

Playing through the Pandemic: The Social and Emotional Gratifications of Gaming during the COVID-19 Pandemic in Japan

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Abstract

While most industries were hit hard during the early stages of the COVID-19 pandemic, the global game industry was not only resilient—it was thriving. With a dramatic reduction of business activity and opportunities for social interaction due to widespread social distancing and stay-at-home orders, gaming not only served as a pleasant distraction, but it provided players with social gratifications and a sense of achievement in a time when the monotony of daily life made it hard to recognize our daily accomplishments. Like most countries with a large gaming population, Japan was no exception. Although some studies have suggested that problematic gaming is related to coping and escape, socialization and personal satisfaction as reasons for playing, this presentation explores the positive social and emotional gratifications associated with gaming. In order to do so, by means of discourse analysis, this presentation reveals the interpretation of results from a large-scale survey obtained with the cooperation of Tokyo-based GameWith Corporation. The overall findings reveal that almost 90 per cent of respondents agreed that gaming not only helped them to cope, but helped them to connect with others in an often immensely isolating stay-at-home context.

Keywords: Gaming, Gratifications, Isolation

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Introduction

The constant cycles of stay-at-home orders and travel restrictions spurred by the COVID-19 pandemic have undoubtedly proved challenging for people worldwide and even Japan where restrictions on movement were simply requests. In such unprecedented circumstances, people nevertheless found individual means of coping and tried to adapt somehow. While some distracted themselves with new hobbies such as gardening or baking, others sought social interaction on digital platforms to deal with the loneliness. It has been argued that social distancing resulted in loneliness, fatigue and even depression. Moreover, even before COVID-19, “depression was already considered one of the major diseases of this century, and this risk escalates with social isolation” (Kleiman et al., 2020). Other studies have also reinforced that symptoms of anxiety and depression have increased substantially during the COVID-19 pandemic (Shanahan et al., 2020). Hoping to alleviate these feelings of loneliness or even depression, statistics show that there was an increased use of ICTs such as TV, online gambling platforms, and video games in 2020 (Ángeles López-Cabarcos et al., 2020). In particular, online game streaming platforms such as YouTube Gaming and Twitch reported a 10% increase in audiences and game distributor Steam reported the highest number of active users in its entire history (Stephen, 2020). In fact, the World Health Organization even teamed up with the game industry’s #PlayApartTogether initiative to promote physical distancing.

Japan was no exception in this global surge of online gaming. Similar results were also observed in Japan in a mass online survey conducted by Tokyo-based GameWith Corporation. The findings revealed that almost 90 per cent of respondents agreed that gaming not only helped them to cope, but helped them to connect with others in an often immensely isolating stay-at-home context (see Figure 1).

