

Cozy Games for Mood Repair, Stress Reduction, and Well-Being

Thesis by

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ABSTRACT

People often look for sources of entertainment in order to cope with daily life preoccupations. Video games are an example of such an activity. More often than not, video games present challenges and situations of conflict in order to retain the player's attention. In contrast to these common types of games, we may sometimes come across one that breaks the mold and presents the player with plentiful resources, calming music, and/or an overall sense of calmness without any clear time-sensitive objectives to pursue. These types of games which evoke a sense of coziness in players are known as Cozy Games and have been a part of the video game industry for a long time, yet they have only recently become a more standard genre for developers. Although an exact definition for Cozy Games is still up for debate, some studies have already started to investigate their roles in sociopolitical movements. However, there is still little research into Cozy Games as a tool for relaxation and to help cope with stress. In this thesis, we provide a characterization of the Cozy Games genre based on community and industry-based discussions on the topic as well as collected survey responses. We are also interested in finding whether and how Cozy Games might affect mood repair, stress reduction, and overall well-being of players. In order to begin exploring these questions, we devised a mixed-methods study with a heavy focus on qualitative analysis to narrow down which features in games make them feel cozy and whether they can help with stress relief and mental well-being.

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Chapter 1

INTRODUCTION

Imagine having a hot cup of tea, sitting by a crackling fire, bundled up with a warm blanket in wintertime. This image probably evokes a cozy feeling for most people. Similar imagery to create cozy atmospheres are often used to aid story-telling in all kinds of media; video games are no exception (e.g. [5, 81, 82]). Casual games that focus on evoking a sense of coziness in players are known as Cozy Games and have been a part of the video game industry for a long time (e.g. Harvest Moon [4]). Some would argue that the Life Simulation genre (e.g. The Sims [7]) could fall into the category of Cozy Games. However, the industry has only recently begun to refer to Cozy Games as a genre, and very little scientific literature exists on the topic. Most academic discussions on Cozy Games focus on their sociopolitical roles such as their place within neoliberal ideology [9] among other examples [5, 9, 60, 72, 82].

Our interest in the topic stems from the idea that video games can sometimes help with stress management, mood repair, and overall mental well-being [42, 63–65, 69]. Perhaps intuitively, success in video games can provide a sense of accomplishment in players which may bring with it other benefits [34]. More surprisingly, even failure during gameplay can help heighten the sense of accomplishment when finally succeeding after several attempts, leading to greater enjoyment [24, 59]. However, for other people, challenging game design and competitive scenarios can hinder their enjoyment and diminish mental health benefits by causing frustration upon repeated failure and inducing stress instead [61]. Some may not be able to overcome the frustration and noxious moods that come with failure [10]. Even after victory, competitive gaming has been found to lead to increased stress and anxiety levels [43]. Hence, some of the aforementioned mental health benefits found in previous studies, may be limited by the type of game and the type of individual.

We would like to investigate the potential uses of Cozy Games for stress reduction, mood repair, and mental well-being. However, we must first identify the defining traits of Cozy Games due to the lack of concrete and well-established criteria in the scientific literature. At the time of writing, no formal comprehensive studies

exist with a clear definition based on industry standards and player perception of the Cozy Games genre. For this reason, we first reviewed articles from the video games industry as well as internet forums and social media in order to assess the current perceptions surrounding Cozy Games. We then designed and conducted a mixed-methods study to further analyze users' experience with the aim to identify more concrete characteristics of Cozy Games. In this study, we also included questions that address the topic of stress reduction and mental well-being directly in the hopes of opening an academic discussion into the possible effects of Cozy Games on mental health and stress reduction. This work serves as an initial approach for answering the following research questions:

RQ1: What are the most defining characteristics of Cozy Games?

RQ2: Do Cozy Games affect mood repair, stress reduction, and the overall well-being of players?

Chapter 2

BACKGROUND

2.1 Mental Well-being: a Shift in Research Focus

The topic of mental health and well-being is a vastly studied subject in the field of psychology (e.g. [2, 26, 29, 38]). According to the Global Burden of Disease (GBD) study used by the World Health Organization, it is estimated that 5% of adults, globally, suffer from depression [21]. High stress levels and low well-being have been shown to accurately predict depressive episodes and risk of depression [27, 30]. Stress can also often lead to many other mental health issues and disorders [62, 68, 80]. Some authors, like Keyes [39] have conducted influential studies that attempted to shift the classical psychiatric approach to the topic, in which mental health is seen as the absence of mental illness, by including the presence of positive mental states into consideration as well [39]. This trend gave rise to new measures of mental health and well-being like COMPAS-W [25] which can provide detailed descriptions of the current overall mental wellness of an individual.

The shift in mentality within the scientific community has also allowed alternative methods for stress relief and mental health improvement like Mindfulness-based Stress Reduction (MBSR) [36] to be adopted and cross-examined by medical professionals [29]. For example, when MBSR is practiced by an individual, they employ Buddhist techniques of mindfulness to experience a richer, more vital sense of life [36]. An extensive meta-analysis of the studies evaluating the technique suggests that indeed it can be useful not only to enhance stress relief on a regular basis, but also as an effective part of dealing with serious disorders [29]. These studies exemplify the growing interest within the scientific community to research alternative methods focusing on promoting positive mental states.

The use of diverse forms of entertainment for stress reduction and mental health are some of the alternative methods that have gained popularity over the last couple of decades. The idea that entertainment can help stress management, mood repair, and overall mental health is now well established in academia (e.g. [16, 37, 48, 65, 67]). More specifically, interactive media has been shown to be more effective as a mood repair tool than non-interactive sources of entertainment [65]. Video games

in particular are highly researched and have shown promise in reducing disorder-related symptoms [42], helping with mental fatigue recovery [64], reducing stress [63, 69], and aiding mood repair [11, 12, 65, 66].

2.2 Video Games for Mental Well-being

The effects of video games on stress and the mind are observable, not only from a psychological perspective, but also physiologically. The Biopsychosocial Model of Challenge and Threat [8] serves to characterize people's responses to threats and challenges. Porter et al. [61] uses this model to directly measure stress responses caused by different video games. Their findings show that while different types of games can provoke different stress responses, many participants still report greater positive emotions after stressful gameplay [61]. Indeed, some players seek out stressful situations as a way to enrich gameplay through learning moments and fulfilling triumph after a struggle [24, 59].

Emotion Self-regulation Theory [10] suggests that some individuals, called action-oriented, are better at processing negative emotions than others, called state-oriented [41, 77]. For state-oriented individuals, the fear of failure can get in the way of enjoyment and feelings of accomplishment during challenging situations [77]. In video games, state-oriented individuals have shown greater likelihood to use cheat codes in order to avoid failure, resulting in improved overall experiences [79]. Moreover, even though they are less negatively affected by failure, action-oriented players show no decrease in enjoyment when using cheat codes [79]. Hence, having the option to use cheat codes appears to enhance the gaming experience of state-oriented individuals without negatively impacting the experience of action-oriented players [79]. Besides cheat codes, other types of extraneous advantages used in single-player games have shown an increase in positive emotions, stress-reduction, and mood repair [57]. In another study, playing casual games was reported to improve mood and decrease stress [69]. Overall, these studies imply that less challenging (or more adjustable) video games, like Cozy Games, may be accessible to a broader range of individuals looking for ways to cope with stress or improve their mental state.

Many players find a way to circumvent the possibility of failure by employing cheats [18, 22]. Studies have shown that cheating in single-player contexts can provide a greater sense of agency as well as an increased interest and enjoyment derived from

gameplay [57, 79]. One of the main motivators for employing cheats in video games is feeling stuck in a specific challenge or scenario of the game [18]. These aspects of cheating in games are reminiscent of Cozy Game design. Based on our investigation of the Cozy Game industry, their design tends to focus on plentiful rewards and little punishment, highly customizable gameplay, with non-competitive mechanics, and lower difficulty. Therefore, Cozy Games could be of particular interest for stress reduction and mood repair.

2.3 Breaking the Competitive Game Paradigm

Throughout the evolution of video games, a clear push towards competitive play in both player-versus-player (PVP) and player-versus-environment (PVE) contexts has been observed [1, 28, 78, 83]. The development of massively multiplayer online role-playing games (MMORPGs) and their dominion over the current market can be seen as a culmination of said push [83]. More recently, however, a shift in the paradigm has begun to occur, with casual games taking a more prominent place across a more diverse audience [35]. At the same time, studies linking the psychological concept of Flow State [20] to video games have begun to appear more frequently in the literature (e.g. [19, 46, 50, 71, 74]).

These changes have helped video game research focus on new areas like dynamic difficulty adjustment [47], reviews about accessibility options [3, 14], identification with the player character as a drive for enjoyment [31], among others. One study suggests that gameplay focused more on meaningful experiences, as opposed to fun, results in undiminished enjoyment with a greater appreciation for the game [55]. Cozy Games are prime examples of a type of game that has recently gain popularity for their non-competitive scenarios, with highly adjustable difficulty, often accessible to players with a low level of skill or with disabilities, focusing on meaningful experiences over providing a high level of challenge. However, these claims are entirely speculative. As a result of a lack of a formal definition for Cozy Games in academic circles, we decided to examine sources from both the gaming industry and the Cozy Games community to better characterize the genre.

