Implementing Music Therapy in a Multiplayer Virtual Reality Environment

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Abstract

In this thesis the possibility of implementing music therapy in a virtual reality (VR) environment was explored. In recent years research in music therapy and research in VR applications have been a point of interest. There has also been interest in therapy in VR, although music therapy specifically in VR has not had much research to date.

A literature review, focusing on the application of music therapy to anxiety and depression, dementia and autism, showed that music therapy can have positive effects. At the same time, it highlighted that there are still many unknowns and areas requiring further research.

To get a better understanding of the practical aspects of music therapy, interviews with music therapists were held. The insights and experiences shared by these experts showed that sessions are highly dependent on the individual client and must be tailored to the needs of the individual client. In combination with the wide range of activities, from playing instruments, singing and analysing music, these interviews showed that music therapy comes in many different shapes and forms.

With the insights from the interviews and the literature review, a prototype for music therapy in a VR setting was developed and user tested, both with a music therapist and proxy users. The results from the user testing confirmed that the prototype is functioning well for a single user, in line with the design requirements and allows the deployment of techniques used in music therapy in a VR setting. The user testing also provided valuable insights for improvements and further research and development. The multiplayer option requires additional work, which could be the subject of future research.

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Chapter 1: Introduction

Over the past few decades, an increasing amount of research and evidence for music therapy as a clinical practice [1] could be observed. Activities in a clinical setting include, playing music, both structured and improvised, singing, and other activities related to music, such as analysing and discussing songs of interest to the client [1]. The field of music therapy is interesting and promising as music engages the brain in emotion, cognition, and motor functions, meaning it can aid in a variety of different areas if applied correctly [1]. Therapy in the virtual reality (VR) setting has also gained traction over the past few years. The combination of these two disciplines – music therapy and virtual reality - may prove to be a useful tool for therapists.

This thesis investigates the implementation of music therapy in the VR environment. The prototype developed in this research could -with additional research - evolve into an additional tool in the tool kit of music therapists, which they can apply if considered suitable for the client and the situation. It is not meant as a replacement for face-to-face therapy sessions. This leads to the main research question of this paper.

Research Question:
How can music therapy be implemented in a multiplayer VR environment?

Additionally, this can lead to the development of a music therapy tool that can interact or be beneficial for other types of therapy, such as psychomotor or art. This could broaden the range of applications, which leads to the sub research question.

Sub Research Question:
How can music therapy be made to interact with other types of therapy, specifically psychomotor and art?

Chapter 2: Related Work

To start the process of ideating and prototyping an idea, background research must be performed to get a better base understanding of the problem at hand and draw inspiration from existing products and research in the same realm. This chapter consists of two parts, the first being a literature review of music therapy, exploring what it is and what it has been applied to. The second part focuses on existing products which implement music therapy in a VR environment and products used for music therapy.

2.1 Literature Review

The goal of this literature research is to examine the applications of music therapy and its success. This literature research will be split into two sections, the first being an explanation of what music therapy is, whereas the second part will look at real applications music therapy has had, specifically on anxiety and depression, dementia and autism.

2.1.1 Definition of music therapy

In order to investigate applications of music therapy, first the definition must be discussed. Although music therapy can be dated back to early attempts in around 1820 [2], the general public has little awareness of music therapy and its applications. Shiquin and Sondhiratna define music therapy as "music therapy is a therapeutic intervention that utilizes music, rhythm, sound, and melody to address various physical, emotional, cognitive, social, and psychological needs" [2, p.200]. They also go on to explain that these interventions can include playing, composing, dancing to and discussing music [2]. Another definition, written by de Witte et al., states that "music therapy is characterized by using the specific qualities of music in a therapeutic relationship with a music therapist" [3, p.135].

Although these are two different definitions of music therapy, they compliment each other. De Witte et al.'s definition is more generic, e.g. by stating "specific qualities of music" rather than listing the qualities. This definition also does not provide details of symptoms or needs it can address. However, it is very explicit and clear that music therapy needs to be carried out by a licensed music therapist [3]. The first definition on the other hand is very specific about the qualities of music that are used and what they are used for. As both definitions do not contradict each other, but only focus on different aspects, they can be combined to a more comprehensive definition: Music therapy uses musical qualities such as playing, composing, discussing and analysing, to address emotional, cognitive, social and psychological needs, with its application being led by a licensed music therapist.

