



ROBIN

a narrative videogame about living with Borderline Personality Disorder



Design report
M1.1 Project Emotion Enabled Design

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I. INTRODUCTION

Borderline Personality Disorder (BPD) is one of the most common personality disorders. People with this disorder suffer from sudden and intense shifts in their mood, thoughts, and behaviour [20]. It is estimated that around 1-2% of the population is affected by BPD [18, 20]. While BPD is an often misunderstood disorder, effective treatments fortunately exist [7]. It is vital that those suffering from the disorder have access to such treatment. Not only has BPD been shown to have a negative impact on quality of life [15], people with BPD are also at a higher risk of self-harm and suicide [21]

However, the stigma that surrounds BPD stands in the way of successful treatment and adds to the difficulties people with BPD face. There is very little understanding of and knowledge about BPD among non-experts [13], and negative attitudes towards people with BPD have been documented among police officers [19], in the context of employment [16], and in the media [4]. Unfortunately, the stigma surrounding BPD is even perpetuated by some mental health professionals [23]. Encountering such stigma can trigger reactions from people with BPD that only reinforce these stigmas, thus creating a self-fulfilling prophecy [23]. To improve the quality of life of people with BPD as well as the chances of effective treatment, it is imperative to increase awareness of the disorder and to reduce the stigma that surrounds it.

Videogames have been an effective tool in helping to destigmatize mental health issues and in opening up conversations about specific conditions. For example, the game *Hellblade: Senua's Sacrifice* has been lauded as a realistic depiction of psychosis [9]. Some people who have experienced psychosis have said that the game has helped them to better explain their experience to loved ones, and that it has made them feel more understood [14]. A study using *Hellblade* also found that it reduced mental health stigma in those who played it [10]. Not only can video games be helpful in reducing mental health stigma, mental health issues are also already a popular subject for video games: one study found that around 10% of popular games explicitly include mental health issues as a topic [5]. However, many of these depictions are negative [5, 11], and all of the games depicting personality disorders in the aforementioned study did so in a stigmatizing way.

Taking in mind the importance of destigmatizing BPD and the potential of video games to do so, this report describes the process of developing *Robin*, a concept for a videogame that destigmatizes BPD. The videogame is intended for people without BPD to gain insight into the experience of living with BPD. In this report we will discuss the theoretical background for this project, the design process, and final design concept. We will also explore the value such a game could provide and share the results of a first user test. The end of the report summarizes the insights this process has generated, and our recommendations for possible further development of the game.



2. THEORETICAL BACKGROUND

2.1 STIGMAS AROUND MENTAL HEALTH

Link and Phelan (as cited in [30]) described four elements of stigma whereby “(a) individual differences are recognized, (b) these differences are perceived by society as negative, (c) the stigmatized group is seen as the outgroup, and (d) the end result is loss of opportunity, power or status”. Sheehan et al. [30] further mention three types of stigmas, namely public stigma, self-stigma and structural stigma. Public stigma displays itself in multiple variants, ranging from decrease in eye contact to excluding people. If the stigmatized individual internalizes the accusations by believing them to be true, it can unfold into self-stigma. Structural stigma ensues “when stigmatizing beliefs and attitudes lead to unfair social institutions and policies for the stigmatized group” [30].

Stereotypes that contribute to stigma around mental illness specifically include the belief that people with a mental illness are inept, dangerous, or responsible for their own condition [30]. The stereotype of dangerousness for example is fueled by media reports that misrepresent the link between mental illness and violence [30]. For individuals with personality disorder this stigma might be even greater than for other mental illnesses. Research has shown that “the public reacts less sympathetically to individuals described as having a personality disorder and is less likely to think these individuals need professional help than those with other psychiatric disorders” [30]. Less about personality disorders is known by the general public in comparison with other mental illnesses. “When presented with a vignette describing someone with borderline personality disorder (BPD), only 2.3 % of respondents recognized the symptoms as BPD, whereas 72.5 % recognized depression and 65.6 % recognized schizophrenia” [30].

The effects of these stigmatizing beliefs are that people with a mental illness can develop a “low self-esteem, depression, or lack of motivation” [30]. Additionally, the stigma can oppose recovery efforts when patients experience the “why try” effect, where a person has internalized the stigma of incompetence, and beliefs it halts their recovery efforts [30]. Another reason for not seeking treatment is the concern to be labeled as “crazy” as a result of stigmatizing beliefs. On top of these effects, people with personality disorders might also be exposed to negative attitudes in health care. Some studies have found that professionals exhibit negative behavior against patients diagnosed with personality disorders, and in some cases BPD has been cited as a reason to exclude patients from treatment [30].

2.2 AWARENESS THROUGH THE MEDIUM OF GAMES

The research area of creating awareness about topics through games is becoming increasingly popular. Research indicates that serious games are a potential medium to reduce stigma and promote awareness of mental health [8, 16]. Developing these types of games is linked with the area of persuasion as it aims for a change in attitude. Within games, a leading theory for persuasion is that of Procedural Rhetoric [4]. The theory of Procedural Rhetoric explains how persuasion can occur through rules and interactions instead of spoken word or writing [4, 22, 31]. Kors, Van der Spek & Schouten [22] present a model for creating a persuasive gameplay experience (Figure 2.1). The model describes the change of attitude towards an object or concept in the real world based on the transfer of the attitude towards an in-game

representation. The attitude formation of the in-game representation happens through two routes, the Semiosis and Behaviour Route. The Semiosis Route explains how players attach meaning to elements they perceive. The Behaviour Route works in conjunction with the Semiosis Route and describes how games create opportunities for behaviour that the player can react on. Through feedback the player can conclude if the behaviour was expected [22]. However, Vermeulen et al. [31] warn that when designing a persuasive game, the in-game representation can become an abstraction of the represented and therefore be able to lack nuance.

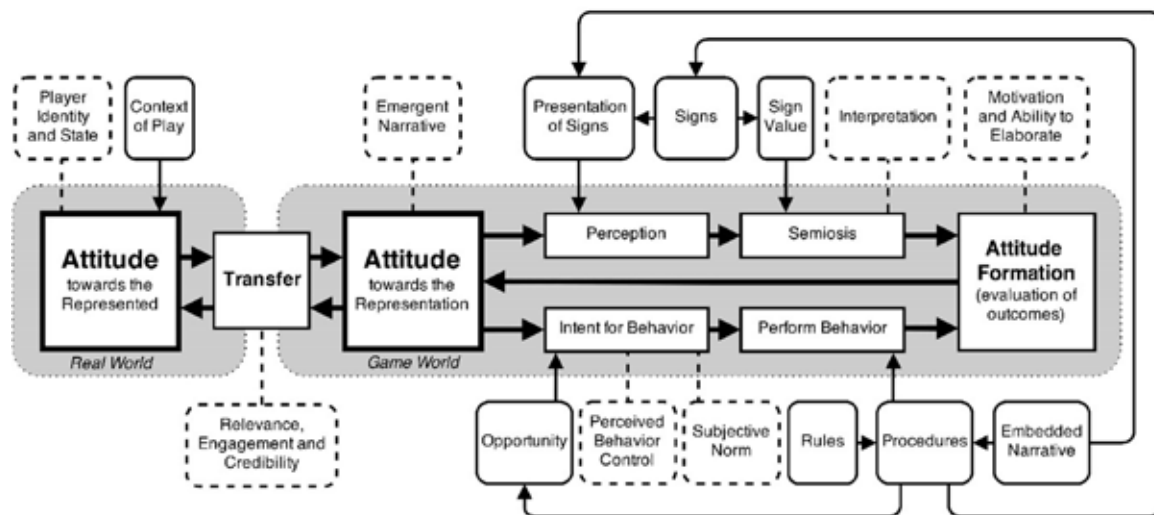


Figure 2.1 Attitudinal Gameplay Model for the Persuasive Gameplay Experience [22]

To form a player their attitude towards the representation, Kors et al. [22] present four aspects for making persuasive messages more pertinent within the game world and thereby improve the process of attitude formation. The first aspect is the presence of Knowledge and Understanding of the topic in the game. The second aspect is to provide the player with Available time after the player is presented with a persuasive message to allow the player to reflect upon the message. The third aspect is to limit Distractions of less important elements to highlight the desired message. The last aspect is Repetition of persuasive messages throughout the game to increase the chance of success. Next to aspects for transfer formation, Kors et al. [22] recognized three aspects to encourage the transfer of attitudes. These are Relevance, Engagement and Credibility. Relevance relates to how relevant the subject matter is to the player. This aspect can for example be influenced by encouraging the player to identify with characters that display aspects of the attitude. The aspect of engagement relates to how submerged the player is with the gameplay. Kors et al. [22] stress that: “*Persuasive messages embedded in gameplay are only as good as to what level the game is actually played*”. Therefore, it is important that game designers do not neglect the engaging aspect of the game. The last aspect of Credibility “*determines the degree to which the player thinks that what is represented in the game is believable*”. Incorporating all these aspects in a persuasive game will help to bring across the persuasive message of the game.

2.3 DESIGNING GAMES ABOUT MENTAL HEALTH

In the research of Fordham & Ball [16] where they analyze the design process of the game *Hellblade: Senua's Sacrifice*, a game about a character with psychosis, they discuss three design recommendations. The first being the importance of transparency by clearly

displaying the intentions regarding the portrayal of mental illness. Secondly, *“input from key stakeholders is also essential”* [16]. Throughout the design process it is useful to work closely with experts, scientists, and people with various mental illnesses. Lastly, making use of the affordances from the video game technology to convey mental illness in unique and effective ways [16].

