CoMBInES
CONFERENCE ON MANAGEMENT, BUSINESS, INNOVATION, EDUCATION AND SOCIAL SCIENCES

Volume 3 No 1 (2023)

Received : February, 15, 2023
Accepted : February, 17, 2023
Published : April, 14, 2023

Conference on Management, Business, Innovation, Education and Social Science
https://journal.uib.ac.id/index.php/combines

In-Game Spending Due To Quarantine: A Case Study Of Batam Region

Nelson Donglas[1], Tony Wibowo[2]
Email of author correspondence : 1931105.nelson@uib.edu

[1]Faculty of Computer Science, Universitas Internasional Batam, Batam, Indonesia
[2]Faculty of Computer Science, Universitas Internasional Batam, Batam, Indonesia

Abstract

Pandemic mitigation measures greatly affect our social development now, measures such as wearing masks, maintaining distance, and quarantine have been used to prevent the spread of the virus. As a result of the precautions taken, outdoor stress-relieving activities may become prohibited or impractical due to social distancing measures. People who must stay at home and need a social life must look for other activities to avoid anxiety and stress. Video games have become an excellent alternative to avoid this problem, the ability of people to cope with stress thanks to video games and social interactions through online games has increased the consumption of digital games. The main aims of this study are firstly to analyse changes in players money spending due to quarantine and secondly to investigate any changes in gaming behaviour due to quarantine. To do so, 380 participants were invited to complete an online survey to answer questions regarding video games and quarantine. The results showed that there was an increase in player playtime during the quarantine period, more people brought in their families and friends to play together and there was an increase on players spending money on video games. Correlation between post-pandemic and in-game purchase behaviour should be evaluated in further studies.

Keywords: *Video games, Covid-19, Quarantine, Gaming*

Introduction

Changes in social, economic and psychological aspects such as isolation, reduced global market activity and changes in people's behaviour have occurred unexpectedly during the quarantine period caused by the Covid-19 pandemic worldwide (Olff et al., 2020). Pandemic mitigation measures greatly affect our social development now, measures such as wearing masks, maintaining distance, and quarantine have been used to prevent the spread of the virus (Adhikari et al., 2020). In addition to these measures, restaurants, cinemas, entertainment venues, museums, along with many social venues are temporarily locked (Demertzis & Eyerman, 2020). As an outcome of precautions taken, social distancing measures may prohibit or make outdoor stress relief activities impractical. People who must stay at home and need a social life should look for other activities to avoid anxiety and stress. Video games can be a great alternative to avoid this problem (Ko & Yen, 2020). The consumption of digital games has increased as people have been able to cope with stress thanks to social interaction through video games.

These changes are internalized by various industries and sectors that have expanded their markets to boost productivity and economic growth. Connected with the world of entertainment and affected by these changes, the video game industry has seen increased demand, especially in the last two years, becoming a routine activity in the home, breaking sales records and becoming dominant in the global market. occupies a prominent position (Z. Li & Suping, 2020). Even before the pandemic, it was clear that video games were in high demand.

Video games have successfully captured the attention of consumers using mobile devices. The application of new technology and the incorporation of new techniques such as non-player his character allows strategic implementation of dynamic, believable and unpredictable behaviour. As a result, players want to engage in gameplay and get noticed (Agis et al., 2020).

The growth rate increased during the pandemic as the number of players increased and new companies entered the market. Leading game distributor Steam reports that in its history during the pandemic, it reached more than 20 million concurrently active users, and that number is increasing daily. Quarantine encourage users around the world to learn and enjoy great video games that we never played before and, above all, encourages game designers to adapt their products to new demands and needs. (Garmen et al., 2019).

Video games are more than just a medium for entertainment, it can also be a tool for building social skills that are key to functioning in a modern society like concentration and multitasking skills (Toufik & Hanane, 2021) Video games have a positive impact on reaction time and processing speed and can also reduce stress (Pallavicini et al., 2018).