2.4 Community-defined Elements of Cozy Games

Gaming Industry Discussions on Cozy Games

GamesIndustry.biz is the self-proclaimed market leading website for news and information about the global video games industry. In 2022, they published an article written by Collin Campbell titled *What are Cozy Games, and what makes them cozy?* [15]. Campbell claims that the essence of a Cozy Game is "helping other people through non-violent means" [15]. They argue that Cozy Games are regarded as having vague goals of creative personalization and in-game socialization, as well as featuring cute characters and calming activities such as farming, gathering, growing, and nurturing [15].

The website had also published an article in 2018, written by Rebekah Valentine, titled *How to design for coziness...and kindness* [76], in which they report on the discussions of the PAX West 2018 panel. The panel had game developers across all genres, but the article focuses on comments made by Cozy Games creators, specifically about the relationship between Cozy Games and Kind Games. They describe Kind Games as those in which the game is kind to the players as well as the player feeling like they are encouraged to be kind [76]. They bring up specific elements of Kind Games which if missing, would break the coziness of a game. The first element is accessibility; making sure that people with all levels of skill can enjoy the game and adjust it to their needs. The second element is inclusiveness; making sure that most players feel comfortable and welcome in the fictional world they step into. The third element is customization of the gamespace; similarly to inclusiveness, the goal of this is to let players slow down, and feel safe and comfortable. Additionally, the article cites some of the aesthetics discussed by the panel that, in their opinion, make a game feel cozy; these were "soft textures, bright colors, round corners, and cute characters" [76].

PCGamer.com also published an article written by Lauren Morton in 2024, on the state of the genre of Cozy Games and the lack of a clear consensus among both fans and industry alike [49]. They point out that creators have not clearly defined what makes a Cozy Game despite attempting to use the label to refer to a cohesive collection of titles [49]. However, they also argue that most creators agree with the sentiment that no one can define what cozy means for someone else. They suggest that coziness is mutually exclusive with stress and pressure, and since different people have different types of stressors, the term is subjective by definition. [49]

Project Horseshoe, a think-tank style conference for game design, addressed the topic of coziness in video games in 2017. They refer to coziness in games instead of using the term "Cozy Games", allowing them to define it as an ingredient in game design instead of a genre. Their group report defines coziness as "how strongly a game evokes the fantasy of safety, abundance, and softness" [45]. They also propose that in order to better evoke these feelings, games need to give players enough space to deal with emotional and social growth by making any existing story-driven goals important but not urgent [45]. Moreover, The think-tank came up with a set of factors that can negate coziness by presenting players with a more base need that humans inevitably shift their focus towards, like danger, extrinsic rewards, and intense stimuli [45]. One example from the scientific literature discusses a game advertised as cozy before release, then surprising players with dangers and stressful situations, negating coziness, resulting in feelings of betrayal and disappointment from the target audience [72].

Cozy Games Community

Youtuber kolpeshtheyardstick posted a video essay in 2022 [40], written by his anonymous wife, in which they address the nature of Cozy Games and gaming in general. They propose that the feminist movement is largely responsible for the rise in popularity of Cozy Games and coziness as a desirable quality in video games [40]. The argument made is that historically, the social expectations of gaming has been focused on masculine traits like violence and economic wealth. As a result, games with more coziness in their design have been largely marketed towards women and children [40]. They suggest that with emotional openness and mental healthcare becoming more socially acceptable in adult males, the gaming industry is starting to catch up to the trend, explaining why we find more cozy elements in RPGs and MMORPGs than ever before [40]. The ideas in the essay align well with findings present in the literature, where cozy games have been defined in the context of feminist and inclusive design [81, 82].

YouTube, as a platform, hosts a diverse group of content creators who periodically post ranking or review lists of Cozy Games with a wide variety of titles across many genres. The increase of cozy elements in video games that kolpeshtheyardstick and his wife point out could lead to games like *The Legend of Zelda: Breath of the Wild* ([53]), which is an adventure game with violence and a definite sense of urgency

driving the main goal, to be considered a Cozy Game by many of these content creators.

In 2023, a discussion on what defines a Cozy Game was started in the r/CozyGamers Subreddit [6] by a now anonymous user. As expected of an online forum, there is a great diversity of opinions on the thread, yet we can identify some of the recurring themes surrounding the discussion. Many up-voted responses mentioned a low level of difficulty, or complexity for the game mechanics. Another common theme was to be able to lose yourself in the gameplay, which could be interpreted as a high level of immersion, yet many pointed out that they like to have other distractions going on in the background while playing. There are somewhat divided opinions on how much combat and/or violence should be allowed in a game to be considered cozy, but many agree that if combat is present, it should be optional or easy to handle. Customization of different aspects of a game were also brought up by several users. Perhaps surprisingly, the aesthetics of the game (including visuals, and sound and music) were not mentioned much; the few responses that did, mostly describe visuals as cute, and music as comforting, calming, or relaxing.

Chapter 3

METHODS

We designed a mixed-methods study with a heavy focus on qualitative data in order to identify defining characteristics of Cozy Games as perceived by users. Thanks to the manageable size of the response count, we were able to perform the qualitative analyses without the aid of automated software. Additionally, we asked participants for self-reported accounts of experienced effects of Cozy Games on stress-relief and mental well-being. The study consisted of an online survey followed by a round of interviews on volunteering participants.

3.1 Survey

The survey consisted of a total of 17 open-ended, close-ended, slider, and multiple choice questions related to Cozy Games and video games in general. The open-ended questions encouraged participants to elaborate on their answers with personal examples whenever possible. Questions were based partially on some of the initial themes identified on forums and web articles. Some questions were based on personal experiences with Cozy Games. Thematic analysis following guidelines presented by [13, 33, 73] was performed on all open ended questions. Seven additional demographic questions were added to be able to describe our sample pool. The WHO-5 questionnaire [56] was also included as a validated [75] measure of current mental well-being. For the full survey see Appendix A.

Describing Cozy

Three open-ended questions focused on characterizing what makes a game cozy or not. Crucially, we directly asked participants both what makes a game cozy and what makes a game not cozy. Additionally, using a more quantitative approach, we asked them to rate the importance of visual aesthetics, sound and music, familiarity and nostalgia, and low difficulty in Cozy Games. Due to the mostly qualitative nature of the study, a comparison of means, medians, and standard deviations for these ratings was the extent of the numerical analysis performed. The particular elements were chosen as some of the most common topics discussed in forums and opinion articles online.

Motivations Underlying Playing a Cozy Game

We asked participants what makes them choose a Cozy Game over other types of games. We also probed them on whether they believe there is a link between Cozy Games and stress-reduction or mental well-being. Specifically, we asked “How do you feel about cozy games as a way to reduce stress?” and “Have you ever experienced that playing a cozy game has helped your well-being? How?”. We used a mixed-method analysis on these questions by looking at how many participants observed a link, but also performing sentiment and thematic analyses to identify how these different aspects are affected. Personal anecdotes were encouraged to support their claims.

Player Classification of Cozy Games

Attempting to identify specific games that feel cozy, we asked participants to provide examples of their own of both games that feel cozy to them, and games that fall into the category of Cozy Games. Afterwards, we provided a list of popular titles among Cozy Games content creators for participants to rate how familiar they are with each of them. For every game they had played and remembered well enough, we asked them to rate how cozy each one felt.

3.2 Participants

Demographics

The survey was distributed through Utrecht University’s Game and Media Technology and Human Computer Interactions Discord Servers, LinkedIn posts, and direct contacts of the researchers. We collected 51 valid responses in total, discarding 1 incomplete entry, and 2 with invalid or nonsensical answers. Participants’ ages ranged from 21 to 57 years old with an average of 30. 23 participants (43%) identified as men, 27 (51%) as women, 1 as non-binary, 1 as other, and 1 preferred not to say. 48 participants (90%) indicated having completed at least a 4-year college degree. The majority were White/Caucasian with 39 participants (76%) identifying at least partially as such. 7 identified as Hispanic/Latino (14%), 2 as Black and 2 as Asian. 30 participants (59%) were located in the United States, 11 (22%) in The Netherlands, 3 (6%) in Germany, and the rest in Colombia, Switzerland, Iran, China, Finland, and Denmark.

Video Games Experience

Besides general demographics, we aimed to better describe our sample pool by questioning participants about their general experience with video games. We asked about their gaming habits like how many hours a week they play, what percentage of their gaming time is spent on Cozy Games, and how familiar they consider themselves to be with video games.

We observed a wide variety of gaming experience with one participant reporting as little as 0.1 hours a week of gaming time to another who plays 60 hours a week. The average weekly gaming time was 13 hours. When asked how familiar they perceive themselves to be with video games in general, 21 participants (41%) considered themselves extremely familiar, 14 (27%) very familiar, 12 (24%) moderately familiar, 1 slightly familiar, and 3 not familiar at all. Most participants seem to either play mostly Cozy Games, or not play them much at all, with only 3 users reporting spending between 40% and 60% of their play time on Cozy Games, 27 playing between 0% and 40% and 21 between 60% and 100%.