In the context of serious games for mental health, Andrews [3] also proposes some design recommendations for development:

- “1. A pedagogically sound serious game concept*
- 2. A solid construct of explicit and implicit learning events that are directly linked to instructional objectives.*
- 3. Purposeful use of gaming technologies to ensure appropriate levels of realism and immersion in relation to the learning content.*
- 4. A robust storyline that is contextually rich and engaging.*
- 5. The so-called “fun factor” which represents an appropriate blend of learner engagement, competition, humor, and entertainment elements.”* [3]

Next to these design considerations, Andrews [3] mentions to keep the principle “Do no harm” in mind and to remain cautious.

3. DESIGN PROCESS

3.1 EXPLORING THE TOPIC

Scoping

The initial goal of this project was to create awareness for complex mental health issues using games. How can games be used to communicate nuances around mental illnesses and stay true to those affected? To first gain a better understanding about how games were already being used to create awareness about mental health issues we commenced by doing a benchmark analysis. Games like *Mental Health Management Bingo* [1] and the *Mental and Emotional Wellbeing Game* [29] try to create discussion around the topic while not really focusing on the enjoyment of the actual game. *Drug Awareness Jeopardy* [15] and *Wheel of Misfortune* [40] are quizzes that teach children about the dangers of drugs and whether certain substances are legal or not. However, they lack nuance about the mental health aspect of addictions. We wanted our game to also create an emotional understanding towards people dealing with mental health issues instead of providing the players only with facts and knowledge.

Examples we found that did this better are the videogames called *Hellblade: Senua's Sacrifice* [21] and *Celeste* [16]. In these games the protagonists conflict with their depression and anxiety by which it shows the importance of them accepting their mental issues as a step towards learning to deal with their problems. Moreover, they teach players lessons like reaching out to others for help and controlled breathing to get out of panic attacks [31]. They are examples of how games can both be critically acclaimed while still helping people deal with the topic of mental illness even to the degree that players reach out the developers to thank them [31]. However, we noticed a lack of games about borderline personality

disorder even though 1-2% of the population suffers from it [30] and it being heavily stigmatized [37]. Therefore, we decided to make an engaging game to create emotional understanding of BPD.



Figure 3.1 Concept art for one of the early game concepts where two characters build a sandcastle together, generated using Stable Diffusion

First Iteration

Starting of the first iteration, we were uncertain of the format of the game. We ideated about board games and video games and noticed that our ideas were more leaning towards video games for creating an emotional understanding. Furthermore, from Jacobs, Jansz & De la Hera [24] we found that most persuasive games about lived experience and disorder, such as with BPD, rely mostly on linguistic persuasion through their narrative. An example of this is *Depression Quest* [13], a narrative videogame about depression. We drew inspiration from this game and decided to also create a narrative videogame to provide necessary nuance for our persuasive message to destigmatize BPD.

A broad concept that followed from our first ideation was a story-based videogame on Borderline. It would be played by two people who had to work together to build a sandcastle while having a conversation about one of the character's struggles with their personality disorder and relationship. Moreover, they had to be careful that the castle would not be damaged by either the sea washing it away or a conflict arising between the two characters. We took a step back with this concept and turned it into more of a general idea as we believed the representation of the illness would otherwise be too abstract. The concept was rephrased to: *'Two characters, one of them has Borderline Personality Disorder, doing activities together'*.

With the use of the storytelling structure of Freytag's Pyramid, the concept of the two characters was refined into *Bea*. In this game you play as a young woman with BPD, called Bea, going through her daily life and see her interact with others. To further develop the game, we had a conversation with one of the hybrid teachers in the Games & Play squad, Ken Koontz, who has experience developing games for mental health. His most notable comment was about the scope of the story; especially for a prototype, it had to be downsized. A lot of work needs to be invested into making a narrative game interactive and engaging. Therefore, we downsized the story to one scene. He also highlighted that when developing games around mental health it is important to do research with the people with the mental health problem in question. Moreover, he underlined the value of showing

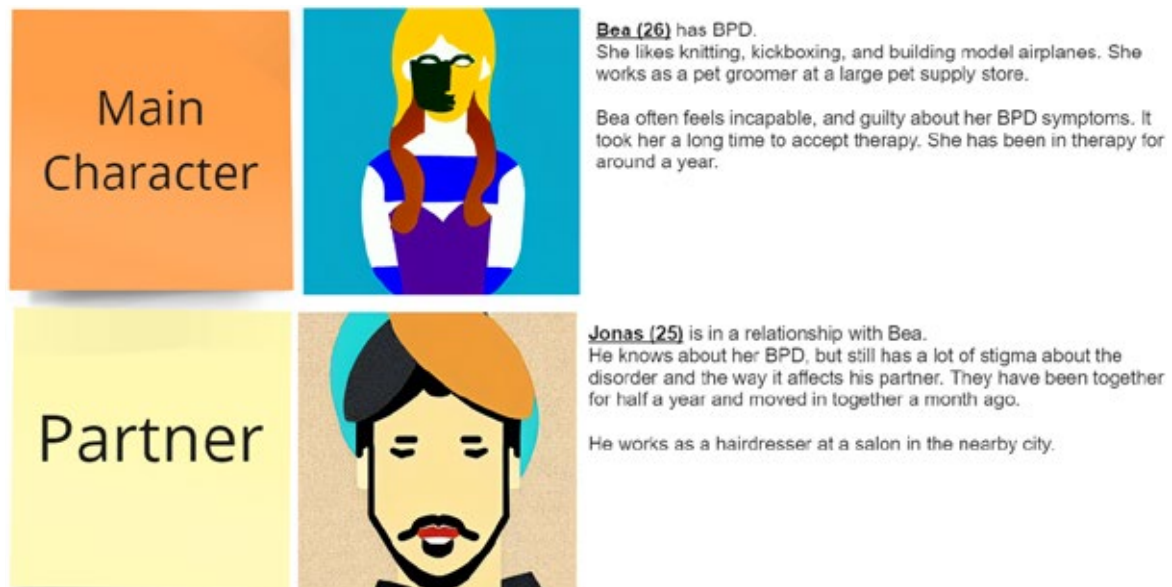


Figure 3.2 Character profiles from Bea

the game's mechanics to people with experience around the topic and to look at existing techniques that are already being used to deal with mental illnesses.

Therefore, the next step would be involving experts. They could give us information about what it is like to have Borderline, give feedback on mechanics, and tell us about techniques that are being used to help with BPD. However, we first developed a prototype for the first concept of *Bea* to show to the experts and get more concrete feedback of our current view of BPD.

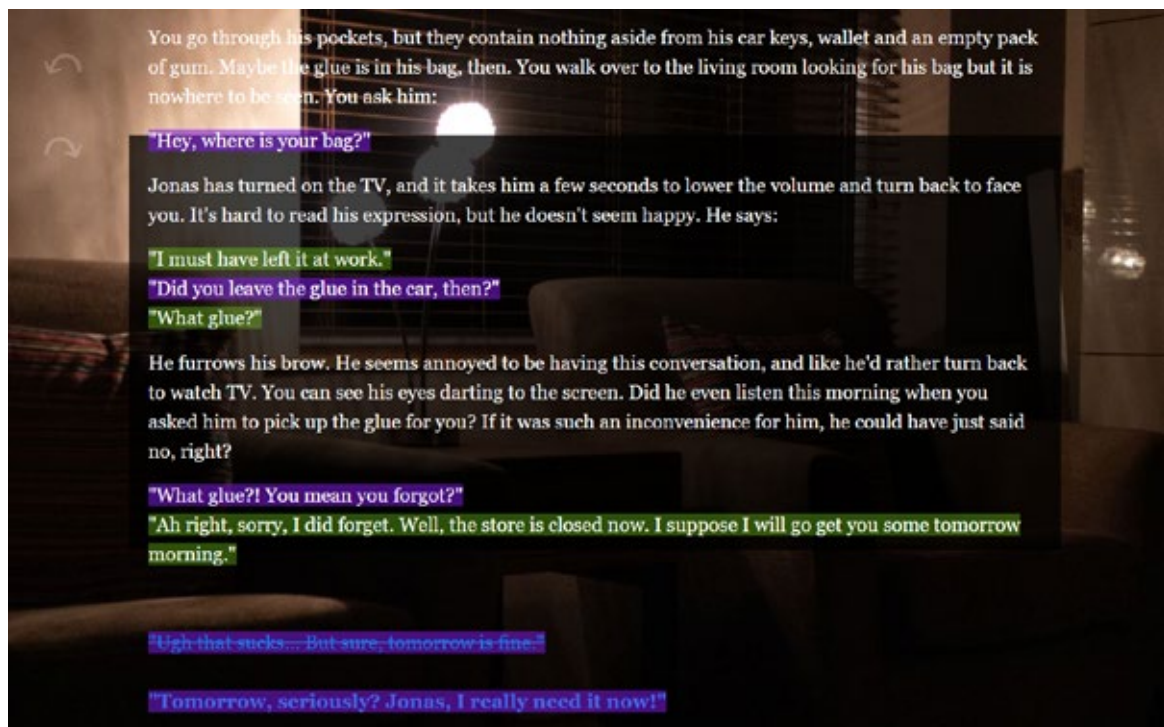


Figure 3.3 A screenshot from Bea

First concept: Bea

Bea is a fully text-based game in which you play as a woman with borderline personality disorder. The aim of the game is to reduce stigma by increasing players' empathy for people with BPD and give them a better understanding of the disorder. In the game, your character gets into a conflict with her partner. As a player, you read the events from Bea's perspective, so you get insight into how she experiences seemingly innocuous moments as much more intense. You get to make choices as the character, allowing you to explore her interactions with the other characters and the way she relates to them.