A significant increase in the number of people playing video games during the pandemic could increase exposure to in-game items and open opportunities for purchase. Many of the games that are played are free online games, but they are rarely truly free. So, it's worth considering if something can be accessed for free, as we are the product paying with our time, data, or attention. But often there are products purchased that unlock or acquire new skins that are only for aesthetics reasons and won't improve game character abilities (Thorhauge & Nielsen, 2021).

The main aims of this study are firstly to analyse changes in players' money spending due to quarantine and secondly to investigate any changes in gaming behaviour due to quarantine. Therefore, we are interested in developing research with the objectives.

Literature Review

There are five authors which are Marc Toledo, Zhang li, Gaëlle Bodi, Ellis, Belbag.

The research conducted by (Toledo, 2021) is a survey-containing study directed at gamers of various demographics and examining the changes in their motivation and the way they approach gaming after the pandemic. Surveys are created in Google Forms and distributed individually via Steam, Discord, Blizzard Battle.net, and the Journal of Geek Studies. This supervision is divided into three parts. Divided into 9 general demo questions, 9 game-specific demo questions, and 12 player behaviour questions. The results found that gaming becomes more socially acceptable during quarantine, and players take advantage of it and invite their families and friends, higher player presence replaces the community of players playing alternative video games, and the timely release of video games has an effect big on players.

Research by (Z. Li & Suping, 2020) Learn how and why self-expression influences in-game purchasing behaviour in Fortnite. As one of the world's most popular battle royale games, he collects data in two ways for this study. The first, an online survey conducted in October 2018, asked participants about their psychological perceptions of how they felt about playing Fortnite patterns and their avatars. Contestants were recruited through Mechanical Turk, Fortnite Facebook groups, Reddit Fortnite, Twitter, and their university esports teams. As a screening question, the participant was asked if he had played Fortnite in the past month. Otherwise, you are not eligible to be investigated. The second method consists of 11 semi-structured, in-depth interviews conducted via text, voice, or face-to-face chat. Of the 11 participants, 10 were male and 1 was female. Participants' ages ranged from 18 to 32, with the average of 20.7. The results found identify simple links that influence the amount of money spent by players.

The research conducted by (Bodi et al., 2021) aim to explore changes in gaming behaviour due to the lockdown and then analyse gaming motivations in relation to the lockdown. A total of 346 participants completed the survey, including 186 women (53.76%). Their age ranged from 18 to 68. Nearly all of the participants were found to have continued gaming during the quarantine period, with most playing more hours than usual.

The research conducted by (Ellis et al., 2020) aims to investigate how the physical and mental well-being of players of AR games like Pokémon Go is being affected by the pandemic period. A mixed method was used to collect the data for this study. The survey included a total of 40 questions, both quantitative and qualitative questions. Quantitative survey data were analysed using SPSS 25.0 while qualitative data were analysed through thematic analysis using NVivo. The results of this study were that physical activity during social restrictions related to COVID-19 decreased significantly from an average of 7.50 hours per week.

Research conducted by (Belbağ & Aybegüm, 2022) It aims to examine consumer behaviour in Turkey during the pandemic and how consumers are adapting to this new normal. For this purpose, 78 Turkish consumers were surveyed online.

Data were analysed by well-founded theory using a stimulus-organism-response model and constant comparison method. The results found in this study are additional hoarding behaviour due to the pandemic which causes them to rarely go out.

For this study, the research method used is a quantitative and qualitative multi-method. The quantitative method is carried out by distributing surveys to Batam players (Bodi et al., 2021; Ellis et al., 2020; Toledo, 2021) and the qualitative method is carried out by conducting interviews (Belbağ & Aybegüm, 2022; L. Li et al., 2020).

Research Methodology

Surveys are a way of collecting data by providing a list of questions to respondents where the answers to these questions give different values. The distribution of the survey uses the Google Form which will be shared via social media WhatsApp, Instagram and Line. Survey questions use a Likert scale developed by Ransis Likert by determining a score for each question in the range 1-5. Scale 1 describes strongly disagree, scale 2 describes disagree, 3 describes neutral, 4 agree, and 5 describes strongly agree. The population used in this study were the people of Batam city, totalling 1,196,396 people especially video game players with an age range of 15-64 years so that the research population was 841,227 people for Batam city. The sample taken for this study was at least 385 respondents who had played video games in Batam city according to the slovin formula with a margin of error of 5% and a confidence level of 95% of the total population of video game players in Batam city. We also conducted an interview process to collect qualitative data. The target that we will interview is 30 game players in the cities of Batam, both men and women. The questions in the interview are the same as the questions in the survey, the media used in the interview process is via zoom.