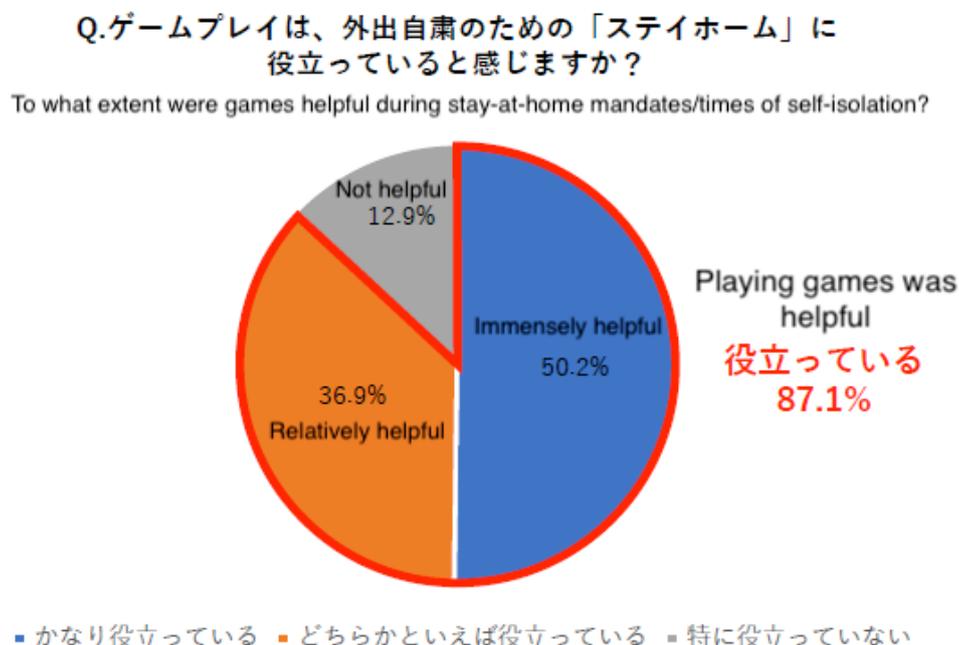


Figure 1: GameWith Survey Question 5

In this context, one might assume that more direct forms of online social interaction such as video calls or messaging services offer more meaningful interaction, so what kinds of

gratifications did online gaming offer? This presentation explores the positive social and emotional gratifications associated with gaming. In order to do so, by utilizing concepts from ‘Uses and Gratifications’ theory, this presentation reveals the interpretation of results from the aforementioned mass online survey obtained with the cooperation of Tokyo-based GameWith Corporation. As noted, almost 90 per cent of respondents agreed that gaming helped them to cope and to connect with others in a stay-at-home context, however, the factors that contributed to this and other notable gratifications need discussion. Not only do the results and interpretations of this survey provide insight into social behaviour in Japan, but it refutes the common misconceptions that gaming is anti-social and unproductive.

Background and Methods

GameWith’s Company Profile

Prior to clarifying my methods of analysis, it is essential to briefly overview the survey conducted by GameWith Corporation. Launched in 2013, GameWith Corporation runs a website which provides the latest information on game releases, their respective reviews, and gaming tips or tricks from top gamers. Its website is not only available in Japanese, but also in English and Taiwanese Mandarin, meaning that it has a potentially large audience reach and user base. According to the company profile, they not only provide game-playing tips, but “are also creating the surrounding environment necessary for better enjoying games by providing such services as game reviews, video streaming and a user community” (GameWith, 2021a). Significant here is the user community that it boasts as a sense of community was cited by a number of the survey respondents.

Survey Participants, Survey Methods and Summary of Questions

As for the survey itself, it was conducted from June 24th to July 1st in 2020 and yielded 3950 responses from users from the age of 10 through to over 70. It was distributed online via a Google Form and later analyzed, upon which GameWith Corporation released the results online. The purpose of the survey was to gauge the extent to which users perceived gaming was helpful for them during the early stages of the pandemic. Although the majority of the questions were closed, multiple-choice questions to gain simple quantitative data, there were “Other” options which allowed respondents to make comments or expand on their responses. The only open-ended questions were: “If you have methods of limiting or controlling your game playing time, what do you do?” and “What are some of the titles of games you played during the stay-at-home mandates?”. The remaining closed questions asked respondents about their age, gender, the amount of time they spend gaming since the pandemic started, who they usually play with, what the positive aspects of gaming were during stay-at-home mandates, and whether they thought gaming helped them during the pandemic.

Survey Interpretation Methods

While the intention of GameWith Corporation’s data analysis was to provide a simple summary of results of largely quantitative data, I wanted to take their findings a step further and examine them through a more critical lens. In order to do so, I accessed the survey data with permission from GameWith in early 2021 and began my own interpretation of the findings using concepts from Uses and Gratification Theory (UGT) which apply to gaming.

In 1973 media theorists Katz, Gurevitch, and Haas (1973), compiled a list of 35 needs of media users with both social and psychological functions, and thus sorted them into the following five categories: (1) Cognitive needs (acquiring information, knowledge and understanding); (2) Affective needs (strengthening aesthetic, pleasurable and emotional experiences); (3) (Personal) integrative needs (strengthening credibility, confidence, and status); (4) (Social) integrative needs (strengthening contact with family, friends, and the world); and (5) Tension release needs (needs related to escape, tension-release or diversion) (p.166).