3.2 INVOLVING EXPERTS

The game was presented to three experts: a psychosocial therapist, a psychiatrist in training, and the chairman of the Dutch borderline foundation. We interviewed them (see Appendix F) about BPD, their thoughts on the prototype, and possible future game mechanics. The main goal of these interviews was to evaluate whether our prototype gave a realistic impression of what BPD can look like, and to find out whether we had accidentally incorporated stigmatizing elements.

All experts mentioned that it was not right to really call BPD a 'personality disorder'; it would be better formulated as an 'attachment problem'. The experts explained that for many people their Borderline stems from events that traumatized them in the past. A typical case is that they had a problematic relationship with their parents or other guardians. The experts further mentioned that with right treatment it is very possible to recover from BPD. Additionally, the experts confirmed the symptoms of what we read online about a black-white view, separation anxiety and anger problems [6]. However, they helped clarify the how these emotions are experienced and expressed.

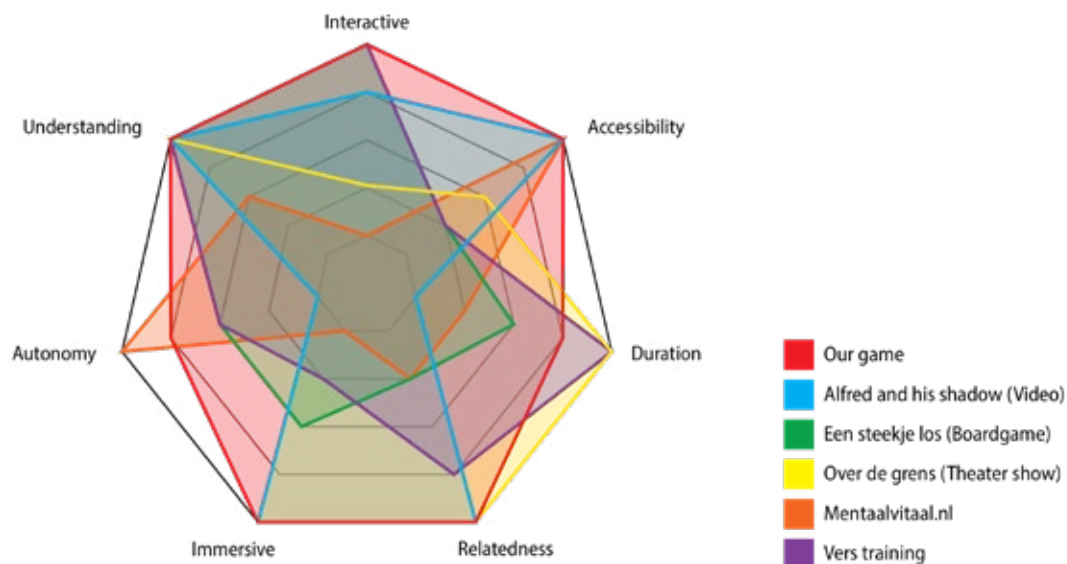


Figure 3.2 A screenshot from *Bea*

Reacting to the prototype, one expert said that people very often think about women when thinking about someone with BPD, while this is not always the case. While the majority of people diagnosed with BPD are women, there are also many men and nonbinary people

with BPD. When one expert saw Bea drinking coffee, she talked about certain coping mechanisms that could take the form of overuse of for example alcohol, caffeine, or food. The experts also provided us with other initiatives that bring awareness to BPD. These included *Alfred and his shadow* (video)[3], *Over de Grens* (theater)[32] and the *Vers training* [39]. These were used for a competitor analysis (see Figure 3.4).

We further discussed potential game mechanics to implement in the game to portray this. From this discussion, the game elements of crossed-out choice options, overwhelming the player with options and a time-limit were agreed by with the experts as good representation tools for how someone with borderline might feel or think. Lastly, they were keen to help us get in touch with people who dealt with BPD themselves.

3.3 REFINING THE CONCEPT

Our next step was making a new iteration of this concept that now included more visuals than the purely text-based prototype we already had. We decided to make this change to make the game look more appealing and to have more opportunities to incorporate different mechanics. Depression Quest [13], a similar game to *Bea* in that it is also text-based, received criticisms about it not feeling interactive enough to some players [14]. They said that the game did not offer them enough options to influence the story. The current software of our prototype, Twine, did not really offer us many other options to increase engagement, so we decided to make the next prototype a 2D side scroller, developed in Unity and Yarn Spinner. Once sufficiently playable, the prototype would be presented to people with personal experience with Borderline to receive their feedback, following the design tips as mentioned by Ken and Fordham & Ball [19].

Implementing the expert feedback

The characters of Bea and Jonas were replaced with the gender-neutral Robin and Luca, as to not enforce the stereotype of people with BPD all being women. We also tried to incorporate smaller details, like alcohol being a possible coping mechanism, by letting Robin drink beer as a response to emotions. Moreover, we put extra emphasis on how unexpectedly the conflict between Robin and Luca could arise. A flashback scene was added to give players insight into the relationship between Robin and their parents.

Keeping in mind the stigma that people with BPD cannot recover from their disorder, we also thought about the narrative of the game outside of the single scene we were developing. In this larger story we would put emphasis on how Robin learns to deal with their BPD symptoms through therapy. In the context of the prototype's scene, this is represented by a breathing exercise Robin has learned from their psychologist at the beginning of the scene.

Feedback from people with BPD

The three participants were people with BPD in recovery. In recovery in this context means a person no longer meets the diagnostic criteria for the disorder. The game was sent to and played by them before the interviews. During the interviews we asked questions (see Appendix G) about how they related to the game and if they felt it was an accurate depiction of BPD. Moreover, we asked them about what they felt was missing.

All participants stated that the way Robin acted, and the things they thought and said were

accurate to their experience. Moreover, they felt like the mechanics implemented were good metaphors for how they felt in heated situations. One thing they would like to see in future iterations is that the options they select have a larger impact on the narrative. However, they did think that the choices given are realistic responses someone with Borderline might say.

The way Luca responded to Robin was not completely accurate according to them. When Luca enters the scene the first few responses did not really show that much interest in Robin, and Luca barely greets Robin. One participant said that people without Borderline would also get annoyed at Luca's lack of greeting. Later in the scene, when Robin's emotions had escalated and swear words were aimed towards Luca, the participants felt like Luca's responses were too calm. After reflecting on these points, we fully agreed and made changes accordingly.



4. DESIGN CONCEPT: ROBIN



Figure 4.1 A screenshot from *Robin*

4.1 THE CONCEPT AND PROTOTYPE

Borderline personality disorder (BPD) is a heavily stigmatized mental illness. Studies have shown that the general public has less knowledge about BPD compared to other mental illnesses and reacts less sympathetically to individuals with BPD. Unfortunately, some stigmas are even perpetrated by mental health professionals which disrupts the recovery efforts of patients.

To help destigmatize this illness we developed *Robin*, a narrative video game in which you play as an individual with BPD. In the game, the player gets to make choices as Robin by interacting with their surroundings and with the people in their life. The story of the game spans the course of a few weeks in Robin's life. Because the player experiences the events of the game from the character's perspective, they get insight into how BPD impacts their inner world and daily life. During development, we involved people with BPD and mental health professionals.

The prototype that we built is a single scene from this game, which takes place around the middle of the game's timeline. The prototype is built in the game engine Unity. The dialogue for the game is written in Yarn Spinner, a tool which is specifically meant to write branching narratives and dialogues for games.

4.2 THE STORY

The story of the game (Figure 4.2) follows Robin, a young person with BPD. When the game starts, Robin has recently received the diagnosis "borderline personality disorder" and is still grappling with what this means for them. Regular game events consist of going

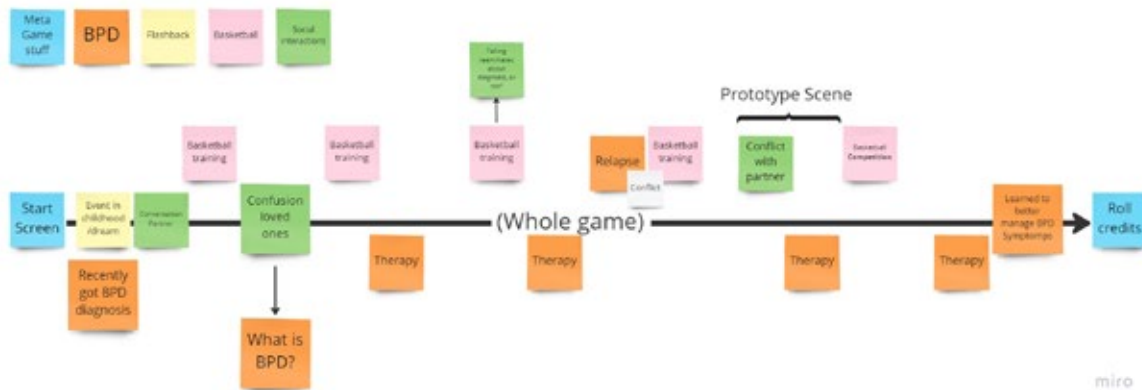


Figure 4.2 Storyboard for the game

to basketball practice, therapy, work, and talking with friends and family. At the end of the game, Robin and their basketball team play in an important basketball competition. The main conflict of the game is Robin's stress about the upcoming competition. Surrounding this, the game is about Robin's relationships with the people around them, and their journey of learning how to manage their emotions and BPD symptoms.