Table 1. General Demographics Questions on Survey

Questions	Possible Responses
Gender	1. Male 2. Female
Age	1. <18 2. 18-24 3. 25-40 4. >40
Education	1. Less than high school diploma 2. High school degree 3. Bachelor's degree 4. Master's degree
Employment status	1. Employed full time. 2. Employed part-time. 3. Self-employed 4. Unemployed (currently looking for job) 5. Unemployed (not currently looking for job) 6. Student 7. Retired 8. Unable to work. 9. Prefer not to say

What is your household income?	1. < 2 million rupiah 2. 2-3 million rupiah 3. 3-4 million rupiah 4. 4-5 million rupiah 5. Over 5 million rupiah 6. Prefer not to say

Table 2. Gaming Specific Demographic Questions on Survey

Video platform you often use	1. PC 2. PlayStation 4 3. Xbox One 4. Nintendo Switch 5. Mobile (iOS/Android)
How many hours spend n video games during lockdown?	1. Less than 1 hour 2. 1 - 3 hours 3. 3 - 5 hours 4. 5 - 10 hours 5. 10 - 20 hours 6. More than 20 hours
How many hours usually?	
How much did you spend on video games this year?	1. < Rp 100.000 2. Rp 100.000- 500.000 3. Rp 500.000 - 1million 4. 1-2.5 million rupiah 5. 2.5-5 million rupiah 6. Over 5 million rupiah
Video games you were playing before lockdown	(Open-ended question)
Video games you are playing after lockdown	(Open-ended question)

Table 3. Gaming-specific behavioural questions using Likert scale

"I spend more time playing video games during lockdown than I used to"	1=Strongly disagree 2=Somehow disagree 3=Neither agree nor disagree 4=Somehow agree 5=Strongly agree
"I enjoy playing video games during confinement more than before"	
"I use video games as a stress mechanism during confinement"	
"I feel better after playing video games during confinement"	
"Playing video games during confinement affected my sleep schedule"	

"I'm spending more money than usual on new video games because of the confinement"	
"I play more games that allow me to connect with friends during confinement"	
"When I want to play video games and can't, I'm angrier/sadder than usual"	

After all data have been collected. Then proceed to frequency analysis by presenting the results of comparing quantitative and qualitative results by using frequency analysis and presenting the data in graphic or table form, then we will draw conclusions based on valid evidence from the research results.

Finding and Discussion

In this chapter, we begin our investigation and analysis of the data collected through the interviews and surveys we conducted. There are 385 respondents consisting of 88.8 % male with the frequency of 342 people and 11.2 % female with a frequency of 43.

Table 4. gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	342	88.8	88.8	88.8
	Female	43	11.2	11.2	100.0
	Total	385	100.0	100.0	

The analysis of table 5 contains demographics of the respondents according to their age. There are 42 respondents (10.9%) with the age under 18, 165 respondents (42.9%) with the age of 18-24, 119 respondents (30.9%) with the age of 25-34, 52 respondents (13.5%) with the age of 35-44. From the results, we know that most of the respondents are 18-24 years old.

Table 5. age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<18	42	10.9	10.9	10.9
	18-24	165	42.9	42.9	53.8

	25-34	119	30.9	30.9	84.7
	35-44	52	13.5	13.5	98.2
	45-54	5	1.3	1.3	99.5
	diatas 55	2	.5	.5	100.0
	Total	385	100.0	100.0	

The analysis of table 6 contains demographics of the respondents according to their last education. The results showed that 35 people (9.1%) were under high school ,144 people (37.4%) were high school and 173 people (44.9%) were bachelors.