3.3 Follow-up Interview

The last question of the survey asked participants whether they would be willing to volunteer for a follow-up interview. Thirty people volunteered, but we were only able to reach 8 of them. Table 3.1 shows demographic descriptors for the 8 participants reached.

ID	Age	Gender	Education	Ethnicities	Country of Residence
1	24	Man	4 year degree	Greek	Netherlands
2	26	Woman	Master degree	Caucasian	Denmark
3	33	Woman	Master degree	White	Germany
4	28	Man	Doctorate	White	USA
5	29	Woman	Master degree	Turkish	Netherlands
6	28	Man	Master degree	White	Netherlands
7	30	Man	Some college	Latino	Colombia
8	29	Man	Master degree	Asian	USA

Table 3.1: Demographic description of follow-up interview participants.

Interviews were conducted online using Microsoft Teams, asking participants for verbal explicit consent before any recordings were made. The recordings will not be made publicly available and were used only to review participants' responses during the analyses that informed this report. The format of the interviews consisted

of a planned set of questions to ensure the discussion of main topics of interest while still allowing room for deviations in favor of a more conversational style. Interviews lasted anywhere from 25 to 54 minutes depending on the depth of the participant's answers, and the number of follow-ups that came up naturally. The resulting interviews served to prompt participants to elaborate on some of their answers from the survey, as well as asking new questions based on a preliminary analysis of the survey results.

Some questions were intended to find limits and exceptions to general trends found in the survey answers. For example, we asked participants "How do you feel about time constraints in Cozy Games?". Depending on their answer, we followed up by asking if there was a specific context in which they thought time constraints would not break coziness (or vice-versa, if they did not mind them in the first place).

Other questions simply served to get more specific examples of themes identified in the survey, like what type of music they like or expect in a Cozy Game. Still others were intended to extract personal opinions on uncommon, yet interesting ideas that came up during the survey. For example, we asked whether the presence of micro-transactions and/or DLCs affects the coziness of a game. However, due to the small sample size of the interviews, we only used the responses to inform a discussion of the results from the survey. See Appendix B for the full line of inquiry followed during the interviews.

Chapter 4

RESULTS

4.1 Survey

The main focus of the study was the thematic analysis performed on the open ended questions. We identified some common themes across responses and present them in Tables 4.1, 4.2, 4.4 - 4.8.

We asked participants both “What makes a game cozy for you?”, and the converse “What makes a game not cozy?”. Tables 4.1 and 4.2 respectively contain themes constructed based on answers to these two questions. While most people agreed on a few elements, we found a high variety of answers. One individual expressed a contrary opinion to most expectations of Cozy Games, later arguing that cozy activities in video games tend to stress them out, making them feel like they are “doing chores”.

Element	Count	Representative Quote
No time constraints	18	<i>A lax sense of time (no time trials, etc.).</i>
Music/sound	17	<i>Nice, background music (like Lo-fi).</i>
Relaxing	13	<i>Relaxing music, atmosphere, graphics, game play.</i>
Cute elements	12	<i>Cute graphics with pastel colors, too.</i>
Easy	11	<i>Comfortable and easy to play.</i>
Low stakes	10	<i>The lack of pressure of any kind; time, resources, stakes, etc.</i>
Art style	9	<i>Ambience, color and art style.</i>
Exploration	8	<i>Opportunities for exploring.</i>
Agency	7	<i>[A] story line I can manipulate.</i>

Table 4.1: Recurrent themes among responses for elements that make a video game feel cozy.

Participants were also asked to rate on a scale from 0 to 100 how important are visual aesthetics, sound and music, familiarity and nostalgia, and low difficulty for Cozy Games. See Table 4.3 for a full list of the results. While familiarity and nostalgia show a lower average rating than sound and music and visual aesthetics, they also caused more divided opinions as suggested by their higher standard deviations. We

Element	Count	Representative Quote
Time pressure	17	<i>Anything that adds a timer.</i>
Intensity	14	<i>Being 'on' the whole time while playing the game.</i>
Combat/Violence	12	<i>Battle or violence.</i>
Stress-inducing	11	<i>Stressful components.</i>
Competition	11	<i>Live (local or online) competition.</i>
Penalties	10	<i>Punished harshly for failing.</i>
Difficulty	9	<i>High degree of action/difficulty.</i>
Complexity	6	<i>Complex mechanics with lots of menus.</i>

Table 4.2: Common elements that can break the coziness of games based on participants' answers.

can also observe this in Figure 4.1, which shows a clear difference in the length of the boxes between the first two elements and the last two.

Element	Average	SD	Min	Max
Sound and music	78.78	21.10	0.00	100.00
Visual Aesthetics	71.84	23.75	3.00	100.00
Familiarity and nostalgia	59.25	27.56	8.00	100.00
Low difficulty	57.67	31.36	0.00	100.00

Table 4.3: Resulting average, standard deviation, minimum, and maximum ratings out of 100 for how important each of the four presented elements are for Cozy Games.

The majority of participants expressed that multiplayer should be allowed in direct response to the question "For a game to be cozy, does it need to be your personal space, or is multiplayer allowed? Why?". However, some implied certain conditions that would make multiplayer viable. The conditions listed by participants for multiplayer to respect coziness were used to construct themes across responses (see Table 4.4). A few others suggested Cozy Games should be single-player only. Two responses were unclear on whether multiplayer should be allowed or not.

In order to identify underlying motivations for playing Cozy Games, we asked participants "What makes you choose to play a Cozy Game over a another type of game? Provide an example scenario if you can." Multiple participants provided several possible motivations for choosing Cozy Games over other types. Most focused on similar themes of relaxation, unwinding, and stress-relief. For a more complete list of common themes constructed from the answers see Table 4.5.

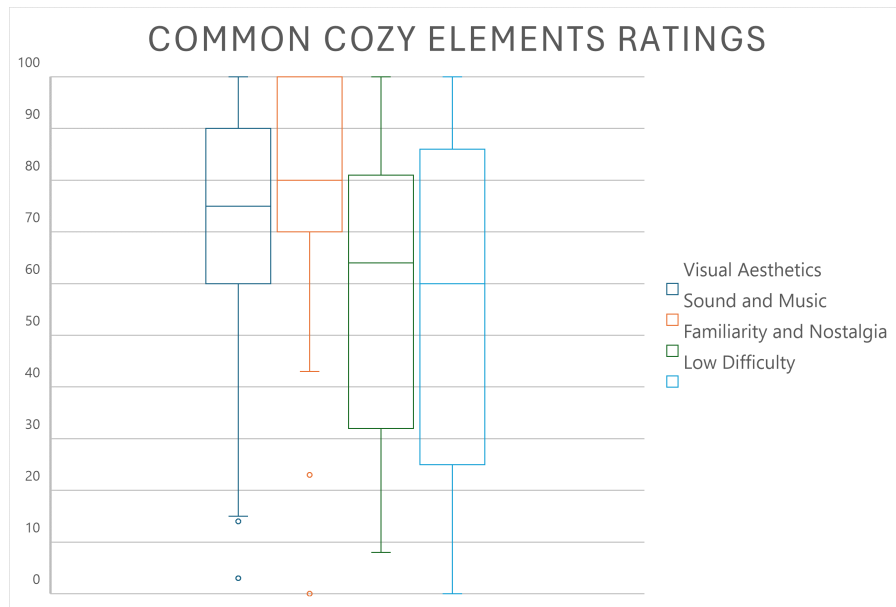


Figure 4.1: Distribution of ratings of the 4 common cozy elements presented to participants.

Condition	Count	Representative Quote
Friends only	13	<i>[It] need[s] to be people that I know personally and that I have allowed into the space.</i>
No competition	12	<i>It needs to be single player or multiplayer co-op, I'm very competitive so once any competition is involved it becomes not cozy.</i>
No peer pressure	6	<i>It is important that the other players do not rush me to do things.</i>
Calm mechanics	4	<i>Depends on the game mechanics. It could be [a] fun and calm experience</i>
No conflict	4	<i>[I] cannot be antagonized by other players.</i>
Limited contact	4	<i>The multiplayer has to be low engagement</i>

Table 4.4: Common conditions for multiplayer to better preserve coziness according to player answers.

Participants were asked to describe how they feel about Cozy Games to reduce stress. We performed sentiment analysis on these answers to classify how strongly they feel about Cozy Games as a tool for stress reduction. See Table 4.6 for a list of the main sentiments identified. Some answers were unclear and were left out of the main sentiment classes because they either refer to games in general instead of Cozy Games, or they comment on other effects of Cozy Games on their well being, but not specifically stress reduction.

Motivation	Count	Representative Quote
To wind down	14	<i>[I have] just finished playing a non-Cozy Game like an RTS and need to relax, or I've had a long day and want to unwind a little.</i>
To relax	12	<i>Relaxation after a stressful day.</i>
Stressed	10	<i>If I'm very stressed and busy.</i>
Low attention demand	10	<i>I usually will have the TV on so I can swap my attention between the Cozy Game and what I'm watching.</i>
Something easy	9	<i>[I] need to empty my head and do something simple.</i>
Killing time	4	<i>I have time and [I] am bored.</i>
To socialize	3	<i>When I want to do something together with someone.</i>
Mood repair	3	<i>[I feel] tired or in need of a better mood.</i>

Table 4.5: Common motivations among participants for playing Cozy Games over other types of video games.