Katz, Blumler and Gurevitch further developed UGT, essentially arguing that media use is active and diverse, and that the purposes of media consumption vary from person to person (1974). While UGT and the abovementioned social and psychological needs can arguably apply to most forms of media, I required a model more specific to gaming for my analysis. Therefore, I adopted the six dominant dimensions of video game motivations proposed by Sherry et al. (2006). Although debatable, the model proposes that the six dominant motivations for video game use include: (1) Arousal (games stimulate emotions); (2) Challenge (the feeling of accomplishment derived from game play); (3) Competition (gaming allows users to prove their mastery, dominance, or skills); (4) Diversion (games can be used to avoid stress or responsibilities); (5) Fantasy (video games allow users do things they cannot possibly do in real life); and (6) Social interaction (games allow social interaction) (Sherry, et al. 2006, p.218). While the cognitive needs described by Katz et al. are not explicitly listed in this model, I argue that the cognitive processes involved in mastering a game and its strategies are represented in the category “Competition”. Thus, based on these six key motivations, I analyzed both the processed and raw data to ascertain the various gratifications users derived from gaming during the initial COVID-19 outbreak in Japan.

Findings and Analysis

1. Arousal

As noted, the first motivation, arousal, simply refers to the stimulation of emotions. Aside from media studies scholars, psychologists and behavioural scientists have also acknowledged that games elicit positive emotions. For instance, “puzzle games have been empirically shown to trigger positive emotions”, and that “individuals consciously turn to these games to regulate their emotions” (Granic, Lobel, & Engels, 2014, p.72). Renowned game designer and author Jane McGonigal also argues that some of the most intense positive emotional experiences are triggered while playing video games (McGonigal, 2011). Thus, when considering the ways in which games were effective (or beneficial) during the stay-at-home orders, it is unsurprising that the majority of respondents agreed that games were a means of stress relief or a way to alter one’s mood (see Figure 2).