Table 6. Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	dibawah SMA/SMK	35	9.1	9.1	9.1
	Diploma 3	1	.3	.3	9.4
	Gelar doktor	1	.3	.3	9.6
	Gelar Master	18	4.7	4.7	14.3
	Sarjana	173	44.9	44.9	59.2
	SMA	12	3.1	3.1	62.3
	SMA/SMK	144	37.4	37.4	99.7
	Smk	1	.3	.3	100.0
	Total	385	100.0	100.0	

The analysis of table 7 contains demographics of the respondents according to their occupation. 111 people (28.8%) are full time working, 88 people (22.9%) are self-employed, 76 people (19.7%) are students. From the results, we know that most of the respondents are full-time working.

Table 7. Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Part-time working	56	14.5	14.5	14.5

	Full-time working	111	28.8	28.8	43.4
	Not working	11	2.9	2.9	46.2
	Retired	3	.8	.8	47.0
	Not working (looking for job)	39	10.1	10.1	57.1
	Students	76	19.7	19.7	76.9
	Not able to work	1	.3	.3	77.1
	Self-employed	88	22.9	22.9	100.0
	Total	385	100.0	100.0	

The analysis of table 7 contains demographics of the respondents according to their income. 104 people (27%) are under Rp 2.000.000, 78 people (20.3%) are around Rp 3-4 million, 64 people (16.6%) are around Rp 2-3 million. The largest frequency of respondents earning is under Rp 2.000.000.

Table 7. Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2-3 million Rp	64	16.6	16.6	16.6
	3-4 million Rp	78	20.3	20.3	36.9
	4-5 million Rp	61	15.8	15.8	52.7
	> 5 million Rp	41	10.6	10.6	63.4
	<2 million Rp	104	27.0	27.0	90.4
	Prefer not to say	37	9.6	9.6	100.0
	Total	385	100.0	100.0	

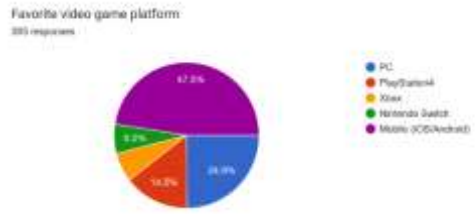

Figure 2. Video games platform

Most of our respondents are playing on mobile devices, as many as 183 people (47.5%) are playing on mobile devices. The second largest one is pc, there are 96 (24.9%) people among our respondents who are playing video games on pc.

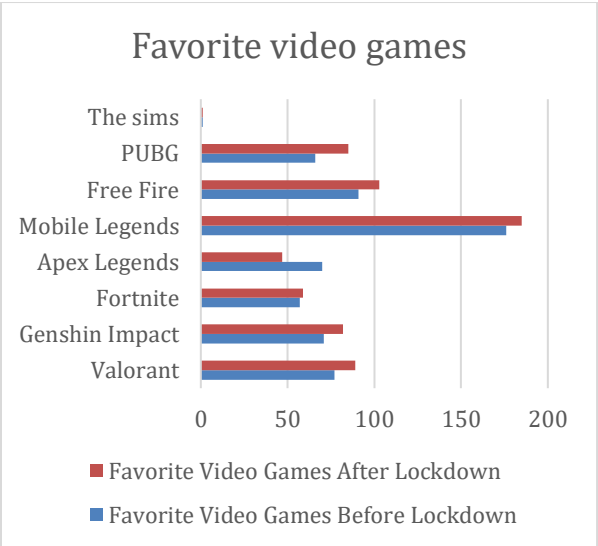

Figure 3. Favourite video games

There were not many changes in the video games titles that were played before and after the lockdown, the most drastic change in our data were apex legends losing one-third of the players after the lockdown and the most popular title is mobile legends before and after the lockdown.

Figure 4. Time spent on video games

There was a significant change in time spent on video games before and after the lockdown. After the lockdown, the number of people who played under 1 hour decreased from 24.4% to 5.7, and the people who played 1-3 hours also saw a decrease from 42.3% to 32.7%. There was a significant increase in the 3-5 hours of playtime after the lockdown from 20,3% to 42.3% and an increase from 9,9% to 16.1% for people who played 5-10 hours.