Sentiment	Count	Representative Quote
Greatly help	29	<i>Very understandable: no competition, no 'musts' or 'fails', it's just 'being in the now' and 'it is as it is', which can be very relaxing.</i>
Somewhat help	14	<i>I think it sometimes can help reduce stress, but sometimes the stress level is so high a low-paced Cozy Game does not distract enough</i>
No help	4	<i>Cozy Games don't do anything for me to be honest.</i>

Table 4.6: Sentiments summarizing how participants felt about Cozy Games as a way to reduce stress.

In response to the question "Have you ever experienced that playing a Cozy Game has helped your well-being? How?", most participants expressed some degree of positive effects. Although the type of help and examples were varied, many expressed that Cozy Games can serve as a good distraction from busy lives, to help them relax in various circumstances, and/or directly helping with stress reduction. Table 4.7 shows the main themes extracted from the responses to this question.

Some other less common effects on mental well-being mentioned by participants were evoking feelings of accomplishment, inspiring, helping with mental recharge, increasing feeling of safety, and helping with grief. Many of these included specific examples of past experiences of varying degrees of impact, with one participant going as far as calling Cozy Games "life-saving":

Theme	Count	Representative Quote
Good distraction	17	<i>[Cozy Games] can help take my mind off of stressful events. This can help with negative ruminations.</i>
Relaxing	14	<i>It helps [me] relax which improves my overall mental state.</i>
Stress reduction	10	<i>[Cozy Games] helped me as I took a stressful chemistry class at the undergrad level.</i>
No help	6	<i>Probably not - the time invested tends to offset the relaxation.</i>
Socializing	5	<i>Yeah! [I] like my friends in animal crossing lol! Their words are always so warm!</i>
Evoking joy	5	<i>[A Cozy Game] makes me feel happy when a character has a cute dialog and when I feel a bit down.</i>
Mood repair	5	<i>[Cozy Games] have had huge positive impacts on my mood during tough times.</i>

Table 4.7: Common themes regarding whether and how Cozy Games can help with mental well-being.

They have saved my life. Like Pokémon games for example. Life-saving. I grew up with Nintendo games (GBC, GBA, DS, 3DS...) and wow. They shaped who I am. They were there when I had no friends, when I had difficult breakups and when I developed testicular cancer. Without Cozy Games I would be nowhere. I would not be here.

With the intention to assess the mental well-being state of participants at the time of the study, we included the WHO-5 questionnaire. However, no groups or trends were identified as a result.

In order to get an idea for what type of activity is representative of a Cozy Game, we asked participants to give some examples from their own favorite Cozy Game. Some participants listed several activities in their responses; e.g. “gather items from the environment, talk to and help NPC neighbors, a bit of crafting, care for animals and plants, decorate your space”. We collected and grouped all the different activities contained across answers and present the most common ones in Table 4.8.

Participants provided examples of favored games that feel cozy to them as well as a favorite game that belongs to the category of Cozy Games. Tables 4.9 and 4.10 show the most common results for these two questions respectively (see Appendices C and D for the full lists of games).

Activity	Count	Representative Quote
Building	19	<i>I decorate my island. Landscaping, placing items just so, making everything pixel perfect, one little shove at a time.</i>
Farming	16	<i>Growing and selling crops.</i>
NPC relationships	16	<i>Build up a relationship with NPCs.</i>
Completing objectives	15	<i>Work through levels in a meticulous way.</i>
Exploring	15	<i>Exploration, filling out maps and discovering new structures, biomes, and creatures.</i>
Gathering	9	<i>Gather items from the environment.</i>
Seeking upgrades	8	<i>Get all the upgrades I can.</i>
Collecting	7	<i>You are trying to find a list of objects on the map.</i>
Fishing	6	<i>Fishing.</i>

Table 4.8: Some of the in-game activities identified among the answers to the question "What do you do in your favorite Cozy Game? (in-game activities)".

Game	Count
Stardew Valley	19
Animal Crossing	12
The Legend of Zelda (any entry)	11
Minecraft	10
Pokémon (any entry)	8
A Short Hike	5
The Sims (any entry)	4

Table 4.9: Common examples of favorite games that feel cozy.

Game	Count
Stardew Valley	14
Animal Crossing	7
Pokémon (any entry)	4
Unpacking	3
Minecraft	3

Table 4.10: Common examples of favorite Cozy Games officially labeled as such.

4.2 Interviews

With only 8 volunteers in total, the interviews were used mainly as support for the results already present in the survey. We used topics of relevance to the survey results to compile and summarize common aspects among the interview discussions. These topics and their respective common responses are shown in Table 4.11.

Topic	Summary of responses
Limits of time constraints	Time constraints only affect coziness when it becomes difficult to succeed; otherwise, they might not add enough pressure to break the cozy feeling of the game.
Combat	All participants allowed combat in the context of Cozy Games as long as it is optional and its difficulty remains low enough.
Music	Music needs to be soft and part of the background, without grabbing too much attention. In order to preserve the coziness, lyrics were off-limits for most participants. One participant proposed that music should be chosen by the player, explaining that they often mute the music in the game settings to play their own instead.
Games in general versus Cozy Games for stress reduction	We observed divided opinions with some participants advocating for Cozy Games' lack of competition and pressure as a more effective way to reduce stress, while others suggested that any form of entertainment can likely have the same effect as a Cozy Game in terms of stress-relief.
Duration of self-observed effects on well-being	While many suggested possible long-term effects, most of the same responses were hesitant, explaining or implying uncertainty in their answers.

Table 4.11: Summaries of compiled interview discussions that are most relevant to topics derived directly from the survey.

Chapter 5

DISCUSSION

5.1 Defining Cozy Games

Time Constraints

The most recurrent theme among responses for what makes a game cozy was a lack of time constraints among in-game activities and mechanics. Similarly, when asked what makes a game not cozy many participants reiterated time pressure or deadlines for objectives and tasks. The constructed theme is purposefully general to encompass time pressure of any scale and scope. Some participants referred to time trials as a specific example of an activity that would break coziness while others simply indicated that they feel cozy when they can play through the story at their own pace. During the follow-up interviews many participants also indicated that time pressure mostly interferes with coziness when the difficulty is high enough or if high stakes are also involved. Some also suggested that timed activities that are easy to complete and/or optional can add to the fun of the gameplay without breaking the overarching cozy feeling.

Time pressure has been linked to psychological and physiological stress responses before [44]. This, in conjunction with many participants seeking out Cozy Games to relax, unwind, and relieve stress, suggests that the lack of time factors could be one important defining characteristic for Cozy Games. We cannot discard timed activities completely from Cozy Game design, but games in which these activities put pressure on players may not feel cozy to many people.

Sound and Music

A large group of participants referred to sound and music as one of the elements that can make a game feel cozy. More specifically, some of the words used to describe the type of sound and music were relaxed, nice, enjoyable, calming, cheerful, soft, lo-fi, and background. These findings reflect the opinions on music for Cozy Games found in internet forums [6]. Some participants brought up sound and music elements that can break coziness for them, albeit less frequently than the converse. The most common examples referred to tense music and loud noises. This was supported by

the follow-up interviews where participants suggested that for sound and music to aid and preserve coziness they cannot be too attention-grabbing. Most agreed that if the music contains lyrics or complex elements, it can break the immersion of the game and the cozy atmosphere.

Visual Aesthetics

Visual aesthetics ranked second in importance of the cozy elements presented to the participants with an average score of 71.84 out of 100. Participants referred mostly to cute, quaint, or charming aesthetics when describing what makes a game cozy with some emphasizing the need for good graphics and art style. This aligns with our findings regarding visual aesthetics of Cozy Games from online forums and business articles [6, 45, 76]. Not many participants mentioned visual elements breaking coziness, although the few that did suggested ugliness, dark atmospheres, and harsh visuals as possible elements that can make a game feel not cozy.

Difficulty and Complexity

The difficulty level of a game and the complexity of its mechanics are two other factors that were found frequently among the answers to both what makes and what breaks coziness. While these elements are decidedly different, the way participants described how they affect coziness appears to be the same. Some responses implied that high difficulty and complex mechanics can easily lead to frustration and break coziness completely. For example, one response to *what makes a game not cozy* included “bosses and complex fighting. Failing over and over again. [...] Complex mechanics with lots of menus. [...] If you haven’t played for a while, and it’s really difficult to get into.” This sentiment was reaffirmed during follow-up interviews, where most allowed exceptions for time constraints, combat, and violence, in Cozy Games as long as the difficulty of the activities is low enough. Scientific evidence linking failure and stress [77, 79] may suggest a possible explanation for why people who want to feel cozy try to avoid difficult activities. Curiously, *low difficulty* ranked last among the cozy elements presented to participants during the survey with an average score of 57.67 out of 100.

Multiplayer

The addition of multiplayer to a game does not seem to break coziness for most people. On the contrary, some participants suggested it can enhance their feeling

of coziness by creating a sense of community and allowing for a safe space to share with friends. However, the sentiment does not extend to PVP content or competitive environments. Many participants referred to competition as one of the elements that can break coziness in a game. This aligns with previous findings that discuss competitive gaming inducing stress [1, 43] since these feelings would be contrary to the desired coziness. Additionally, when asked if multiplayer could be part of Cozy Games most who agreed, added the conditions of cooperation over competition, playing with friends only, or no conflict among players.