The scene (Appendix H) built out in the prototype, is one where Robin gets into a conflict with their partner, Luca1. The morning before the scene takes place, Robin went to basketball practice, and got angry at their teammates. The rest of the day, Robin has been trying to calm down and deal with their emotions. The scene starts when Robin smashes a picture of them together with their teammates, in a moment of anger. After Robin calms down, the player can explore objects in their house. Then Luca comes home, a small conflict causes Robin's emotions to boil over again. This leads the two to get into a fight. The scene ends with Luca leaving, and Robin feeling upset and regretful.

4.3 GAME MECHANICS

The player influences the game's narrative by making choices for the character of Robin, both in what they do and say. Although people with BPD are fully capable of and responsible for their choices, the disorder can make it difficult to react in a measured way when emotions run high [6, 30].



Figure 4.3 The game's Cluster mechanic



Figure 4.4 The game's Timer mechanic

By messing with the game's "choice" mechanisms, we aim to translate these feelings to players according to the model of Kors et al. [26]. For example, when Robin's emotions run high, a timer starts ticking (Figure 4.4), forcing players to make a choice very quickly,

without giving them time to think their decision over. When Robin feels overwhelmed, the screen suddenly fills up with thirty choices instead of three (Figure 4.3), thus overwhelming the player with possible choices to make. And early in the game, when Robin is still getting used to their diagnosis and has not learned a lot about how to manage their emotions, certain choices are simply crossed out (Figure 4.4). This reflects how you, as a player, might be aware of more “reasonable” choices, but how these are simply unavailable to Robin at that time.

4.4 WRITING AND COGNITIVE STYLE

To create understanding of BPD, we focused in the writing on recreating the cognitive style of a person with BPD. Cognitive style is defined by Tennant (as cited in [34]) as “an individual’s characteristic and consistent approach to organising and processing information”. Recreating the cognitive style of someone with BPD in the game helps players to understand where outbursts or seemingly over the top expressions of emotion come from. This cognitive style was recreated by first consulting literature and internet forums with personal stories about people’s experiences with BPD. Secondly, the writing was discussed with mental health experts and people with personal experience of BPD.

4.5 VISUAL STYLE

We chose to incorporate paper textures in the game’s visuals. During our research, we found that people with BPD tend to see the world in black and white. They also tend to have chronic feelings of emptiness and can feel a lack of personal identity. We chose to visually represent these feelings by portraying the world in our game as being made of paper, showing characters as flat representations of themselves rather than fully rounded human beings.

5. VALUE PROPOSITION

To determine the value of *Robin*, we made a value proposition. The main user groups can be seen in Table 1. As loved ones have a stronger motivation to play the game, we focused the value proposition on this user group. The game could also be a helpful tool for people who only recently got the diagnosis of BPD to understand themselves and their diagnosis better. Additionally, we hope Robin would be valuable for people with an interest in similar types of narrative games, as it could help them understand BPD better, thus creating more awareness about the disorder in general.

Figure 5.1 shows the value proposition we created for Robin. In this figure, the jobs that loved ones have are to understand BPD, through for example sessions with psychologists, and to find reassurance. People that recently got diagnosed with BPD want to recover from their mental illness.

The pains that can obstruct these jobs are that the sessions with psychologists are long and dreadful or that loved ones do not have time for these sessions. People with BPD can feel ostracised or think they are crazy which can limit their recovery efforts.

The gains that could help with these jobs are that the sessions are short and engaging and

User groups	Loved ones of people diagnosed with BPD	People who are interested in playing narrative driven games	People who recently got the diagnosis of BPD
How do they find it?	Distributed by mental health professionals during therapy, can be played online	Can be found in online video game stores such as Steam or on a website	Distributed by mental health professionals during therapy, can be played online
Motivation for use	To better understand their loved one so they can be more supportive	The enjoyment they get out of playing narrative driven games / Interest in the topic of BPD	Helps understanding themselves and the diagnosis better, and validates their experiences
Additional value	Enjoyment of the game	Better understanding of the topic of BPD and less likely to believe the stigma surrounding it	Enjoyment of the game

Table 1 *The intended user groups for Robin*

that resources for understanding BPD are easily available. Furthermore, people with BPD understanding themselves and being aware of their needs to recover can help them in their recovery efforts.

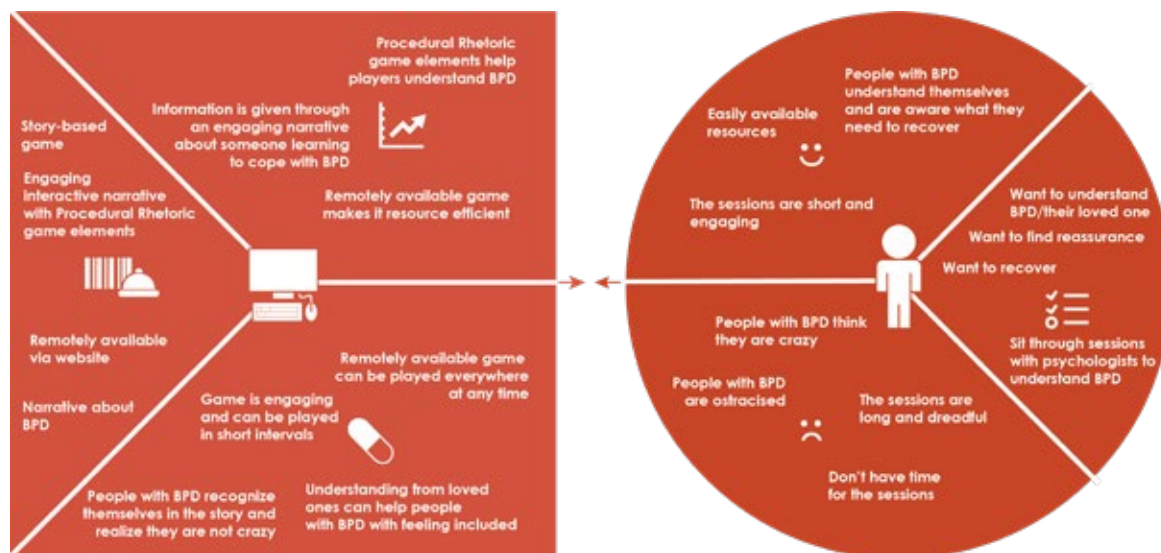


Figure 5.1 *Value proposition*

Robin is a story-based game with an engaging interactive narrative about BPD that can be played remotely in your web browser. Because the game is remotely available, people can play the game at any time and for as long as they want. The game is also engaging instead of boring sessions. Continuing, people with BPD will recognize themselves in the story and this will help realize they are not alone. Moreover, understanding from loved ones that the game enables, will help people with BPD feel included. With regards to the gain

creators, the remotely available game makes it resource efficient. The Procedural Rhetoric game elements will help players understand BPD. Lastly, the information is given through an engaging narrative about someone learning to cope with BPD, which will help people with BPD understand themselves and their needs.

6. ETHICAL CONSIDERATIONS

6.1 AVOIDING STIGMA IN THE GAME

The aim of Robin is to destigmatize BPD. By destigmatizing the illness, we hope that people with BPD feel less ostracised and that symptoms are better recognized so that they are referred to and seek fitting treatment. One of the guidelines for destigmatizing communication developed by the Dutch foundation “Samen Sterk Zonder Stigma” is to talk *with* the group of people in question, and not just *about* them [36]. Another reason why it was important to talk to people with first-hand experience, and not just people with professional expertise, is that stigmatization is unfortunately sometimes also (unknowingly) perpetuated by mental health professionals (Aviram et al., 2006). If we would have limited ourselves to consulting mental health professionals, we would have risked possibly reinforcing these stigmas with our game as well.

6.2 CONFRONTING STIGMA IN THE DESIGN PROCESS

People with BPD are considered a vulnerable target group. Initially we therefore proposed to have a mental health expert present during the interview in case the game or questions made the participant feel upset. However, after consulting the mental health experts, all three of them expressed their disapproval of this measure. They explained that the people we had invited to give feedback were perfectly capable of handling such a conversation by themselves, and that inviting a mental health professional to attend the meeting would come across as patronizing. It would reinforce the stigmatizing belief that people with (a history of) mental health problems are somehow less capable and in need of constant handholding. These responses led us to amend our interview setup.

6.3 DATA AND PRIVACY

With regards to data, we only collected data with consent of the participants. Data was stored on a password protected server. For the extra sensitive data, we took extra precautions and stored it on SURFdrive. Lastly, data access was limited to the research group, consisting of the three of us and our supervisor.