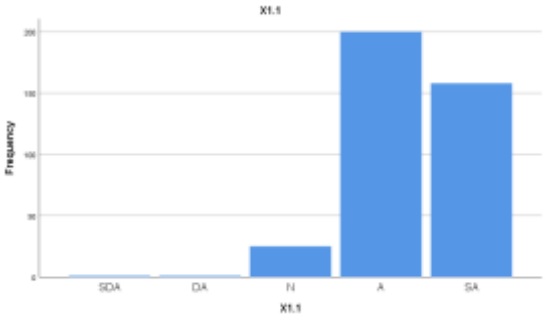

Figure 5. Gaming behavioural question 1

Figure 5 contains people answers on the question "I spend more time playing video games during lockdown than I used to". The results show that 200 people (51.9%) answer agree, 158 people (41%) answer strongly agree. And when we asked the same question to the people we interviewed, we also received many strongly agree answer a total of 24 people (80%) from 30 people.

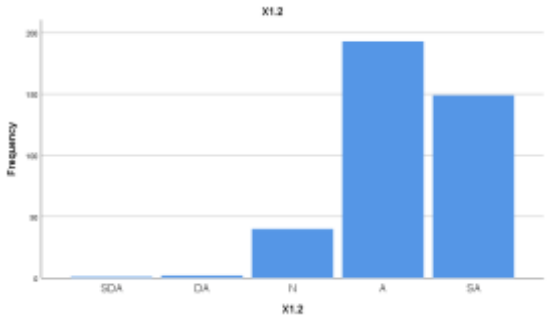

Figure 6. Gaming behavioural question 2

Figure 6 contains people answers on the question "I enjoy playing video games during confinement more than before". The results show that 193 people (50.1%) answer agree, 149 people (38.7%) answer strongly agree, 40 people (10.4%) answer neutral. And when we asked the same question to the people we interviewed, we also received many strongly agree answer of 21 people (70%) 9 people (30%) neutral.

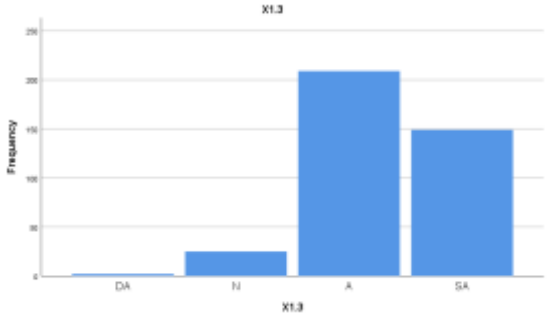

Figure 7. Gaming behavioural question 3

Figure 7 contains people answers on the question "I use video games as a stress mechanism during confinement". The results show that 209 people (54.3%) answer agree, 149 people (38.7%) answer strongly agree, 25 people (6.5%) answer neutral, 2 people (.5%) answer disagree. And when we asked the same question to the people we interviewed, we also received many strongly agree answer of 18 people (60%), 6 people (30%) neutral, 3 people (10%) disagree,3 people (10%) strongly disagree.

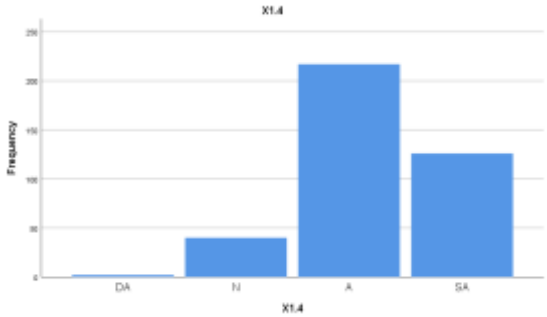

Figure 8. Gaming behavioural question 4

Figure 8 contains people answers on the question "I feel better after playing video games during confinement". The results show that 217 people (56.4%) answer agree, 126 people (32.7%) answer strongly agree, 40 people (10.4%) answer neutral, 2 people (.5%) answer disagree. And when we asked the same question to the people

we interviewed, we received mixed answer of 12 people (40%) Neutral, 9 people (30%) Strongly agree, 3 people (10%) disagree,6 people (20%) strongly disagree.