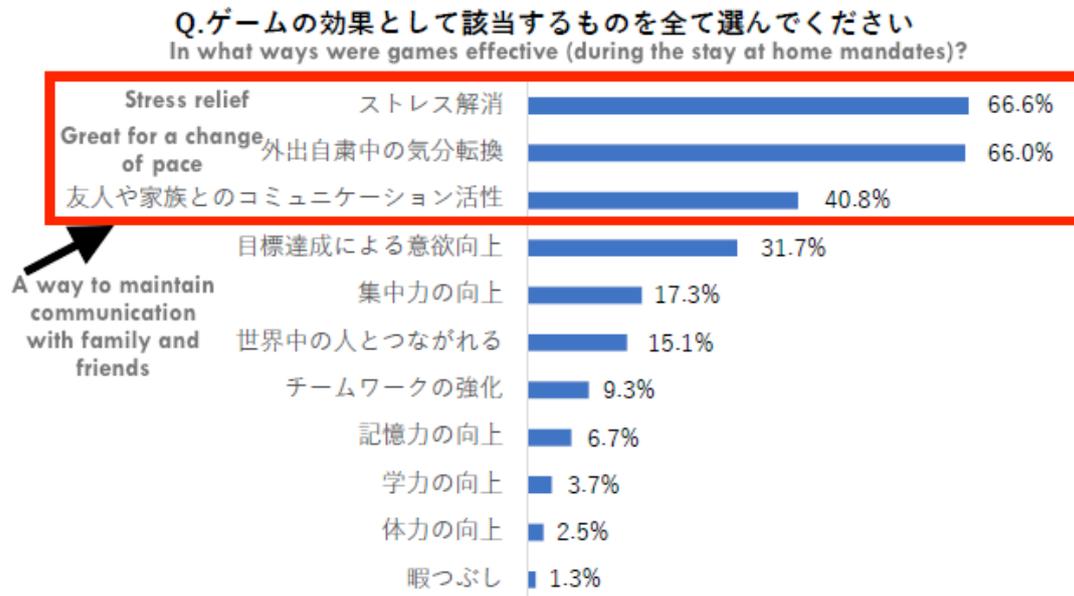


Figure 2: GameWith Survey Question 6

Furthermore, the survey also found that the most popular games among respondents were as follows: (1) *Monster Strike*, (2) games belonging to the *Pokémon* franchise, (3) *Fortnite*, (4) *Animal Crossing*, and (5) *Puzzle and Dragons*. While *Monster Strike* and *Puzzle and Dragons* incorporate elements of puzzle games, *Pokémon* (mostly an RPG involving battles), *Fortnite* (a battle royale survivor game) and *Animal Crossing* (a simulation game set in a village) arguably evoke a range of emotions. For instance, emotions can range from fear and frustration in trying to survive in *Fortnite* and *Pokémon* to joy and satisfaction from making friends and catching bugs to get daily rewards in *Animal Crossing*.

2. Challenge

One of the primary reasons for game play is undoubtedly the desire for a challenge and the associated feeling of accomplishment derived from it. For Granic, Lobel, and Engels, games continuously provide new challenges for a reason. That is, as soon as a player masters one task, “the rules change drastically, frustrating players and often triggering anxiety while also forcing players to “unlearn” their previous strategies and flexibly switch their appraisal systems to uncover the new rule structure” (2014, p.72). In turn, this may promote “the ability to flexibly and efficiently reappraise emotional experiences, teaching players the benefits of dealing with frustration and anxiety in adaptive ways” (2014, p.72). In the context of an unprecedented pandemic where we have had to unlearn our previous ways of living and adapt to the “new normal”, it is easy to see how games, with their ever-changing rules and strategies, might simulate or reflect real-world situations. In a sense, overcoming these new simulated challenges may be therapeutic. As Figure 2 illustrates, 31.7% of respondents thought that games increased their desire to reach goals and thereby feel a sense of accomplishment. This need to feel challenged and successfully accomplishing a task is something that life in lockdown could not offer for many. This was evidenced with the rise of baking and gardening as hobbies which allow one to observe progress, be challenged and accomplish something. Whether attempting a new level in a puzzle game or learning how to fight with a newly acquired monster in *Pokémon*, I argue that constantly adapting to new challenges in game play during a pandemic was both therapeutic and reinforced the importance of developing coping strategies to overcome challenges.

3. Competition

While the aspect of competition was not explicitly mentioned by respondents as one of the gratifications they derived from gaming during the early stages of the pandemic, the respondents' choice of games seems to suggest a subconscious desire for competition. As multiplayer and MMOG (massively multiplayer online game) games, *Monster Strike*, *Pokémon* and *Fortnite* rely on teamwork for players to advance in competitions or challenges. Notably too, after *Puzzle and Dragons*, the sixth and seventh most popular games were *Fate/Grand Order* (a combat game) and *Apex Legends* (a battle royale game). Whether challenging a gym leader in *Pokémon* or fighting to survive or remain in the game in *Apex Legends* or *Fortnite*, some level of competition is involved. What is interesting, however, is that 9.3% of the respondents in the survey believed that strengthening teamwork is one of the beneficial aspects of gaming. One could infer that although there are common goals and a sense of competition in some of the abovementioned games, being competitive in a team is perhaps valued more than individual effort by Japanese gamers. Whether this is related to the idea that Japan has a collectivist society is debatable, but what is significant to note is that it has been argued that players of violent games that encourage cooperation are more likely to exhibit helpful gaming behaviours online and in daily life than those who play nonviolent games (Ferguson & Garza, 2011). What this overall signifies is a need for massive cooperation to defeat a common enemy or reach a common goal. In the context of a global pandemic, this may signify the mass cooperation of citizens to curve the spread of COVID-19 and defeat what might be considered a common enemy. Cooperative competition, it seems, was valued by the respondents in the survey.