Cozy Games Versus Games That Feel Cozy

The questions that asked participants to provide examples of games that feel cozy to them and their favorite game belonging to the category of Cozy Games emphasized the difference between those two concepts. There was a clear overlap between answers to these two questions with *Stardew Valley* [17], *Animal Crossing* [51], and entries from the *Pokémon* [52] series being among the most popular in both cases. However, many responses to games that feel cozy included various entries in *The Legend of Zelda* series [54] as well as *Minecraft* [58], even though only a few included these as their favorite Cozy Game. Indeed *Minecraft* and *The Legend of Zelda* are both adventure games with an abundance of both elements that can feel cozy and elements that can break coziness. Even more surprising are the appearance of games like entries from the *Dark Souls* series [32], the *Elder Scrolls* series [70], and the *Fallout* series [23] which are games that contain predominantly non-cozy elements including suspense and horror themes. Further investigation into titles officially labeled as Cozy Games and those that are simply perceived as cozy by players would be needed to make any further conclusion on these results.

5.2 Why Do People Play Cozy Games?

Many participants mentioned that they play Cozy Games when they want something easy and with a low attention demand. A few provided examples of other activities they like to do while playing Cozy Games like watching a show, listening to a podcast, or having conversations with people around them. However, the most recurrent theme for why they choose to play a Cozy Game over other types was to unwind at the end of a long day. Others indicated simply to relax, which can be interpreted as a more general answer of the same case. Findings in [79] suggest that cheat codes can help players avoid failure, decreasing stressors during gameplay for

state-oriented individuals. A similar phenomenon could occur with Cozy Games, where low stakes and limited or no competition may help remove fear of failure in players, helping them relax more than other types of games. Several participants explicitly mentioned being stressed as a motivation to play Cozy Games, suggesting that some may seek the genre as a stress coping mechanism.

Cozy Games for Stress Reduction

When asked to describe how they feel about Cozy Games for stress reduction, almost everyone suggested that they help at least a little. However, the extent to which they can help varied greatly among the reports. Some participants indicated that after playing, they feel like they have come back to the real world, and all the stress that comes with it. Others felt that Cozy Games have given them a much needed respite during stressful times. During a follow-up interview, one participant suggested that video games may help in small doses, but can easily get in the way of responsibilities, ultimately causing more stress in the long term.

While many participants limited their answers to Cozy Games, some compared them to competitive games, explaining that by contrast, those don't help at all, since competitive gameplay often causes greater stress for them instead. However, during follow-up interviews, we asked participants if they felt that stress reduction was particularly effective with Cozy Games, or if any video game would work, and the responses were divided in that case. Some indicated that indeed competition and frustration get in the way of stress recovery, while others explained that for them, any form of engaging gameplay works to reduce stress. This difference in opinions may once again be related to the action-oriented versus state-oriented paradigm of Emotion Self-regulation Theory [41, 77]. However, further research into competitiveness versus coziness in games with a focus on self-regulation would be needed to better support this claim.

Cozy Games and Well-being

Following stress reduction, we asked participants whether and how Cozy Games have helped their mental well-being in general. While 6 suggested they are no help at all, and 4 had answers that gave no clear indication, most participants suggested positive effects of varying types and degrees. The most common theme among the responses was that they serve as a good distraction for mental recovery, or to avoid

negative ruminations. This is reminiscent of some of the techniques outlined in the MBSR [36] method for stress reduction. Other frequent themes were relaxation and stress-reduction, which are not unrelated to the first. For example, one participant replied “it feels like a fun way to unwind and distract myself for a moment”. It is worth noting that this question came immediately after the one about stress reduction, making it possible that relaxation and distractions from daily stress were at the forefront of the participants’ minds, thus introducing some bias. Such a bias may have made these themes over-represented, but they can still be valid indicators of self-reported effects on mental well-being.

During follow-up interviews, we asked participants whether they thought the effects on well-being they have experienced are long lasting, or only short-term. Some expressed feeling unsure about it, but still believing that Cozy Games could have long-term positive effects on well-being. Others pointed out that other types of games, specifically the competitive kind, often leave them with lingering negative emotions long after their play session has ended, which never happens with Cozy Games. Only one person during the survey suggested that Cozy Games might have a negative effect on their mental state, by causing frustration and restlessness in the repetitive, slow-paced nature of their in-game activities. However, this participant clarified during their interview that they believe video games in general can have positive effects on their mental well-being, they simply do not like the industry standards for Cozy Games.

Further investigation into the effects of Cozy Games on stress and mental well-being would be necessary to make any conclusions, but we believe there are enough indications to encourage pursuing the topic.

5.3 Limitations

This thesis work was designed as a first approach to a much broader topic. As an exploratory study based mostly on qualitative data, the observations we have made are insufficient as evidence to support generalized claims. However, our results could serve as a foundation for future research into Cozy Games. We recognize the need for further studies to narrow down some of our observations and support them with experimental data. Any causal relationships between the themes identified among our participants and verifiable markers for stress-relief, mood repair, or mental well-being are outside the scope of the study.

We also acknowledge a bias in the resulting sample of the survey, with a vast majority of White/Caucasian participants based in USA and Europe. A total count of 51 survey responses was adequate for an exploratory study but small enough to be susceptible to other unforeseeable biases. Additionally, we regret that only 8 of the 30 volunteers were able to be reached for conducting the follow-up interviews. As a result, we had to limit the observations made during the interviews to extend the findings already present in the survey responses. It is our hope that this work will inspire future studies, which can collect more diverse sample data to arrive at a more universal definition of Cozy Games and their effects on mental health.

Chapter 6

CONCLUSION

Combining the results of our study with discussions from the Cozy Games community, we propose the following elements as defining characteristics of Cozy Games:

1. The lack of pressure of any kind. Especially time pressure, high stakes, competition, and peer pressure.
2. Low or adjustable difficulty for any skill level along with simple and clear mechanics.
3. A consistent art style with an overall high sense of cuteness, quaintness, and/or charm.
4. Background music only without too many attention-grabbing elements.
5. Story and mechanics not centered around violence with optional combat and avoidable confrontations.

Due to the subjective nature of feelings like coziness, we cannot expect every person to agree with a generalized definition of Cozy Games. The proposed characteristics are not meant as a hard set of rules to follow in Cozy Game design, but rather a list of elements that could lead to an increase in the perceived feeling of coziness for most players. More importantly, we propose that games presenting an abundance of these characteristics should be categorized as Cozy Games.

The results of our study lay down ground work for exploring the topic of Cozy Games as a tool for mood repair, stress reduction, and improved mental well-being. While much work remains to make any well-substantiated claims on specific effects, we were able to observe self-reported anecdotal evidence supporting the theory.

6.1 Future Work

Based on the results of this study, we propose the following topics for further research:

- A validation study on the defining characteristics of Cozy Games. We suggest a large scale study with a more diverse pool of participants to fine-tune what makes a game feel cozy. We propose an experiment with different versions of a video game using varying degrees of coziness by adjusting the characterizing elements identified in our study.
- An experiment-based study to determine the effects of Cozy Games on stress responses during gameplay. This could help find physiological evidence for short-term stress reduction related to Cozy Games.
- An in-depth qualitative study on the effects of Cozy Games on mental health and well-being using validated measures to test the hypothesis that playing Cozy Games can lead to potential mental health benefits inside or outside of clinical contexts.

BIBLIOGRAPHY

- [1] Paul J.C. Adachi and Teena Willoughby. “Demolishing the competition: The longitudinal link between competitive video games, competitive gambling, and aggression”. In: *Journal of youth and adolescence* 42 (2013), pp. 1090–1104. doi: <https://doi.org/10.1007/s10964-013-9952-2>.
- [2] Joep van Agteren et al. “A systematic review and meta-analysis of psychological interventions to improve mental wellbeing”. In: *Nature human behaviour* 5.5 (2021), pp. 631–652. doi: <https://doi.org/10.1038/s41562-021-01093-w>.
- [3] Juan Aguado-Delgado et al. “Accessibility in video games: a systematic review”. In: *Universal Access in the Information Society* 19 (2020), pp. 169–193. doi: <https://doi.org/10.1007/s10209-018-0628-2>.
- [4] Amccus. *Harvest Moon*. 1996.
- [5] Andrea Andiloro. “Comfortably numb: An ideological analysis of coziness in videogames”. In: *Replay. The Polish Journal of Game studies* 11.1 (2024), pp. 79–92. doi: <https://doi.org/10.18778/2391-8551.11.06>.
- [6] Anonymous. *What do you define as a cozy game?* 2023. URL: https://www.reddit.com/r/CozyGamers/comments/16gqkdg/what_do_you_define_as_a_cozy_game/.
- [7] Electronic Arts and Maxis. *The Sims*. 1989.
- [8] Jim Blascovich and Joe Tomaka. “The biopsychosocial model of arousal regulation”. In: *Advances in experimental social psychology*. Vol. 28. Elsevier, 1996, pp. 1–51. doi: [https://doi.org/10.1016/S0065-2601\(08\)60235-X](https://doi.org/10.1016/S0065-2601(08)60235-X).
- [9] Bettina Bódi. “The duality of cozy games: Cozy agency, neoliberalism, and affect”. In: *Replay. The Polish Journal of Game Studies* 11.1 (2024), pp. 51–64. doi: <https://doi.org/10.18778/2391-8551.11.04>.
- [10] Monique Boekaerts, Moshe Zeidner, and Paul R. Pintrich. *Handbook of self-regulation*. Elsevier, 1999.
- [11] Nicholas D. Bowman and Ron Tamborini. “‘In the Mood to Game’: Selective exposure and mood management processes in computer game play”. In: *New Media & Society* 17.3 (2015), pp. 375–393. doi: <https://doi.org/10.1177/1461444813504274>.
- [12] Nicholas D. Bowman and Ron Tamborini. “Task demand and mood repair: The intervention potential of computer games”. In: *New Media & Society* 14.8 (2012), pp. 1339–1357. doi: <https://doi.org/10.1177/1461444812450426>.