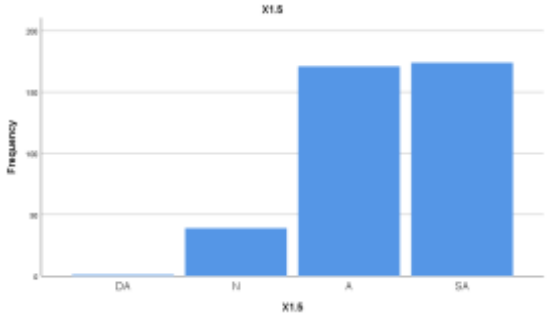

Figure 9. Gaming behavioural question 5

Figure 9 contains people answers on the question "Playing video games during confinement affected my sleep schedule". The results show that 174 people (56.4%) answer strongly agree, 171 people (32.7%) answer agree, 39 people (10.1%) answer neutral, 1 people (.3%) answer disagree. And when we asked the same question to the people we interviewed, we also received many strongly agree answer of 21 people (70%), 3 people (10%) neutral, 6 people (20%) strongly disagree.

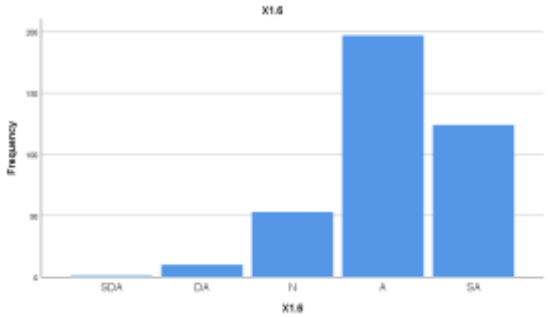

Figure 10. Gaming behavioural question 6

Figure 10 contains people answers on the question "I'm spending more money than usual on new video games because of the confinement". The results show that 197 people (51.2%) answer agree, 124 people (32.2%) answer strongly agree, 53 people (13.8%) answer neutral, 10 people (2.6%) answer disagree, 1 (.3%) strongly disagree. And when we asked the same question to the people we interviewed, we received mixed answer of 12 people (40%) Neutral, 12 people (40%) Strongly agree, 3 people (10%) agree, 3 people (10%) strongly disagree.

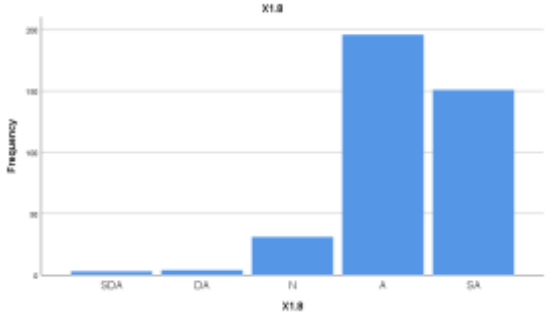

Figure 11. Gaming behavorial question 7

Figure 11 contains people answers on the question "I play more games that allow me to connect with friends during confinement". The results show that 196 people (50.9%) answer agree, 151 people (39.2%) answer strongly agree, 31 people (8.1%) answer neutral, 4 people (1.0%) answer disagree, 3 (.8%) strongly disagree. And when we asked the same question to the people we interviewed, we also received many strongly agree answer of 21 people (70%), 6 people (20%) agree, 3 people (10%) neutral.

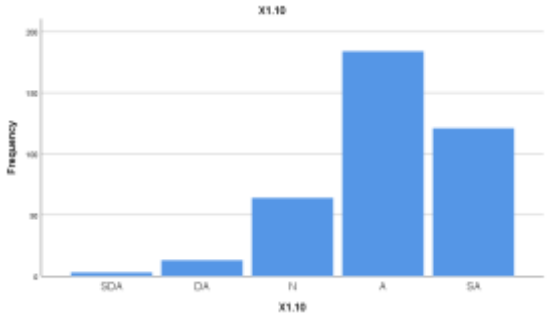

Figure 12. Gaming behavioural question 8

Figure 12 contains people answers on the question "When I want to play video games and can't, I'm angrier/sadder than usual". The results show that 184 people (47.8%) answer agree, 121 people (31.4%) answer strongly agree, 64 people (16.6%) answer neutral, 13 people (3.4%) answer disagree, 3 (.8%) strongly disagree. And when we asked the same question to the people we interviewed, we received negative result of strongly disagree answer of 15 people (50%), 6 people (20%) neutral, 9 people (30%) strongly agree.