4. Diversion

As evidenced in Figure 2, the top two benefits of playing games during the early stages of the pandemic were that games functioned as a means of stress relief and a way to alter one's mood. At the end of the table, the response “暇つぶし”(to kill time) was also given by 1.9% of respondents. If diversion in the context of gaming indeed refers to the practice of playing games to avoid stress of responsibilities, then the survey results indicate that gaming as a diversion from stress was one of the greatest gratifications for respondents during the stay-at-home periods in early 2020. This is also reflected in the choice of games. To elaborate, rather than time-consuming RPGs such as *Final Fantasy* or *Assassin's Creed*, puzzle games or games such as *Animal Crossing* can be easily stopped and resumed. However, the multiplayer or MMOGs (such as *Monster Strike*, *Fortnite* and *Apex Legends*) which were popular amongst respondents demand not only one's time, but one's commitment. That is, if your team is relying on you for support to advance in the game, it can be difficult to put the game down and consequently let the team down. While this could potentially lead to problematic gaming, under strict stay-at-home orders, gaming as a distraction needs to be recognized for its therapeutic effects. Clinical psychologists have also noted that games:

shift attention from whatever is disturbing a player's mind-set to the external, physical stimulus of the game. Like traditional grounding and mindfulness exercises, this shift helps calm the nervous system, and unlike other escapist activities such as watching a movie or television show or reading a book, video games are immersive. They fully engulf and distract the mind from worries and stress. (Wiederhold, 2021, p.1)

If we use the discourse of mindfulness to approach and understand gaming as a means of diversion, perhaps it also becomes easier to acknowledge the therapeutic attributes.

5. Fantasy

In game studies discourse, fantasy generally “involves trying our new activities/identities in virtual game worlds which are not possible in everyday life” (Marino et al., 2020, p.618). Whether one assumes the role of a character in the game world or simply engages in activities that are simply not viable in one’s real life, the fantasy aspect of gaming satisfies one’s needs or desires to temporarily depart from the mundane or ordinary and invites players to explore, achieve, and succeed in the virtual game world. While the respondents in the survey did not explicitly mention or refer to the fantasy element of gaming, the aforementioned games which the respondents overwhelmingly favoured perhaps indirectly indicate that the respondents sought some degree of fantasy in game play. In 2020 when anything from travelling overseas to meeting friends became mere fantasies, even taken-for-granted aspects of daily life could be considered a fantasy when in lockdown. While some enjoyed defeating monsters or dragons in *Monster Strike*, *Pokémon* and *Puzzle and Dragons*, others enjoyed the simple pleasures of gardening or catching bugs in *Animal Crossing*. On the other hand, battle royale games such as *Apex Legends* or *Fortnite* perhaps tapped into our deeper anxieties and desires during the pandemic—a will to defeat a common enemy and to stay alive. While this may uncannily reflect the reality of 2020, the gap between reality and the virtual game worlds of *Apex Legends* and *Fortnite* is the presence/absence of weapons. Being shooter games, players in *Apex Legends* and *Fortnite* are armed with weapons which are used to defeat enemies. However, in early 2020 there were no available means to defeat what was slowly becoming a universal enemy for citizens worldwide. Being armed, having weapons and essentially power to eliminate an enemy was, I argue, the element of fantasy which struck a chord with not only many of the GameWith survey respondents, but players worldwide.

6. Social interaction

When social settings and occasions shifted online due to restrictions on movement in most countries in the early stages of the pandemic, taken-for-granted office chit-chat and catching up with friends over a beer or coffee were no longer options for some. In Japan, for students or singles living alone or away from home, the initial stay-at-home orders were particularly challenging. In early 2021, the situation reached the point where Japan eventually appointed its first minister with the specific role of “combating the country’s loneliness and isolation crisis that has exacerbated during the coronavirus pandemic” (Ryall, 2021). While messaging and video calls provide some relief, people’s availability, response time and willingness to use online communication tools varies. While games are by no means the ultimate solution to this problem, the vast amount of people engaged in social multiplayer games at any time of the day means that someone somewhere is always available to interact with. GameWith’s survey results (see Figure 2) also reinforced the importance of social interactive functions of games with 40.8% of respondents agreeing that games were a means to maintain communication with friends and family. Another 15.1% of respondents noted that one of the other benefits of playing games was being able to connect with people all over the world. Figure 3 (Question 7 in the survey) further confirms whom the respondents mostly enjoyed playing with.

Q.ゲームは誰とプレイすることが多いですか？
Who did you mostly play with?