- [13] Virginia Braun and Victoria Clarke. *Thematic analysis*. American Psychological Association, 2012.
- [14] Mark Brown and Sky L. Anderson. “Designing for disability: Evaluating the state of accessibility design in video games”. In: *Games and Culture* 16.6 (2021), pp. 702–718. doi: <https://doi.org/10.1177/155541202097150>.
- [15] Colin Campbell. *What are cozy games, and what makes them cozy?* 2022. URL: <https://www.gamesindustry.biz/what-makes-a-cozy-game-cozy>.
- [16] Lei Chen, Shuhua Zhou, and Jennings Bryant. “Temporal changes in mood repair through music consumption: Effects of mood, mood salience, and individual differences”. In: *Media Psychology* 9.3 (2007), pp. 695–713. doi: <https://doi.org/10.1080/15213260701283293>.
- [17] ConcernedApe and The Secret Police Limited. *Stardew Valley*. 2016.
- [18] Mia Consalvo. *Cheating: Gaining advantage in videogames*. mit press, 2009.
- [19] Ben Cowley et al. “Toward an understanding of flow in video games”. In: *Computers in Entertainment (CIE)* 6.2 (2008), pp. 1–27. doi: <https://doi.org/10.1145/1371216.1371223>.
- [20] Mihaly Csikszentmihalyi. *Flow: The psychology of optimal experience*. New York: Harper & Row, 1990.
- [21] Global Burden of Disease Collaborative Network. *Global Burden of Disease Study 2021 (GBD 2021)*. Tech. rep. Institute for Health Metrics and Evaluation (IHME), 2024. URL: <https://www.healthdata.org/research-analysis/about-gbd>.
- [22] Shawn M. Doherty et al. “An analysis of expressed cheating behaviors in video games”. In: *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. Vol. 58. 1. SAGE Publications Sage CA: Los Angeles, CA. 2014, pp. 2393–2396. doi: <https://doi.org/10.1177/1541931214581498>.
- [23] Interplay Entertainment, 14 Degrees East, and Bethesda Softworks. *Elder Scrolls*. 1997.
- [24] Julian Frommel, Madison Klarkowski, and Regan L. Mandryk. “The struggle is Spiel: On failure and success in games”. In: *Proceedings of the 16th International Conference on the Foundations of Digital Games*. 2021, pp. 1–12. doi: <https://doi.org/10.1145/3472538.3472565>.
- [25] Justine M. Gatt et al. “The heritability of mental health and wellbeing defined using COMPAS-W, a new composite measure of wellbeing”. In: *Psychiatry Research* 219.1 (2014), pp. 204–213. doi: <https://doi.org/10.1016/j.psychres.2014.04.033>.

- [26] Andrew T. Gloster et al. “The empirical status of acceptance and commitment therapy: A review of meta-analyses”. In: *Journal of contextual behavioral science* 18 (2020), pp. 181–192. doi: <https://doi.org/10.1016/j.jcbs.2020.09.009>.
- [27] Faren Grant, Constance Guille, and Srijan Sen. “Well-being and the risk of depression under stress”. In: *PLoS one* 8.7 (2013), e67395. doi: <https://doi.org/10.1371/journal.pone.0067395>.
- [28] Robert P. Griffiths, Matthew S. Eastin, and Vincent Cicchirillo. “Competitive video game play: An investigation of identification and competition”. In: *Communication Research* 43.4 (2016), pp. 468–486. doi: <https://doi.org/10.1177/0093650214565895>.
- [29] Paul Grossman et al. “Mindfulness-based stress reduction and health benefits: A meta-analysis”. In: *Focus on Alternative and Complementary Therapies* 8.4 (2003), pp. 500–500. doi: [https://doi.org/10.1016/S0022-3999\(03\)00573-7](https://doi.org/10.1016/S0022-3999(03)00573-7).
- [30] Constance Hammen. “Stress and depression”. In: *Annu. Rev. Clin. Psychol.* 1.1 (2005), pp. 293–319. doi: <https://doi.org/10.1146/annurev.clinpsy.1.102803.143938>.
- [31] Dorothee Hefner, Christoph Klimmt, and Peter Vorderer. “Identification with the player character as determinant of video game enjoyment”. In: *International conference on entertainment computing*. Springer, 2007, pp. 39–48. doi: https://doi.org/10.1007/978-3-540-74873-1_6.
- [32] FromSoftware Inc. et al. *Dark Souls*. 2011.
- [33] Helene Joffe. “Thematic analysis”. In: *Qualitative research methods in mental health and psychotherapy: A guide for students and practitioners* (2011), pp. 209–223. doi: <https://doi.org/10.1002/9781119973249.ch15>.
- [34] Christian Jones et al. “Gaming well: links between videogames and flourishing mental health”. In: *Frontiers in psychology* 5 (2014), p. 76833. doi: <https://doi.org/10.3389/fpsyg.2014.00260>.
- [35] Jesper Juul. *A casual revolution: Reinventing video games and their players*. MIT press, 2012.
- [36] Jon Kabat-Zinn and Thich N. Hanh. *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. Delta, 2009.
- [37] Ani Kalayjian and Lisa F. Abdolian. “Trauma and the media: How movies can create and relieve trauma”. In: *The Cinematic Mirror for Psychology and Life Coaching* (2010), pp. 155–169. doi: https://doi.org/10.1007/978-1-4419-1114-8_8.

- [38] Kenneth S. Kendler et al. “The relationship between the genetic and environmental influences on common internalizing psychiatric disorders and mental well-being”. In: *Behavior genetics* 41 (2011), pp. 641–650. doi: <https://doi.org/10.1007/s10519-011-9466-1>.
- [39] Corey L.M. Keyes. “Mental illness and/or mental health? Investigating axioms of the complete state model of health.” In: *Journal of consulting and clinical psychology* 73.3 (2005), p. 539. doi: <https://doi.org/10.1037/0022-006x.73.3.539>.
- [40] kolpeshtheyardstick’s anonymous wife. *What Makes A Game Cozy?* 2022. URL: <https://www.youtube.com/watch?v=bi7e-mTWC9U>.
- [41] Julius Kuhl. “A functional-design approach to motivation and self-regulation: The dynamics of personality systems interactions”. In: *Handbook of self-regulation*. Elsevier, 2000, pp. 111–169. doi: <https://doi.org/10.1016/B978-012109890-2/50034-2>.
- [42] Ho M. Lau et al. “Serious games for mental health: Are they accessible, feasible, and effective? A systematic review and meta-analysis”. In: *Frontiers in psychiatry* 7 (2017), p. 209. doi: <https://doi.org/10.3389/fpsy.2016.00209>.
- [43] Oliver Leis and Franziska Lautenbach. “Psychological and physiological stress in non-competitive and competitive esports settings: A systematic review”. In: *Psychology of sport and exercise* 51 (2020), p. 101738. doi: <https://doi.org/10.1016/j.psychsport.2020.101738>.
- [44] Ulf Lundberg et al. “Psychological and physiological stress responses during repetitive work at an assembly line”. In: *Work & Stress* 3.2 (1989), pp. 143–153. doi: <https://doi.org/10.1080/02678378908256940>.
- [45] Ron Meiners and Far Flung Socks. *The Twelfth Annual Game Design Think Tank Project Horseshoe 2017*. 2017. URL: <https://projecthorseshoe.com/reports/featured/ph17r3.htm>.
- [46] Lazaros Michailidis, Emili Balaguer-Ballester, and Xun He. “Flow and immersion in video games: The aftermath of a conceptual challenge”. In: *Frontiers in psychology* 9 (2018), p. 1682. doi: <https://doi.org/10.3389/fpsyg.2018.01682>.
- [47] Olana Missura and Thomas Gärtner. “Player modeling for intelligent difficulty adjustment”. In: *Discovery Science: 12th International Conference, DS 2009, Porto, Portugal, October 3-5, 2009 12*. Springer, 2009, pp. 197–211. doi: https://doi.org/10.1007/978-3-642-04747-3_17.
- [48] Edinara M. Morais, Paulo R. Moreira, and Eliane R. Winkelmann. “Movie watching during dialysis sessions reduces depression and anxiety and improves quality of life: A randomized clinical trial”. In: *Complementary therapies in medicine* 52 (2020), p. 102488. doi: <https://doi.org/10.1016/j.ctim.2020.102488>.