We know that the pandemic has led to widespread quarantine measures in many parts of the world, which have forced people to stay at home and limit their social interactions. As a result, people are looking for ways to pass the time and stay entertained while at home, and one popular choice has been playing video games.

From all the data we have gathered we know that a lot of people claimed that they spend more money in video games more than before they were quarantine, it's because many people don't know where to use their money cause of the quarantine, the industry is still running by adapting to the situation. Many game developers and publishers have been offering special promotions and discounts on games during the pandemic in an effort to boost sales and support people during this difficult time. This has made it easier and more affordable for people to try out new games and explore different genres. People who are in this situation have to stay at home so they have more opportunities to spend their money on video games.

From the data we gathered we noticed an increase of playtime in video games from the average of 1-3 hours playtime to 3-5 hours of playtime. With more free time on their hands, many people have turned to video games as a way to pass the time and stay entertained while at home. Video games provide a sense of escapism and allow players to immerse themselves in a different reality, which is especially appealing during times of uncertainty and stress.

With more time on their hands and fewer opportunities to socialize outside of their homes, people have been finding creative ways to connect with loved ones. One popular option has been playing games together. Playing games with others can provide a sense of social connection and support during a time when people may be

feeling isolated and lonely. It can be a way to bond with family members or friends and create shared memories and experiences, which can be especially important during a time of crisis.

Additionally, many video games now offer online multiplayer modes, allowing players to connect and play with others in real-time. This has been especially important during the quarantine period, as it provides a way for people to socialize with others while still adhering to social distancing guidelines. Cause of many people begin playing more video games in quarantine we noticed that while playing video games can be fun and engaging, it can also have an impact on people's sleep schedules.

Over half of the respondents, agreed that video games impacted their sleep schedules, there are a few reasons why playing video games can impact people's sleep schedules. First, many video games are designed to be played for long periods of time, often requiring players to invest hours at a time to complete certain goals or objectives. This can lead to players staying up late into the night, even if they have to wake up early the next day.

Even though there was an increase in the time playing video games in quarantine, the video games that are being played were still the same as before quarantine, it was just the people playing time that increased. The most popular one is still Mobile Legends after or before the lockdown, followed by Free Fire, PUBG and Valorant.

The popularity of these games can be attributed to their accessibility, affordability, and social interaction features. Many of these games offer a way for people to connect with friends and family members virtually, providing a sense of community during a time of social isolation. In addition, the availability of these games on mobile devices has made it easier for people to play on-the-go or from the comfort of their own homes.

Conclusion

The COVID-19 pandemic has had a significant impact on the video game industry, particularly in terms of in-game spending. Research studies have shown that there has been a significant increase in in-game spending during the pandemic, particularly in the mobile gaming sector. Overall, the pandemic has had a significant impact on in-game spending and the video game industry. As we continue to navigate the challenges of the pandemic, it will be important to monitor this trend and ensure that it is managed responsibly. The correlation between post-pandemic and in-game purchase behaviour should be evaluated in further studies.