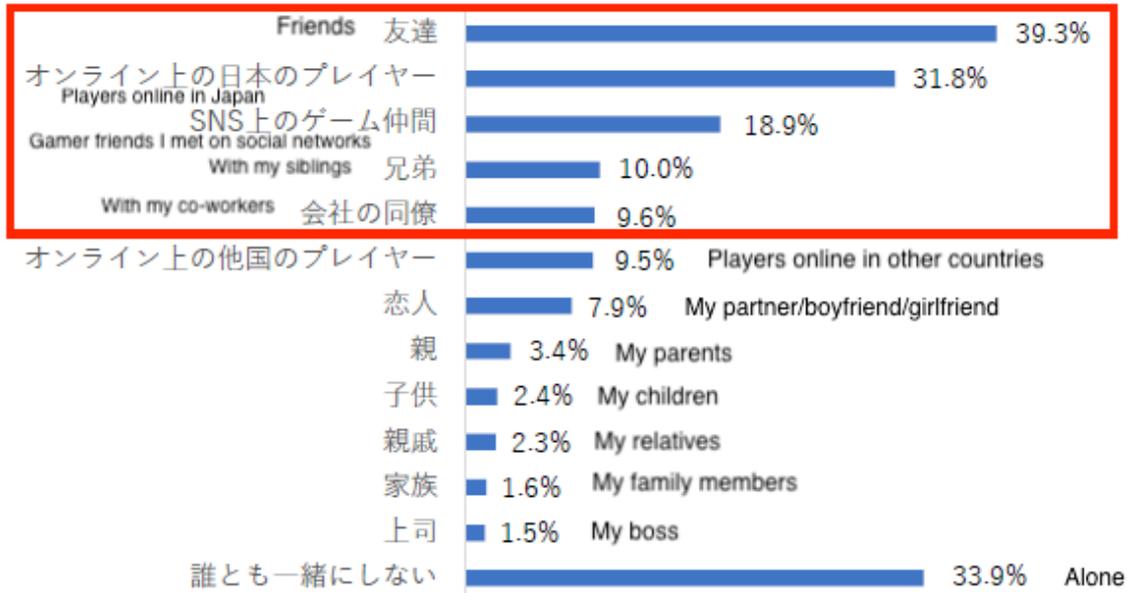


Figure 3: GameWith Survey Question 7

Although playing with friends or alone seemed to be the most common responses, over 40% of respondents reported to have played with fellow players of the same games both in Japan and worldwide. An additional 18.9% of respondents played with gamer friends whom they had met over social network platforms. What this indicates is the importance of a dedicated online gaming community which is usually present and “there for you” when immediate family members, co-workers or friends may not be able to be. Needless to say, these relationships and social interactions through games can range from superficial to significant. However, the sense of belonging, being part of team, and having common goals cannot be dismissed.

This need for social interaction was also reflected in the fact that the five most popular games amongst respondents were multiplayer games. Aside from excessive screen time, games like *Monster Strike*, *Pokémon* and *Puzzle and Dragons* hardly get criticized from concerned parents. However, battle royale games *Fortnite* and *Apex Legends* are often dismissed as being too violent or accused of encouraging violent behavior. Some psychologists have acknowledged that games like *Fortnite* are “fairly bleak” in the sense that players fight it out in a battle royale until only one is left alive. On the other hand, they have also acknowledged that these games provide “an unusual social media network – a place where friends can come together with a common interest, catch up and play to relax and unwind” (Etechells, 2021). Moreover, a large-scale U.S. study found that teens who played games with civic experiences (such as the MMOG *Guild Wars 2*) were more likely to be engaged in social and civic movements in their everyday lives (Lenhart et al., 2008). Whether menial or meaningful, I argue that these game-facilitated interactions satisfied people’s needs for otherwise taken-for-granted office chit-chat or catch ups with friends that were no longer viable. Thus, rather than dismissing such MMOGs as violent or addictive, they ought to be reevaluated as platforms for meaningful social interaction which encourage cooperative competition and teamwork.

