky/boring?
  ➔ What did you enjoy?
  ➔ What did you not enjoy?
  ➔ Would you like to continue playing?
  ➔ Would you recommend the game to other people?
- Did this game remind you of any other games or other forms of entertainment media?
  ➔ How do they compare?
  ➔ Do you think the similarities were purposeful?
- Overall, did playing this game evoke any feelings you are willing to share?
  ➔ Were any of them related to Senua, the player character?

➔ Has this game changed your perspective on those suffering from mental health issues?? (Physical injuries/ sickness vs mental health issues?)

Section 2: Concept of Video Games as Public Mental Health De-Stigmatising Tools

A) Participants' Own Thoughts

- How would you compare this game to previous games you have played?
- Do you think games can have a function beyond just entertainment?
- What are your thoughts on the following terminology?
  - ➔ serious game vs commercially viable game
  - ➔ De-Stigmatising Tool

  Do you think games can have a function beyond just entertainment?
- What are your thoughts on the use of Video Games as Public Mental Health De-Stigmatising Tools?
  - ➔ Do you think such actions are beneficial for those suffering with psychological/ mental health issues/disorder?

B) Does Participants' views on 1) and 2.A) Change or Influenced by New Contextual Information Concerning Hellblade's Development, Marketing and Previous Related Research (i.e., Ferchaud et al, 2020)?

- Now, regarding what we have previously been discussing, i.e., your playtest experience, and your thoughts on De-Stig. Tools, what would you think if I told you that this game, being produced by the company 'Ninja Theory', was developed through continuous consultation both with Neuroscientists and related professionals, along with those who have had varied experiences of psychosis?
  - ➔ Would you be interested to learn more about how it was made?
  - ➔ *Photo sheet ??*

- Additionally, what would you think if I told you that recent research has independently found evidence that this game has potential to reduce stigma towards sufferers of mental health issues? (explain Ferchaud et al 2020 – Stigma = Stereotyping + Social distance)

C) Participants' Thoughts on Potential Future Responses of i) Gaming Communities and ii) Wider Public to the Use of Such Games as Tools

- *As a gamer,* how receptive do you think gaming communities will be to the development of similar De-Stig games?
  - ➔ Why?/ why not?
  - ➔ What about the wider public?
  - ➔ What about those who might be experiencing some form of mental health issue?

- A notable preliminary result from the Online Survey has been the popularity of watching video essays over playing video games
  ➔ What are your thoughts surrounding video essays? Do you watch them? Where?
- What if I told you there was a range of opinions about this game online? X Y and Z.
  ➔ What are your thoughts on such opinions??

D) Participants' Thoughts on the Future Use of Such Games; Developer Considerations etc

- From our chat, what are some considerations that developers should take on board when thinking of developing similar games in the future?
  ➔ What should change /remain the same?
  ➔ Do publisher have to be suitable or more obvious about their development process if they intend to make such games in the future ?

- Overall, would you support the use of these commercially viable games, with traits of serious games, to increase awareness and decrease stigma?
  ➔ Would you like to continue playing?
  ➔ Would you recommend the game to other people?

Section 3: Participants' Thoughts on the Project itself along with its Long-Term Goal(s)

- What are your thoughts on this project?
  ➔ Do you think there might be other aspects to the video game eco system that might need to be considered? Maye streamers and online personalities?

- What do you think of the creation of a data base that acts as a framework for such games that any stakeholders could access?

Appendix 8: Semi-Structured Interview Analysis Guide

Interview Analysis Key Guide
Four key aspects can largely be analysed from each Stage 2 Interview but there is room for additional material:

1) Participant Experience of Playtest
   - How did they find it? Was it enjoyable?
   - Any expectations? Similar to other games?
   - Any key parts that stood out? (Sequences, mechanics etc.)
   - (If they don't mention it first) Thoughts on the lack of HUD, Tutorial, and objective markers.
   - Did they rely on previous gaming experience?
   - (If they don't mention it first) How were the puzzles/combat?
   - Describe the plot (and the world) – what do they think is happening?
   - Would they recommend it to other people? Who?
   - How would they describe the character, Senua?
     ➔ What language do they use?
     ➔ Do they use the word psychosis or something else?
     ➔ Where do they get their information from?
   - Do they feel any way toward Senua?
   - How would they feel if they saw someone acting like Senua?

2) Participants' thoughts on key concepts (on their own + in relation to Hellblade)
   - Stigma & De-Stigmatisation
   - Serious & Commercially Viable game
   - Psychosis
   - Contextualising info
     a) This game's development – good practice?
     b) Prior research – Ferchaud et al. 2020

3) *As expert witness gamers*, what are the participants' thoughts on the reception of games like Hellblade?
   - Gamers
     ➔ Thoughts on polarising opinions of the game – great experience vs boring game
   - Wider public (any differences?)

4) Participants' thoughts on what developers should consider going forward. (+ thoughts on the project itself)

These are largely asked in order, but there may be slight variations per interview session on account of the flow of the conversation.

Additional information may come up during the interview - allow participants to elaborate if tied to the study.

Additional topics that can be mentioned

- Thoughts on “the blue moment” …. etc