7. USER TEST

The user test was conducted to analyse the game its effect on stigmatizing beliefs with the use of the Day's Mental Illness Stigma Scale (DMISS) [11]. Additionally, the user test incorporated the Player Experience Inventory (PXI) [2] to measure the game experience of participants. Lastly, demographics and a gamer profile were gathered to compare differences between groups.

7.1 PROCEDURE

Participants were asked to fill in an online questionnaire with the game embedded in it. The questionnaire comprised a consent form, collection of demographics (e.g. age, gender), a baseline DMISS, the instructions for the game, the game "Robin", a post DMISS, PXI and questions to form a gamer profile. The gamer profile questionnaire contains questions/statements such as: "How much do you self-identify as a gamer on the following scale:" and "I have experience with similar 'narrative' games". The instructions of the game explained the backstory of the game and the controls.

7.2 PARTICIPANTS

Participants for this user test were people above the age of 18. The participants were gathered through personal contacts. At the end of the research period, 21 participants started the questionnaire, and 17 participants completed it. This means a drop-ratio of 19%. Only the participants that completed the questionnaire were considered in the analysis. The gender ratio of the participants is 6 Female, 10 Male and 1 preferred not to disclose. Most participants fell in the age group of 22-26, with 4 participants falling in older age groups.

7.3 EVALUATION

The data from the questionnaire was stored in a database and analysed using R. The data from the Day's Mental Illness Stigma Scale [11] was analysed by calculating the mean scores of participants for each of the seven factors relating to stigma. With these scores, the difference between the post and baseline measurements of the DMISS was calculated. These differences were then tested for normality distribution with the Shapiro-Wilk normality test. In the case of normality, a paired sample t-test was performed to calculate if the difference between the mean of the post and baseline measurement of a factor was significantly different from each other. If the data did not follow a normality distribution, then a paired two-samples Wilcoxon test was performed to calculate if the difference between the median of the post and baseline measurement of a factor was significantly different from each other.

The data from the Player Experience Inventory [2] was first rescaled to the proposed scale by Abeele et al. [2] of -3 to +3. After rescaling, the mean score of each participant per construct was calculated. A boxplot of these scores was made per construct and additional boxplots were made that separated the data based on gender and age.

7.4 RESULTS

Day's Mental Illness Stigma Scale

From the boxplots, it was noticed that most of the factors stayed relatively the same after playing the game. However, the factor of Visibility saw a relative great increase (see Figure 7.1) with a difference in the mean of 0.77. As the Shapiro-Wilk normality test for

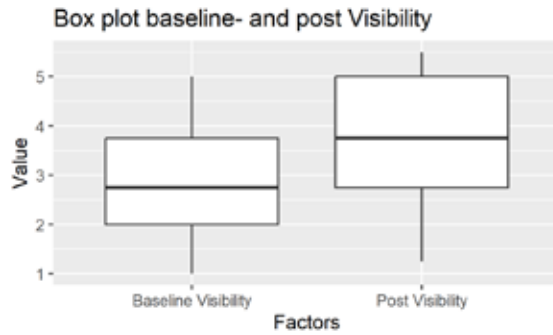


Figure 7.1 Visibility boxplot

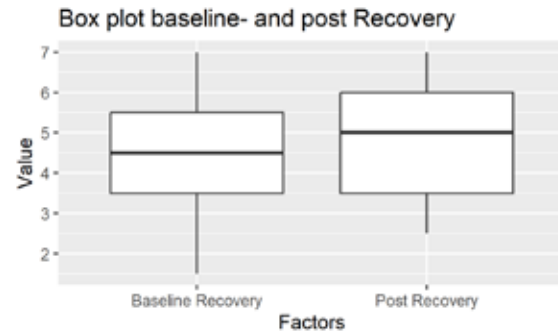


Figure 7.2 Recovery boxplot

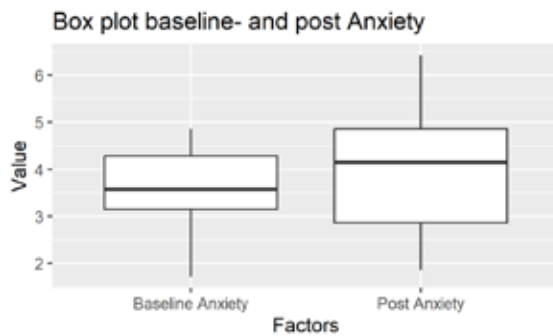


Figure 7.3 Anxiety boxplot

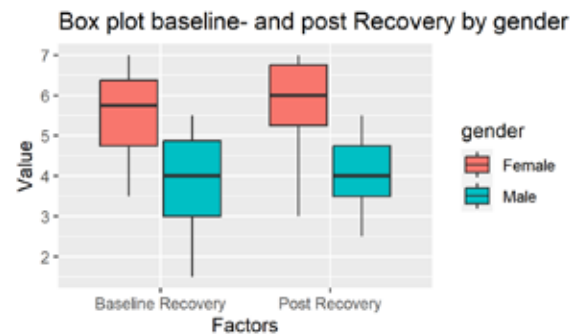


Figure 7.4 Recovery boxplot gender

this factor did not allow us to assume normality, a two-sided paired sample Wilcoxon test was performed to compare the median of the Visibility before playing the game and Visibility after playing the game. The test indicated that the median of Visibility scores after playing the game (Mdn = 3.75) was significantly different than the Visibility scores before playing the game (Mdn = 2.75) $Z = 5.5$, $p < 0.05$. This provides evidence that the game improved the ability of players to recognize if a person has BPD. Another factor that saw an increase after playing the game was Recovery with a difference in the mean of 0.22. A one-sided paired sample Wilcoxon test indicated that the median of Recovery scores after playing the game (Mdn = 5) was significantly higher than the median of Recovery scores before playing the game (Mdn = 4.5) $Z = 13.5$, $p < 0.1$. Although with a bit less confidence than the Visibility score, we can assume that the game improved the player their belief that people with BPD can recover from their illness. The last factor that saw interesting improvement was Anxiety. This factor saw a difference of the mean of 0.37. For this factor

Factor	Baseline Mean	Baseline SD	Post Mean	Post SD
Treatability	4.59	1.1	4.65	1.18
Relationship Disruption	4.10	1.05	4.34	1.18
Hygiene	3.03	1.07	2.93	1.21
Anxiety	3.50	0.95	3.87	1.39
Visibility	2.94	1.28	3.71	1.29
Recovery	4.50	1.48	4.71	1.40
Professional Efficacy	4.85	1.11	4.76	1.35

Table 2 Means and standard deviation Day's Mental Illness Stigma Scale

the Shapiro-Wilk normality test allowed us to assume normality and therefore a two-sided paired sample t-test was performed. With a significance level of 0.1, the test indicated that the mean Anxiety score before playing the game ($M = 3.50$, $SD = 0.95$) was significantly different from the mean Anxiety score after playing the game ($M = 3.87$, $SD = 1.39$); $t(16) = -1.847$, $p = 0.083$. Although not our aim, this gives reason to assume that the game increases anxiety and nervousness for people with BPD. Next to these differences per factor, another interesting remark was found. There was quite some difference in response from males and females. In general, it seemed that males responded more negatively about BPD on the Day's Mental Illness Stigma Scale than females did. An example of this can be seen in Figure 7.4, where males were less likely to believe that people with BPD can recover.

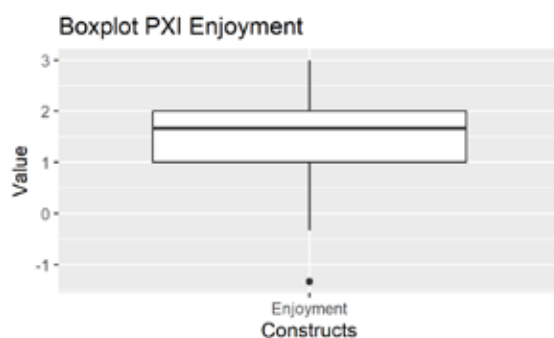


Figure 7.5 *Enjoyment boxplot*

Player Experience Inventory

The PXI was explored through boxplots and summary statistics (see Figure X and Table X). A first remark from the PXI is that a clear majority enjoyed playing Robin ($M = 1.35$, $SD = 1.13$). From the functional consequences we can see that Ease of control ($M = 2.16$, $SD = 0.97$), Audiovisual appeal ($M = 1.80$, $SD = 0.84$) and Clarity of goals ($M = 1.10$, $SD = 1.26$) are fairly present in the game. The

Challenge ($M = 0.55$, $SD = 1.45$) and Progress feedback ($M = -0.47$, $SD = 1.33$) could however be improved. When making the game our focus laid more on the narrative but improving in these constructs could create a better overall game experience. As for the psychosocial consequences, it seems that Curiosity ($M = 1.78$, $SD = 0.74$) and Meaning ($M = 1.53$, $SD = 0.98$) are experienced when playing the game. However, Autonomy ($M = 0.35$, $SD = 1.15$), Immersion ($M = 0.65$, $SD = 1.00$) and Mastery ($M = 0.53$, $SD = 1.18$) are experienced in limited amounts.