- [49] Lauren Morton. *Even 'cozy' gaming's biggest fans can't decide on its definition, but they aren't worried: 'There's a whole lot of grey area, and that's what makes it interesting'*. 2024. URL: <https://www.pcgamer.com/games/life-sim/even-cozy-gamings-biggest-fans-cant-decide-on-its-definition-but-they-arent-worried-theres-a-whole-lot-of-grey-area-and-thats-what-makes-it-interesting/>.
- [50] Fiona F.H. Nah et al. "Flow in gaming: literature synthesis and framework development". In: *International Journal of Information Systems and Management* 1.1-2 (2014), pp. 83–124. DOI: <https://doi.org/10.1504/IJISAM.2014.062288>.
- [51] Nintendo et al. *Animal Crossing*. 2001.
- [52] Nintendo et al. *Pokémon*. 1996.
- [53] Nintendo. *The Legend of Zelda: Breath of the Wild*. 2017.
- [54] Nintendo, Capcom, et al. *The Legend of Zelda*. 1986.
- [55] Mary B. Oliver et al. "Video games as meaningful entertainment experiences." In: *Psychology of popular media culture* 5.4 (2016), p. 390. DOI: <http://dx.doi.org/10.1037/ppm0000066>.
- [56] World Health Organization et al. *Wellbeing measures in primary health care/the DepCare Project: report on a WHO meeting: Stockholm, Sweden, 12–13 February 1998*. Tech. rep. World Health Organization. Regional Office for Europe, 1998.
- [57] Cale J. Passmore et al. "A cheating mood: The emotional and psychological benefits of cheating in single-player games". In: *Proceedings of the Annual Symposium on Computer-Human Interaction in Play*. CHI PLAY '20. Virtual Event, Canada: Association for Computing Machinery, 2020, pp. 58–70. DOI: <https://doi.org/10.1145/3410404.3414252>.
- [58] Markus Persson and Jens Bergensten. *Minecraft*. 2011.
- [59] Serge Petralito et al. "A good reason to die: How avatar death and high challenges enable positive experiences". In: *Proceedings of the 2017 CHI conference on human factors in computing systems*. 2017, pp. 5087–5097. DOI: <https://doi.org/10.1145/3025453.3026047>.
- [60] Morgan Pinder. "Negotiating anthropocentrism and ecologies in cozy games". In: *Replay. The Polish Journal of Game Studies* 11.1 (2024), pp. 125–136. DOI: <https://doi.org/10.18778/2391-8551.11.09>.
- [61] Anne M. Porter and P. Goolkasian. "Video games and stress: How stress appraisals and game content affect cardiovascular and emotion outcomes". In: *Frontiers in psychology* 10 (2019), p. 967. DOI: <https://doi.org/10.3389/fpsyg.2019.00967>.

- [62] Amanda J. Ramirez et al. “Mental health of hospital consultants: the effects of stress and satisfaction at work”. In: *The Lancet* 347.9003 (1996), pp. 724–728. doi: [https://doi.org/10.1016/S0140-6736\(96\)90077-X](https://doi.org/10.1016/S0140-6736(96)90077-X).
- [63] Leonard Reinecke. “Games and recovery: The use of video and computer games to recuperate from stress and strain”. In: *Journal of media psychology* 21.3 (2009), pp. 126–142. doi: <https://doi.org/10.1027/1864-1105.21.3.126>.
- [64] Leonard Reinecke, Jennifer Klatt, and Nicole C. Krämer. “Entertaining media use and the satisfaction of recovery needs: Recovery outcomes associated with the use of interactive and noninteractive entertaining media”. In: *Media Psychology* 14.2 (2011), pp. 192–215. doi: <https://doi.org/10.1080/15213269.2011.573466>.
- [65] Diana Rieger et al. “Eating ghosts: The underlying mechanisms of mood repair via interactive and noninteractive media.” In: *Psychology of Popular Media Culture* 4.2 (2015), p. 138. doi: <https://doi.org/10.1037/ppm0000018>.
- [66] Diana Rieger et al. “The winner takes it all: The effect of in-game success and need satisfaction on mood repair and enjoyment”. In: *Computers in Human Behavior* 39 (2014), pp. 281–286. doi: <https://doi.org/10.1016/j.chb.2014.07.037>.
- [67] Denise Rizzolo et al. “Stress management strategies for students: The immediate effects of yoga, humor, and reading on stress”. In: *Journal of College Teaching & Learning* 6.8 (2009), pp. 79–88. doi: <https://doi.org/10.19030/tlc.v6i8.1117>.
- [68] Lisa Robinson. “Stress and anxiety”. In: *Nursing Clinics of North America* 25.4 (1990), pp. 935–943. doi: [https://doi.org/10.1016/S0029-6465\(22\)02991-7](https://doi.org/10.1016/S0029-6465(22)02991-7).
- [69] Carmen V. Russoniello, Kevin O’Brien, and Jennifer M. Parks. “The effectiveness of casual video games in improving mood and decreasing stress”. In: *Journal of CyberTherapy & Rehabilitation* 2.1 (2009), pp. 53–66.
- [70] Bethesda Softworks and Bethesda Game Studios. *Elder Scrolls*. 1994.
- [71] Alistair R. B. Soutter and Michael Hitchens. “The relationship between character identification and flow state within video games”. In: *Computers in human behavior* 55 (2016), pp. 1030–1038. doi: <https://doi.org/10.1016/j.chb.2015.11.012>.
- [72] Anne Sullivan, Mel Stanfill, and Anastasia Salter. “The constraints of cozy games: Boyfriend dungeon and consent in queer play”. In: *Proceedings of the 18th International Conference on the Foundations of Digital Games*. FDG ’23. Lisbon, Portugal: Association for Computing Machinery, 2023. doi: <https://doi.org/10.1145/3582437.3582452>.

- [73] Gareth Terry et al. “Thematic analysis”. In: *The SAGE handbook of qualitative research in psychology* 2.17-37 (2017), p. 25.
- [74] Alasdair G. Thin, Lisa Hansen, and Danny McEachen. “Flow experience and mood states while playing body movement-controlled video games”. In: *Games and culture* 6.5 (2011), pp. 414–428. doi: <https://doi.org/10.1177/1555412011402677>.
- [75] Christian W. Topp et al. “The WHO-5 Well-Being Index: a systematic review of the literature”. In: *Psychotherapy and psychosomatics* 84.3 (2015), pp. 167–176. doi: <https://doi.org/10.1159/000376585>.
- [76] Rebekah Valentine. *How to design for coziness...and kindness*. 2018. URL: <https://www.gamesindustry.biz/how-to-design-for-coziness-and-kindness>.
- [77] Kathleen D. Vohs and Roy F. Baumeister. *Handbook of self-regulation: Research, theory, and applications*. Guilford Publications, 2016.
- [78] Peter Vorderer, Tilo Hartmann, and Christoph Klimmt. “Explaining the enjoyment of playing video games: the role of competition”. In: *Proceedings of the second international conference on Entertainment computing*. 2003, pp. 1–9. doi: [doi/10.5555/958720.958735](https://doi.org/10.5555/958720.958735).
- [79] Karla Waldenmeier et al. “Cheat Codes as external support for players navigating fear of failure and self-regulation challenges in digital games”. In: *Proceedings of the CHI Conference on Human Factors in Computing Systems*. 2024, pp. 1–13. doi: <https://doi.org/10.1145/3613904.3642603>.
- [80] Jian L. Wang et al. “The relationship between work stress and mental disorders in men and women: findings from a population-based study”. In: *Journal of Epidemiology & Community Health* 62.1 (2008), pp. 42–47. doi: <https://doi.org/10.1136/jech.2006.050591>.
- [81] Agata Waszkiewicz. *Delicious pixels: Food in video games*. Vol. 6. Walter de Gruyter GmbH & Co KG, 2022.
- [82] Agata Waszkiewicz and Martyna Bakun. “Towards the aesthetics of cozy video games”. In: *Journal of Gaming & Virtual Worlds* 12.3 (2020), pp. 225–240. doi: https://doi.org/10.1386/jgvw_00017_1.
- [83] Peter Zackariasson and Timothy L. Wilson. “Paradigm shifts in the video game industry”. In: *Competitiveness Review: An International Business Journal* 20.2 (2010), pp. 139–151. doi: <https://doi.org/10.1108/10595421011029857>.

Appendix A

FULL SURVEY PRESENTED TO PARTICIPANTS

Prior to participating, individuals were given an introduction asking them for informed consent.

Welcome to the Cozy Games Survey

The following questionnaire is part of an academic study about cozy games and mental well-being titled "Cozy Games for Mood Repair, Stress Reduction, and Well-Being". In this survey you will be asked to answer a few questions about yourself and your experience with video games. Please note that all responses will be anonymous, and no personal identifying details will be asked of you. You are free to stop at any point, and no answers will be recorded unless the entire survey is submitted at the end.

Please read the statements below and tick the final box to confirm you have read and understood the statements and upon doing so agree to participate in the project.