References

Adhikari, S. P., Meng, S., Wu, Y., Mao, Y.-P., Ye, R.-X., Wang, Q.-Z., Sun, C., Sylvia, S., Rozelle, S., Raat, H., & Zhou, H. (2020). Epidemiology, causes, clinical manifestation and diagnosis, prevention and control of coronavirus disease (COVID-19) during the early outbreak period: a scoping review. *Infectious Diseases of Poverty*, *9*(1), 29. https://doi.org/10.1186/s40249-020-00646-x

Agis, R. A., Gottifredi, S., & García, A. J. (2020). An event-driven behavior trees extension to facilitate non-player multi-agent coordination in video games. *Expert Systems with Applications*, *155*, 113457. https://doi.org/10.1016/j.eswa.2020.113457

Belbağ, G., & Aybegüm. (2022). Impacts of Covid-19 pandemic on consumer behavior in

Turkey: A qualitative study. *Journal of Consumer Affairs*, *56*(1), 339–358. https://doi.org/10.1111/joca.12423

Bodi, G., Maintenant, C., & Pennequin, V. (2021). Impact of the Confinement on the Use of Video Games, Gaming-Related Motivations: a Quantitative and Qualitative Study. *Psychological Applications and Trends*, *4*(1), 7–11. https://doi.org/10.36315/2021inpact002

Demertzis, N., & Eyerman, R. (2020). Covid-19 as cultural trauma. *American Journal of Cultural Sociology*, *8*(3), 428–450. https://doi.org/10.1057/s41290-020-00112-z

Ellis, L. A., Lee, M. D., Ijaz, K., Smith, J., Braithwaite, J., & Yin, K. (2020). COVID-19 as 'game changer' for the physical activity and mental well-being of augmented reality game players during the pandemic: Mixed methods survey study. *Journal of Medical Internet Research*, *22*(12). https://doi.org/10.2196/25117

Garmen, P., Rodríguez, C., García-Redondo, P., & San-Pedro-Veledo, J.-C. (2019). Multiple intelligences and video games: Assessment and intervention with TOI software. *Comunicar*, *27*(58), 95–104. https://doi.org/10.3916/C58-2019-09

Ko, C.-H., & Yen, J.-Y. (2020). Impact of COVID-19 on gaming disorder: Monitoring and prevention. *Journal of Behavioral Addictions*, *9*(2), 187–189. https://doi.org/10.1556/2006.2020.00040

Li, L., Freeman, G., & Wohn, D. Y. (2020). Power in Skin: The Interplay of Self-Presentation, Tactical Play, and Spending in Fortnite. *CHI PLAY 2020 - Proceedings of the Annual Symposium on Computer-Human Interaction in Play*, 71–80. https://doi.org/10.1145/3410404.3414262

Li, Z., & Suping, W. (2020). China's Digital Content Publishing Industry: The 2019 Annual Report on Investment Insights and Market Trends. *Publishing Research Quarterly*, *36*(2), 258–283. https://doi.org/10.1007/s12109-020-09717-1

Olff, M., Bakker, A., Frewen, P., Aakvaag, H., Ajdukovic, D., Brewer, D., Elmore Borbon, D. L., Cloitre, M., Hyland, P., Kassam-Adams, N., Knefel, M., Lanza, J. A., Lueger-Schuster, B., Nickerson, A., Oe, M., Pfaltz, M. C., Salgado, C., Seedat, S., Wagner, A., & Schnyder, U. (2020). Screening for consequences of trauma – an update on the global collaboration on traumatic stress. *European Journal of Psychotraumatology*, *11*(1). https://doi.org/10.1080/20008198.2020.1752504

Pallavicini, F., Ferrari, A., & Mantovani, F. (2018). Video Games for Well-Being: A Systematic Review on the Application of Computer Games for Cognitive and Emotional Training in the Adult Population. *Frontiers in Psychology*, *9*(3), 2127. https://doi.org/10.3389/fpsyg.2018.02127

Thorhauge, A. M., & Nielsen, R. K. L. (2021). Epic, Steam, and the role of skin-betting in game (platform) economies. *Journal of Consumer Culture*, *21*(1), 52–67. https://doi.org/10.1177/1469540521993929

Toledo, M. (2021). Video Game Habits COVID-19. *Journal of Marketing Management and Consumer Behavior*, *3*(4), 66–89. https://doi.org/10.2139/ssrn.3676004

Toufik, G. M., & Hanane, S. (2021). Investigating the Potential of Online Video Games in Enhancing EFL Learners' Communication Skills. *Universal Journal of Educational Research*, *9*(2), 292–298. https://doi.org/10.13189/ujer.2021.090205