Construct	Mean	SD
Meaning	1.53	0.98
Curiosity	1.78	0.74
Mastery	0.53	1.18
Autonomy	0.35	1.15
Immersion	0.65	1.00
Progress Feedback	-0.47	1.33
Audio-visual Appeal	1.80	0.84
Challenge	0.55	1.45
Ease of Control	2.16	0.97
Clarity of Goals	1.10	1.26
Enjoyment	1.35	1.13

Table 3 *Means and standard deviation Player Experience Inventory*

8. DISCUSSION

8.1 USER TEST INSIGHTS

From the results of the user test, promising results for visibility and recovery parts of stigma were found. Sheehan et al. [37] mention that limited knowledge about personality disorders is related to stigma and can cause people with a personality disorder to feel shunned rather than advised to find treatment. Players learning to recognize symptoms and being aware that people with BPD can recover from playing Robin is a step in the right direction to break down the stigma surrounding BPD.

On the other hand, we saw that anxiety for people with BPD increased as well. This is a counterproductive effect from the goal of Robin that hopes to break down stigma. The illness expresses quite violently, and this is also displayed in the game which could explain the increase in anxiety. We think it is important that people see the real nature of the illness in the game to help recognize the seriousness and symptoms of the illness. However, in the full version of the game we hope to bring more nuance to these fierce outrages by showing the trajectory of the main person recovering from BPD. Hopefully, this will create a view that shows that a person with BPD is nothing to be afraid of and bring the anxiety score down after playing the game

Lastly, from the user test it was found that the game lacked immersion for the players. As [26] note that: “*Persuasive messages embedded in gameplay are only as good as to what level the game is actually played*”, it is important that players feel immersed in the game to be influenced by the persuasive message. The reason this is lacking at the moment could be because players reported little autonomy and challenge. In the paper of Ryan, Rigby & Przybylski [35], they argue the motivational pull of videogames with the Self-Determination Theory. The missing game experiences from the user test fall under two of the three elements from this theory, namely Autonomy and Competence. By increasing these elements in the game, players would feel more motivated to play the game and therefore increase the chance of getting immersed. The increase in immersion would in turn contribute to the power of the persuasive messages in *Robin*.

8.2 FUTURE STEPS

During the development of our game prototype, we had to make concessions in order to have a playable demo finished on time. This section discusses game elements we would add if the project were to be continued, as well as other recommendations for the potential continuation of the project.

Larger narrative

As described in the design concept section of this report, the current demo shows only a short scene out of a larger narrative. Although a shorter scene works well to quickly demonstrate the game, it lacks the space that is needed to represent the reality of living with BPD with enough nuance and detail. One important example of this is the way a person with BPD can recover through therapy. This is a process that takes time and effort, and a longer narrative would be more suited to illustrate this.

Impact of choices

In the current prototype, players' choices do not influence the narrative of the story. This was a deliberate choice on our part, not only because it saved us a lot of time during development but also because it ensured that all players would play through the same story beats, keeping their experience consistent. However, this diminishes the replay value of the prototype and makes the game less responsive to the player's choices. For the choices to feel meaningful and engaging to players, they should have a larger impact on the narrative in future versions of the game.

Additional game mechanics

During the demo day and user testing, a much-heard sentiment was that the game entails "too much reading" and that it needs to be more interactive. Therefore, a future iteration of the game should include additional game mechanics.

One game mechanic we already discussed in the interviews earlier in our process incorporates a twist on a familiar game mechanic we describe as "relationship scores". Many video games offer the player a visual overview of their relationship status with nonplayer characters. Although it is an artificial way to represent human relationships, it does mirror how people generally have a feeling for their standing with another person. For people with BPD, it can be difficult to gauge how other people perceive them, and they tend to perceive other people's attitude to them as quite negative. In the game *Robin* there would be a screen where players see a visual representation of Robin's relationship "scores" with the other people around them. However, these dramatically fluctuate or even "glitch" when Robin interacts with another character, leading the player to doubt whether they can trust the relationship score, and question their status with the other characters.

9. CONCLUSION

As argued in this report, it is essential to destigmatize borderline personality disorder. During this project, we have worked with both mental health professionals as well as people previously diagnosed with BPD to develop a concept for a video game that does just that. The outcome of the project is a playable demo version of this game, which illustrates some of the core aspects of the concept. Some of these aspects are an engaging narrative combined with game mechanics that provoke the player's emotions in a way similar to what someone with Borderline might experience in the portrayed context. The main takeaways for its users should be a better understanding of BPD which then leads to more empathy towards people with BPD, and ultimately a decrease in the stigma surrounding BPD. Additionally it is essential that people know that you can learn to deal with Borderline with the right support.

People who have experienced BPD can recognize themselves in the game's main character and see it as a great effort towards destigmatization. Testing the game with potential users showed that there is promise that it has actual destigmatizing effect. However, 'Robin' also increased people's anxiety towards people with BPD which may be attributed to violent expression of the illness in the demonstrator. Further work needs to be done to expand the length of the playable game so it more extensively presents the recovery process and more nuance behind the emotions.

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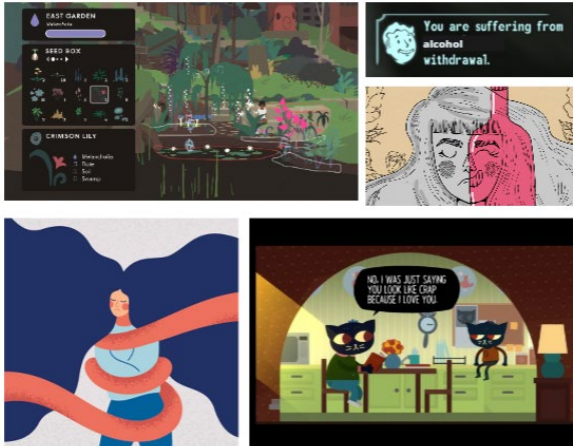
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Appendix A –Ideation session 1

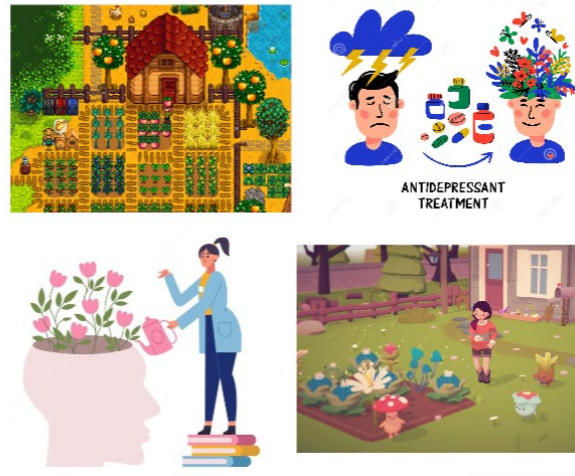
1

A story based game (Night in the Woods, Mutazione) where the protagonist suffers from addiction. "Daily" gameplay is about living your life (going to job/school?), talking to other characters, running errands. The story builds up to a larger event (maybe you are trying to throw a party or something, or you are helping someone to throw a party?) which you are preparing for. The regular things that make a game enjoyable (gameplay, interesting dialogue, fun quests, plot development, etc) keep being distracted from/interrupted by thoughts about your addiction, or even physical manifestations of it. The end of the game/story is not necessarily about "beating" your addiction, but finding ways to manage it and cope with it.



2

A "cute" farming simulator (Harvest moon, Stardew valley, Ooblets) where the protagonist suffers from depression. You must manage your depression by investing time/resources/effort into it, while balancing this with the other activities the game requires of you, such as taking care of your farm, befriending villagers, and exploring forests/caves. There is no "perfect" way to play it; some elements of your in-game life will be less put together than others. The idea is to find a balance that works for you, which makes the game fun for you. (yes it's all very vague I know, it's more clear in my head ok)



3

A pen and paper game (The Deep Forest, Ten candles) about the kinds of conversations you have when you have a certain mental health issue (like trying to hide it, pretending you are ok, entrusting someone with your secret, etc).

A pen and paper game about roleplaying characters with different personality disorders???
(not done with this one)

1

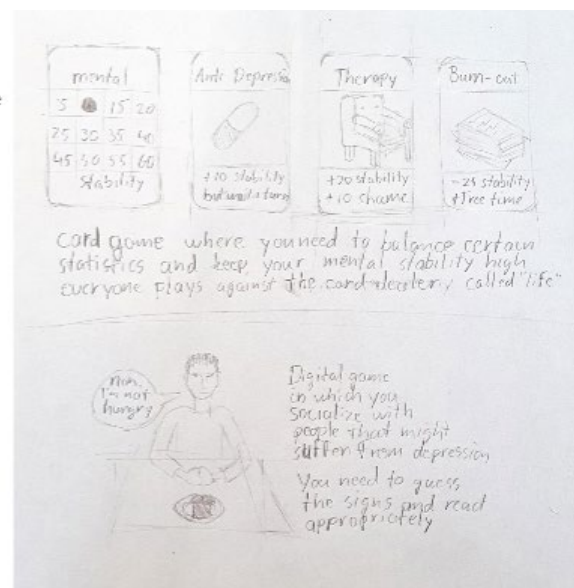
Card game where you need to balance certain statistics that further influence your abilities. The end goal is to keep mental stability high and everyone plays against the dealer called "life".

2

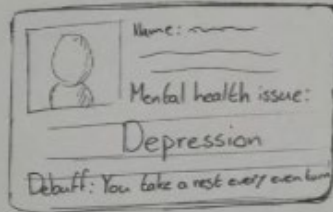
Digital game in which you socialize with characters. These people might suffer from depression or other mental health issues. You can guess whether or not they suffer from these illnesses and act accordingly.