Conclusion

With the future still unclear and circumstances changing on a daily basis, the coping strategies we developed in 2020 to deal with the drastic changes in our lives and livelihoods are still with us. While many industries have suffered or collapsed since 2020, the video game industry has thrived. Marston and Kowert suggest that the popularity of games during the pandemic is partly due to the fact that games are “playful, fun, interactive spaces [which] differentiates them from other forms of mediated communication, such as text messaging or social media”, and they “allow individuals to connect through play, which is an important facet of psychological well-being throughout the lifespan” (Marston and Kowert, 2020). This was indeed also reflected in GameWith Corporation’s survey findings. As I have demonstrated, the survey found that gaming not only helped alleviate stress and feelings of loneliness, but it brought people together. Depending on their needs, some players sought arousal (emotional experiences), competition (such as collaborative competition in MMOG battle royale settings), or challenges (adapting to new challenges in game play and the feeling of accomplishment derived from it). Others sought a diversion or fantasy to temporarily depart from the somewhat bleak reality of daily life in a pandemic. However, what was significant was the recognition that games function as a platform for social interaction with 40.8% of respondents agreeing that games were a means to maintain communication with friends and family members. Given the large sample size, it is possible to make some concrete inferences from the quantitative findings. One of the caveats of the survey, however, was the lack of complex, open-ended questions. Adding several open-ended questions to allow respondents to expand on their answers or provide anecdotes would have provided far greater insight into their needs, concerns and desires. Furthermore, a focus group or interviews with a handful of respondents would have also been fruitful. For instance, GameWith Corporation’s follow-up survey in June 2021 found that 69.7% of respondents agreed that playing games helped to alleviate feelings of loneliness in 2021 (GameWith, 2021b). However, without some kind of qualitative data it is difficult to gain further insight into the extent to which games, or the respondents’ use of them, helped alleviate feelings of loneliness. In any case, the pervasiveness of games as an immersive form of entertainment which brings people together is unquestionable and perhaps we may never witness “Game Over”.

Acknowledgements

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References

- Animal Crossing: New Horizons (Nintendo Switch) [Video game]. (2020). Nintendo.
<https://www.nintendo.com/games/detail/animal-crossing-new-horizons-switch/>
- Apex Legends (PC version) [Video game]. (2020). Electronic Arts.
<https://www.ea.com/games/apex-legends>
- Cameron, D. (2001). *Working with spoken discourse*. London: SAGE.
- Coates, J. (2007). Talk in a play frame: More on laughter and intimacy. *Journal of Pragmatics*, 39, 29-49.
- Drew P., & Heritage J. (1992). Analysing talk at work: An introduction. In P.Drew, & J. Heritage (Eds.), *Talk at work* (pp. 3-65). Cambridge: Cambridge University Press.
- Etchells, P. (2021, March 16). Don't feel guilty about playing video games during lockdown. *Science Direct*. <https://www.sciencefocus.com/comment/dont-feel-guilty-about-playing-video-games-during-lockdown/>
- Fate/Grand Order (iOS version) [Video game]. (2015). Aniplex.
<https://apps.apple.com/jp/app/fate-grand-order/id1015521325>
- Ferguson, C. J., & Garza, A. (2011). Call of (civic) duty: Action games and civic behavior in a large sample of youth. *Computers in Human Behavior*, 27, 770–775.
- Fortnite: Battle royale (PC version) [Video game]. (2017). Epic Games.
<https://www.epicgames.com/fortnite/en-US/download>
- GameWith. (2021a). *Company information*. <https://gamewith.co.jp/en/about>
- GameWith (2021b). 第2回コロナ禍におけるゲームプレイ実態調査 [The second survey about game play during the Coronavirus outbreak]. <https://gamewith.co.jp/4305>
- Granic, I., Lobel, A., & Engels, R. C. M. E. (2014). The benefits of playing video games. *American Psychologist*, 69(1), 66–78. <https://doi.org/10.1037/a0034857>
- Guild Wars 2 (PC version) [Video game]. (2012). ArenaNet, NCSOFT.
<https://www.guildwars2.com/en/>
- Katz, E, Blumler, J.G., and Gurevitch, M. (1973-1974). Uses and Gratification Research. *The Public Opinion Quarterly*, vol.37, 509-523.
- Katz, E, Blumler, J.G., and Gurevitch, M. (1974), Utilization of Mass Communication by Individual. In J.G Blumler & E. Katz (Eds.), *The Uses of Mass Communications: Current Perspective on Gratifications Research* (pp. 19-32). Beverly Hills, CA: Sage.
- Katz, E., Gurevitch, M., & Haas, H. (1973). On the Use of the Mass Media for Important Things. *American Sociological Review*, 38 (2), 164-181.
https://repository.upenn.edu/asc_papers/267