- I confirm that I am 18 years of age or over. I confirm that the research project "Cozy Games for Mood Repair, Stress Reduction, and Well-Being" has been explained to me. I have had the opportunity to ask questions about the project and have had these answered satisfactorily. I had enough time to consider whether to participate.*
- I understand that my participation in this research is voluntary and that I may withdraw from the study at any time without providing a reason, and that if I withdraw any personal data already collected from me will be erased.*
- I consent to allow the fully anonymized data to be used in future publications and other scholarly means of disseminating the findings from the research project.*
- I understand that the data acquired will be securely stored by researchers, but that appropriately anonymized data may in future be made available to others for research purposes. I understand that the University may publish*

appropriately anonymized data in appropriate data repositories for verification purposes and to make it accessible to researchers and other research users.

I confirm that I have read and understood the above statements, and agree to participate in the study.

This was immediately followed by the short WHO-5 questionnaire presented in a table format:

Please indicate for each of the five statements which is closest to how you have been feeling over the last two weeks.

	All of the time	Most of the time	More than half the time	Less than half the time	Some of the time	At no time
I have felt cheerful and in good spirits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have felt calm and relaxed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have felt active and vigorous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I woke up feeling fresh and rested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My daily life has been filled with things that interest me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Then, the questions of our own design comprising the bulk of the survey.

- What makes a game cozy for you?
- What makes a game **not** cozy?
- Rate how important each of the following elements is when it comes to cozy games.



- For a game to be cozy, does it need to be your personal space, or is multiplayer allowed? Why?

- What makes you choose to play a cozy game over a another type of game? Provide an example scenario if you can.
- How do you feel about cozy games as a way to reduce stress?
- Have you ever experienced that playing a cozy game has helped your well-being? How?
- What are some of your favorite games that feel cozy to you? (This can include games that others might not label as 'cozy games')
- What is your favorite 'cozy game'? (This question refers to a game that more objectively belongs to the 'cozy game' genre)
- What do you do in your favorite cozy game? (in-game activities)
- How many hours a week do you play video games on average? (all genres)
- What percentage of your gaming time is spent on cozy games?
- How many years has it been since you first started playing video games?
- How familiar would you say you are with video games in general?
 - Not familiar at all
 - Slightly familiar
 - Moderately familiar
 - Very familiar
 - Extremely familiar
- What are the last three games that you played?

- How well do you know the following games?

	Never heard of it	Heard of it, but never played	Played it a bit, but not much	Played it and remember some of it	Played extensively and remember it well
The Sims	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stardew Valley	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Animal Crossing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Legend of Zelda: Breath of the Wild	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cities Skyline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My Time at Sandrock	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nintendogs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Palia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- How cozy do you feel the following games are?

At this point participants were presented with a slider ranging from 0 to 100 for every game they marked as “played a bit, but not much” or greater in the familiarity scale from the previous question.

The next of the survey contained the following demographics questions:

- How old are you? (In years)
- What is your gender?
 - Man
 - Woman
 - Non-binary
 - Other
 - Prefer not to say
- What is the highest level of formal education you have achieved so far?
 - Less than high school
 - High school graduate
 - Some college
 - 2 year degree
 - 4 year degree

- Master degree
 - Doctorate
 - Other
 - Prefer not to say
- What is your current occupation?
 - Which ethnicity(ies) do you identify most with?
 - What is your country of residence?
 - What is (are) your native language(s)?

Lastly, we asked participants if they would be willing to volunteer for a follow-interview. We only asked for a contact email if they agreed to it.

- Would you be willing to volunteer for an optional follow-up interview about cozy games online?
 - Yes
 - No

If they selected yes:

- Please provide an email address. (We will only use this address to contact you for details regarding the interview)

Appendix B

INTERVIEW DISCUSSION POINTS

1. How do you feel about time constraints in Cozy Games?
 - a) If they approve of time constraints: are there any specific contexts in which time pressure would break the coziness for you?
 - b) If they disapprove of them: are there any specific contexts in which you would allow time pressure in a Cozy Game?
2. What kind of music would you like/expect in a Cozy Game? What kind of music would break the coziness for you?
3. Most people included games with combat mechanics in games that felt cozy to them, would you say violence (both physical and non-physical) should be completely out of Cozy Games or is it OK in specific contexts or with certain limitations? Please explain.
4. A lot of Cozy Games involve nature-related activities like farming, gathering, fishing, etc. Is that something that you look for in a Cozy Game? What are your thoughts about those kinds of activities in real life? In your opinion, are the video game versions an adequate substitute for the real thing?
5. How do microtransactions or paid DLCs affect Cozy Games for you? Do all expenses affect coziness equally, or does it depend on any specific factors?
6. Do you feel like playing Cozy Games when you are stressed or do you prefer playing when you are already in a cozy mood? If they help reduce stress, would you say it is more effective with Cozy Games, or would any game have the same effect?
7. How do you feel about in-game collections and objective completion in Cozy Games? Does it feel like the need to complete everything gets in the way of coziness?
8. Do you ever feel that Cozy Games are wasting your time? Why?

- a) If so, do you feel this is a characteristic of Cozy Games specifically, or video games in general?
9. How long-lasting are the effects of Cozy Games on your mental well-being?
(Depends on their answers to the survey question on well-being)

Appendix C

LIST OF REPORTED FAVORED GAMES THAT FEEL COZY

Game	Count
Stardew Valley	19
Animal Crossing	12
The Legend of Zelda (any entry)	11
Minecraft	10
Pokémon (any entry)	8
A Short Hike	5
The Sims (any entry)	4
Florence	3
The Last Campfire	3
Final Fantasy (any entry)	3
Civilization	3
Unpacking	3
Dark Souls (any entry)	3
Cozy Grove	3
Hades	2
Trackmania	2
What Remains of Edith Finch	2
Elden Ring	2
Fallout (any entry)	2
Elder Scrolls (any entry)	2
RimWorld	2
It Takes Two	2
LEGO (any title)	2
Hogwarts Legacy	2
Slay the Spire	2
Valheim	2
A Little to the Left	2

Journey	2
Kingdom Hearts (any entry)	2
World of Warcraft	2
Solitaire	2
FAR (any entry)	2
Portal (any entry)	2
Everybody Wham Wham	1
Genshin Impact	1
Golden Sun	1
Golf It	1
Grand Mountain Adventure	1
Halo Infinite	1
Hidden Folks	1
Assassin's Creed	1
Botany Manor	1
Rakuen	1
To The Moon	1
Nintendogs	1
Palworld	1
Fall Guys	1
Kirby and The Forgotten Land	1
Super Mario Bros Wonder	1
Final Fantasy X	1
Sonic Adventure 2	1
Dream Chronicles	1
Artifex Mundi	1
Harry Potter	1
Bandle Tale	1
Stronhold	1
We Were Here	1
I Am Future	1
Just Dance	1
Kingdom	1

Kiseki Franchise	1
Koi Farm	1
Lethal Company	1
Lil Gator Game	1
Loddlenaut	1
Lost In Play	1
My Time at Portia	1
No Man's Sky	1
Old School RuneScape	1
Persona 5	1
Prison Architect	1
Professor Layton	1
Project Hospital	1
Rusty Lake	1
Sekiro	1
Story of Seasons (any entry)	1
Super Smash Bros	1
Tales of Arise	1
Teamfight Tactics	1
The Pedestrian	1
Venba	1
Wingspan	1
Dawn of Man	1
Gauntlet: Dark Legacy	1
Palia	1
Myst	1
Mini Metro	1
I Was a Teenage Exocolonist	1
Zoo Tycoon	1
Planet Zoo	1
Adventure Capitalist	1
Spiritfarer	1
Sly Cooper	1

A Building Full of Cats	1
Tinykin	1
Firewatch	1
Farming Simulator	1
Portal Knights	1
Undertale	1
Age of Empires	1
Civilization VI	1
Settlement Survival	1
Banished	1
Dominations	1
Online Poker	1
Potion Craft	1
Clicker Heroes	1
Crusader Kings	1
AFK Arena	1
Against The Storm	1
Advance Wars	1
Dabledom	1
Alba: A Wildlife Adventure	1
Assemble With Care	1
Baldur's Gate 3	1
Bastion	1
BattleBit	1
Coffee Talk	1
Dave the Diver	1
Diablo IV	1
Dorfromantik	1

Table C.1: Full list of examples provided in answer to the question “What are some of your favorite games that feel cozy to you? (This can include games that others might not label as ‘cozy games’)”

Appendix D

LIST OF REPORTED FAVORITE COZY GAMES

Game	Count
Stardew Valley	14
Animal Crossing	7
Pokémon (any entry)	4
Unpacking	3
Minecraft	3
The Legend of Zelda (any entry)	2
A Little to the Left	2
Bandle Tale	1
The Sims (any entry)	1
Banished	1
Dorfromantik	1
A Short Hike	1
Hidden Folks	1
No Man's Sky	1
Oldschool RuneScape	1
Solitaire	1
Cozy Groves	1
Myst	1
Kingdom Hearts	1
Dominations	1
<i>Not specified</i>	3

Table D.1: Full list of examples provided in answer to the question “What is your favorite ‘cozy game’? (This question refers to a game that more objectively belongs to the ‘cozy game’ genre)”