3

Digital game in which you need to do simple mundane tasks like getting out of bed. However, it takes way too much effort to perform these tasks. E.g. you need to do 15 button combos just to actually set one leg out of bed.

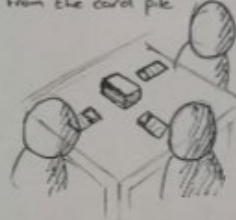


Character that has a mental health issue



The game is centered around managing school life

Each round the whole 'class' gets tasks, this could be homework, activities, etc. These are drawn from the card pile

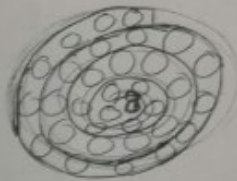


The players have action points to clear the tasks and should try to clear their deck

There are also buff cards that can help you such as therapy sessions, they can give you extra action points



Co-op ~~game~~ to work through a depressive spiral



Maybe the players each have a different role and cards to help beat the game

Play cards to help you get out of the spiral, but the game will pull you back in.



The spiky ball represents anxiety and you have to smoothen the curve.

One player plays as the anxiety against the rest. Take turns in playing cards that can help with anxiety and things that make anxiety come back. The players playing against anxiety can slowly build a resistance to the attacks of anxiety and slowly become better.

Appendix B – Ideation session 2



10 concepts for stories for Games & Play (Eis)

I think it's a good idea to focus on a story (or multiple stories) for our game. This way we can put the focus on the person, not just on their mental health issue. I think we should aim to create understanding and empathy for them, without excusing the bad things they did/do, and with enough room for nuanced interpretations of their actions and character.

Borderline: 1-2% of population (<https://www.pamassiaagroep.nl/uw-probleem/persoonlijkheidsstoornis/borderline-persoonlijkheidsstoornis>)
Bipolar: approx. 2% of population (<https://www.kenniscentrumbipolairstoornissen.nl/bipolaire-stoornis/artikelen/de-bipolaire-stoornis-een-beknopt-overzicht/>)
Schizotypal Personality disorder: 0,1-3% of population (<https://www.deviersonprong.nl/de-schizotypische-persoonlijkheidsstoornis/detais/>)

1. Mees' childhood friend is getting married and has asked him to be one of his groomsmen. During the weeks (??) leading up to the wedding, Mees stays with his parents in his hometown to be closer to the wedding and help with the preparations. Mees has Borderline Personality Disorder (BPD), which he is in therapy for. He has only recently been diagnosed, and while being back in his hometown helps him reconnect to his family and childhood friends, it also confronts him with people's perceptions of him, and both painful and pleasant memories from his childhood and teenage years. Mees spends the time leading up to the wedding (re)connecting with people, running errands and helping with preparations, and reflecting on himself, his disorder, and his growth. The wedding is the end of the story/game.

2. Nes is a witch-apprentice who is learning how to make potions. She spends her days roaming the forest to collect ingredients, making potions, and working in the potion-shop at which she is an apprentice. Nes has Bipolar Disorder, which is undiagnosed when she starts her apprenticeship, although she knows "something is up". Through conversations with the witch who trains her and a few villagers who become trusted friends, Nes learns about her disorder and how to cope with it.

3. On their travels, an unnamed protagonist finds a lonely house on top of a tall hill in the middle of a deserted tundra. In the house lives Kas, who at first tries to turn away the traveler but reluctantly lets them stay when he realizes their food provisions are depleted. Kas seems terse, but quickly turns out to be charismatic and friendly as he and the protagonist speak further. During their first conversations, Kas explains that he isolated himself in this house because his mood influences the weather, and he wanted to protect those around him from this power. He finds it difficult to control his emotions, and when he would get upset, angry, sad, or afraid, the weather often damaged the village he lived in, or even hurt the ones he loved. The traveler stays for a few days, during which they help Kas with chores around the house, and get to know him better. It is never explicitly stated, but Kas has BPD. Conversations with the protagonist take the form of therapy in a certain way, which not only helps Kas regulate/control his emotions better, but also helps him realize that it was not just the weather hurting his loved ones, it was his actions as well.

4. It's a day in the life of Jip, who has BPD. Jip goes to their job, to school, to therapy, and spends time with friends and family. The day is repeated (not in a "time loop" way, the people in the story don't experience it as a repeat) but every time Jip has more options in how they think, act, and speak, because of what they have learned in therapy.

5. Big (but generally friendly) monsters (think "where the wild things are") live on this island. You are here to do an ethnographical study of their culture. You spend time with the monsters, who tell you why they decided to become a monster, and why they left the mainland to live on this island. There is a monster who was excluded from their social circles after coming out, there is a monster who was rejected by their community after serving time in jail, there is a monster who had to leave their home when they decided to have an abortion; they all have a reason why they left the main land behind and came here. They have found a place with less judgement here, and with more understanding, they have made a community. (They talk about the stigma of being called "monsters"? Or maybe that is too obvious) One of the main characters you meet in the beginning with has Schizotypal Personality Disorder (SPD), although this is not explicitly mentioned at first. They come across quite odd, and it takes a long time for them to trust you enough to talk about them. They have only close relations to 1 or maybe 2 other characters on the island. Throughout the story, you get to know them better, and hear why they left to live on the island, and what life on the main land was like for them.

6. Maud has SPD and is going to bake a cake for her younger brother's birthday. She goes out to the supermarket to get ingredients. On the way there she experiences the trees as having personalities, she feels like the weather is sending her signals, and is worried the people around her can tell what is going on inside her head, or are judging the way she looks. When she gets back, she bakes the cake. Later that day, she speaks with her family, but finds it difficult to connect to them.

7. Fenne has BPD and is in a mental health care facility, after a psychotic episode she herself doesn't quite remember. She has conversations with other patients, with psychiatrists and staff, and with her brother when he visits. She still has trouble being sure of what is real, and is not doing well. Throughout the story, she becomes better equipped to deal with her symptoms, and learns what happens during the psychotic episode. Also the mental health care facility is in the future, and it's all in solar-punk style because of the vibes.

8. A group of friends descend into an old mine or cave system together (or climb a mountain?), in search of treasure, or monsters, or simple adventure. During their descent and exploration, they speak about their history together and low moments in their lives. The different choices they must make about which paths/routes to take, reveal something about their priorities, the way they think about life, and the way they make choices. One or more of the friends have a personality disorder, which influences the way they interact with the others, and the way they approach their shared adventure.

9. A group of characters have something traumatic happen in their youth. They learn coping mechanisms; some healthy, some unhealthy. As they grow up, their coping mechanisms influence their life. They may unlearn or learn coping mechanisms. The characters' whole life is played through, in a similar way to The Deep Forest/A Silent Year.

10. Five years ago, you lost contact with one of your friends after they badly hurt you. Recently, they have reached out to you in an attempt to make amends. The other people in your friend group seem to be cautiously letting them back into their lives. The next few weeks you come to terms with what happened, have conversations with different people in your friend group about what happened and about your (ex)friend, and slowly get to know your (ex)friend again.



Idea #1

- A story about the relation between a BPD patient and a clinician
- The clinician gets irritated by the patient and sees him/her as the problem
- See the story from both perspectives

Idea #2

- A story focussing on the consequences of stigmatization / misunderstanding
- Experiencing loneliness and rejection
- Blaming the person, not the illness

Idea #5

- Game where you play a character with BPD
- You have to build up relations, but you hear your character think aloud
- You may find your character unreasonable

Idea #6

- A DnD style game about psychosis
- You work together with your teammates, but one of them secretly plays as the voices in your head and tries to turn you against your team

Idea #9

- A game similar to the Sims that lets you either manage people with personality disorders or lets you play as them
- You experience the difficulty in mundane tasks

Idea #10

- A game where you need to solve a mystery and work together with a partner
- Clues seem to start disappearing
- Your partner seems to know things you don't
- In the end you seem to have dementia

Idea #3

- A somewhat overexaggerated version of bipolar disorder
- The character could keep switching between moods quite quickly
- Experiencing the both day twice while feeling different both times
- Could resemble ground hog day



Idea #4

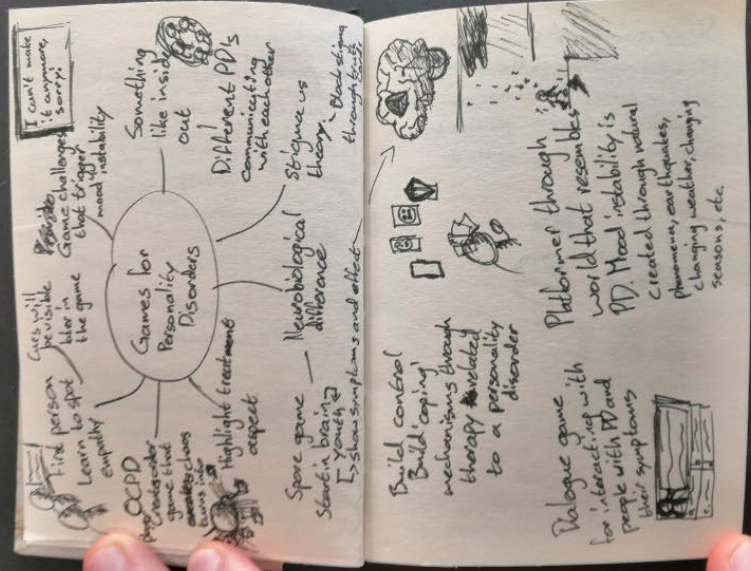
- Card game where you need to get a high score
- This score is a social score
- You play as someone with BPD
- Certain event cards may be hard for you to deal with → less score
- You can play counter cards

Idea #7

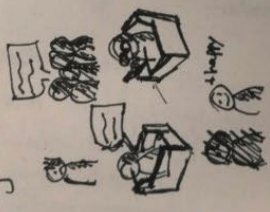
- A game about social anxiety
- Your character needs to escape a prison/dungeon
- These scary creatures walk around the prison
- Your character secretly feels himself safe in the prison, but knows he should escape
- You should seek help from the creatures to escape

Idea #8

- Game about PTSD
- First you play through a situation that gave you the PTSD
- Then you suddenly return to daily life when something triggers it



Story game of someone with PD who experiences the public stigma. See the effect it has before finding out what it is and through therapy learning how to live with it.