- Kleiman, F., Meijer, S., & Janssen, M. (2020). Gaming for Meaningful Interactions in Teleworking Lessons Learned during the COVID-19 Pandemic from Integrating Gaming in Virtual Meetings. *Digital Government: Research and Practice*, September 2020. <https://doi.org/10.1145/3416308>
- Lenhart, A., Kahne, J., Middaugh, E., Macgill, A. R., Evans, C., & Vitak, J. (2008). Teens, video games, and civics: Teens' gaming experiences are diverse and include significant social interaction and civic engagement. *Pew Internet & American Life Project*. <http://www.pewinternet.org/Reports/2008/Teens-Video-Games-and-Civics.aspx>
- López-Cabarcos, M. & Ribeiro-Soriano, Domingo & Piñeiro, Juan. (2020). All that glitters is not gold. The rise of gaming in the COVID-19 pandemic. *Journal of Innovation & Knowledge*. 5. 10.1016/j.jik.2020.10.004.
- Marino, C., Canale, N., Vieno, A., Caselli, G., Scacchi, L., & Spada, M. M. (2020). Social anxiety and Internet gaming disorder: The role of motives and metacognitions. *Journal of Behavioral Addictions*, 9, 617– 628. <https://doi.org/10.1556/2006.2020.00044>
- Marston, H. R., & Kowert, R. (2020). What role can videogames play in the COVID-19 pandemic?. *Emerald Open Research*, 2, 34. <https://doi.org/10.35241/emeraldopenres.13727.2>
- McGonigal, J. (2011). *Reality is broken: Why games make us better and how they can change the world*. New York, NY: Penguin Press.
- Monster Strike (iOS version) [Video game]. (2013). XFLAG. <https://apps.apple.com/jp/app/モンスターストライク/id658511662>
- Pokémon Sword and Shield (Nintendo Switch) [Video game]. (2019). Nintendo, The Pokémon Company. <https://swordshield.pokemon.com/en-us/>
- Puzzle and Dragons (iOS version) [Video game]. (2012). GungHo Online Entertainment, Inc. <https://apps.apple.com/us/app/puzzle-dragons-english/id563474464>
- Ryall, J. (2021, April 23). Japan: 'Minister of loneliness' tackles mental health crisis. *Deutsche Welle*. <https://p.dw.com/p/3sTRA>
- Shanahan, L., Steinhoff, A., Bechtiger, L., Murray, A. L., Nivette, A., Hepp, U., Ribeaud, D., & Eisner, M. (2020). Emotional distress in young adults during the COVID-19 pandemic: evidence of risk and resilience from a longitudinal cohort study. *Psychological medicine*, 1–10. Advance online publication. <https://doi.org/10.1017/S003329172000241X>
- Sherry, J. L., Lucas, K., Greenberg, B. S., & Lachlan, K. (2006). Video game uses and gratifications as predictors of use and game preference. In P. Vorderer & J. Bryant (Eds.) *Playing computer games: Motives, responses, and consequences* (pp. 253-268). Mahwah, NJ: Erlbaum.

Stephen, B. (2020, March 18). *This is Twitch's moment*. The Verge.
<https://www.theverge.com/2020/3/18/21185114/twitchyoutube-livestreaming-streamelements-coronavirusquarantine-viewership-numbers>.

Wiederhold, B. K. Editorial. *Cyberpsychology, Behavior, and Social Networking*. Jan 2021, 1-2. <http://doi.org/10.1089/cyber.2020.29203>.

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