Game to learn to spot empathy. In dialogues some hints of empathy are blurred/left out. So, it's hard to gauge someone's feelings which leads to unpleasant situations. Over time, you learn to pick up on these cues and be able to make better decisions in the game.

Build control of PD (similar structure as Catan)
You start with characteristics of different PD's and your goal is to build control over them. Gather resources in therapy to build control over your symptoms and reduce the deficits you get from them. Learn to control all your symptoms in order to win.

Appendix C – Storyboard Bea



Appendix D – Character profiles

Characters

Short description of the character, the stigma they carry/represent

Main Character		<p>Bea (26) has BPD. She likes knitting, kickboxing, and building model airplanes. She works as a pet groomer at a large pet supply store.</p> <p>Bea often feels incapable, and guilty about her BPD symptoms. It took her a long time to accept therapy. She has been in therapy for around a year.</p>
Partner		<p>Jonas (25) is in a relationship with Bea. He knows about her BPD, but still has a lot of stigma about the disorder and the way it affects his partner. They have been together for half a year and moved in together a month ago.</p> <p>He works as a hairdresser at a salon in the nearby city.</p>
Mom		<p>Anna (57) is Bea's mom. She loves her daughter, but sometimes feels at a loss about how to approach her and communicate with her. She is glad that Bea has started therapy, and tries to be supportive however she can.</p> <p>Anna runs a knitting and craft supplies shop, where she also gives workshops. She taught Bea how to knit.</p>
Psychologist		<p>Dr. Phyllis (49) is Bea's psychologist. She is a kind and gentle woman that has been Bea's therapist for a year now. She has helped Bea tremendously with their sessions and Bea is in a much better place now than she was before they met. Session can still be difficult but she is patient enough to gain a shared understanding and help her navigate through life more easily.</p>
Colleague 1		<p>Peggy (28). She works as a veterinarian at the same place as Bea and she hates her. She thinks she is crazy and its her fault she can't control herself. She generally behaves professionally but cold towards Bea, although she sometimes is a bit snappy or rude.</p> <p>Peggy loves animals and is generally an outgoing and friendly person. The reason Peggy dislikes Bea is because of rumors Bea has spread about her. Peggy is not aware that Bea has BPD.</p>
Colleague 2		<p>Gerard (37). He works as a veterinarian at the same place as Bea and he hates her. He thinks she is mental and its her fault she can't control herself. He likes to tease Bea to get her bad side out. He believes that Bea herself made life choices that resulted in her being impulsive and that she find it difficult to control herself. She is to blame for it, she should just act normal. He is unaware that Bea has BPD.</p> <p>Gerard is an animal lover, he has 2 dogs at home. He is captivating and is always in for a small talk. He cheats on his wife with co-workers from the veterinary.</p>

Appendix E – Prototype Bea game

www.jitzeorij.nl/Bea

Appendix F – Interview questions experts

Expert name

Function

1. Introductie ronde, vertellen over game verhaal en personage van Bea
2. Introductie ronde, wat is precies haar expertise?
3. Wat zijn veel voorkomende problemen die mensen met BPS ervaren?
4. Zijn er bepaalde verhalen die hij kan vertellen die heel typisch zijn voor BPS?
5. Anecdotes of voorbeelden die hij gebruikt om het uit te leggen aan mensen die er misschien nog niet echt begrip voor hebben?
6. Wat zijn de meest voorkomende stigmas?
7. Wat begrijpen mensen niet aan BPS?
8. Wat zijn initiatieven die nu al worden gebruikt tegen stigmas?

Spel Laten Zien

9. Wat zijn de eerste opmerkingen na het zien van de game?
10. Wat vindt u van de volgende ideeën voor game-mechanics? Zijn dit goede metaforen voor hoe het is om te leven met BPS? zijn deze ideeën juist stigmatiserend?
11. Waar zouden we vooral op moeten letten met het maken van onze game?
12. We willen graag feedback van mensen met BPS. Hoe kunnen we dat het beste aanpakken zodat het niet vervelend/overweldigend is voor mensen?
13. Zou u ons door kunnen linken naar mensen met BPS?

Appendix G – Questions interview BPD

Interview people with BPD

Introduction, talk about story and context

Let the participant play the game if not played beforehand

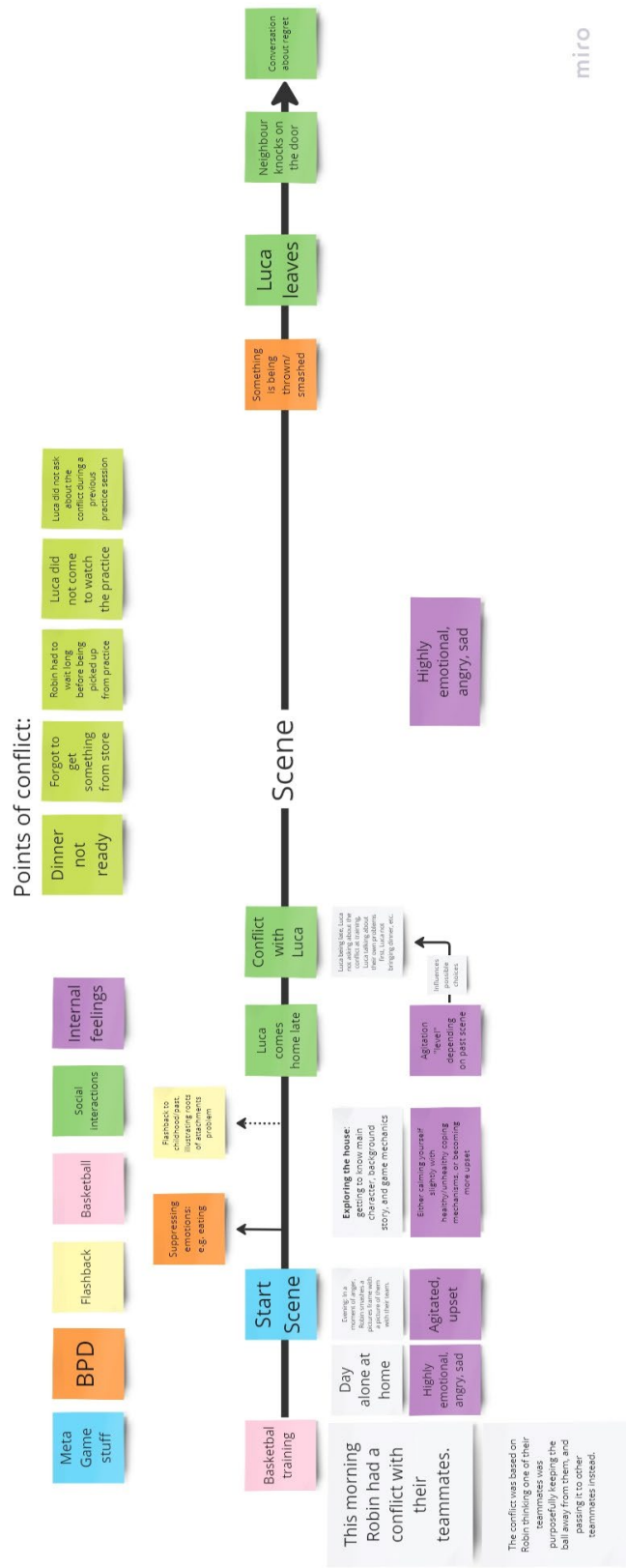
1. First impressions?
2. Was the scene recognizable? In what ways?
3. To which degree were the emotions and thought of the main character recognizable?
In what ways?
4. Was the way the main character presented realistic or stigmatizing? Where there specific aspects that felt wrong/stigmatizing? Which?
5. Which aspects from your own experience with BPD did you miss in this game? (Things that you must explain often)
6. What problems did you encounter while playing the game?
7. What did you think of the partner? Were the responses from the partner comparable to those of your loved ones? In which way (not)?
8. Was the pace at which the conflict formed OK/realistic?

Take participants through the mechanics

9. What would other metaphors be for your experience? How do you like to explain it yourself?
10. Other remarks?

Thank the participant

Appendix H – Storyboard demo



Appendix I – Data analysis final user test

[Appendix I - Data analysis final user test](#)

Appendix J – Game prototype Robin

<http://www.jitzeorij.nl/Robin/>