2.1.2 Music Therapy Applied to Anxiety and Depression

The application of music therapy on anxiety and depression has been researched extensively. In a systematic review by Ibiapina et al., eight studies analysed the effect of music therapy on anxiety and depression [4]. Overall these studies showed that music

therapy had a positive effect, with outcomes such as a physically and mentally relaxed state, less symptoms of anxiety and depression and a higher rate of well being [4]. It was also observed that adult hospitalised patients had a higher retention to music therapy, meaning the music therapy had a greater impact on these patients [4]. One could hypothesise that hospitalised patients generally do not have as much opportunity to participate in activities which help their mental health. These results suggest that music therapy could be a promising way to combat anxiety and depression.

Although anxiety can be a generalised mental disorder, it can also be the product of an upcoming event. For example, many people get a heightened sense of anxiety when they need to undergo surgery: In a study by Sorribes et al., the effect of music therapy for patients undergoing the removal of third molars was observed [5]. Alongside this, a study by Liang et al. similaraly looked at the effect of music therapy on patients experiencing anxiety and stress due to a surgery [6]. In both of these experiments, the goal was to use music therapy to decrease anxiety for patients with an upcoming procedure as higher levels of anxiety can lead to increased sensations of pain [5]. In both studies, the results concluded that the intervention with music therapy aided in reducing anxiety in patients. However, earlier experiments did not deliver the desired results or the outcomes were not statistically significant [5]. In addition, Liang et al., highlighted that music therapy is still in its infancy stage and in certain areas relatively unknown, resulting in limited use in these areas [6]. If further studies deliver encouraging results in different areas, music therapy could become a more common intervention for patients.

2.1.3 Music Therapy Applied to Dementia

The application of music therapy may aid in easing the symptoms of dementia. Lam et al. analysed trials which consisted of different types of music therapy, namely singing, listening to music, playing instruments, song writing, lyric reading or a combination of these activities [7]. The results suggested that music therapy improved the patients language ability, and eased behavioral and psychological symptoms of dementia (BPSD) such as anxiety and depression and apathy [7]. According to a paper by Aleixo et al., these and other symptoms such as sleep disturbances, delusions and hallucinations, are experienced by 80-90% of people throughout their time with dementia [8]. However, Lam et al. also concluded that music therapy did not help to improve "memory, daily function, or overall quality of life" [11, p.9]. Due to the variety of outcomes from different clinical trials, more research is needed to further explore the benefits of music therapy for people with dementia.

Another activity which can lessen the symptoms of dementia is group participation. Sole et al. state that music therapy and group participation was combined for people with varying stages of dementia and its impact on the quality of life was studied [9]. It has been shown that symptoms like anxiety, depression and paranioa can be more severe, if patients with dementia do not join in activities with other people for an extended amount of time [9], while the opposite can be said for people with dementia participating in activities. Whilst positive outcomes were observed, the results of this study implied that the decrease in Quality-of-Life scores was not statistically significant [9]. Amongst the positive outcomes are an improvement in emotional well-being and high levels of participation throughout the whole

experiment. These positive outcomes could be due to a perceived sense of accomplishment, during and after the group music therapy. Since dementia cannot be treated, it is important to consider any method which can make the people affected more comfortable. Music therapy, despite mixed results to date, has shown strong evidence of a positive impact on patients.

2.1.4 Music Therapy Applied to Autism

Music therapy may be a very promising intervention for people with autism. A systematic review, by Marquez-Garcia et al., stated that improvisational music therapy for children with Autism Spectrum Disorder (ASD) was frequently researched. In this type of music therapy, the child and the therapist play instruments together, specifically focusing on things like rhythms, melody patterns and the quality of sound they are producing [10]. Some of the positive impacts of this therapy included a higher rate of attention, more social engagement, and an increased amount of joy and mutual understanding of emotions between the child and the therapist [10]. Additionally, lower levels of stress and anxiety, higher levels of self-esteem and positive attitudes to other people, and improvments in social communication skills, both verbal and non-verbal [10] were observed. With additional research, these outcomes could potentially be used to help patients with autism to improve their communication skills.

      While the outcomes described above are encouraging and positive, there are also studies that did not deliver statistically significant results. More research is needed to gain a better understanding. In addition, a literature review by Geretsegger et al., conclude that poor methodology, for example small sample size or poor design of the experiment itself, led to ambiguous outcomes [11]. In several experiments the interaction between methodological variables like frequency of therapy, abilities of the therapist and severity of the symptoms of the patient [14] were not taken into account. If these issues are considered in future experiments, more conclusive answers can be forged.

2.2 State of the Art

This section looks at existing products, which are developing therapy approaches in the VR environment and existing products, which can fit into classic music therapy.

2.2.1 The Lectorship in Arts Therapies and Psychomotor Therapy in Healthcare Hogeschool Arnhem Nijmegen and PWXR

The Lectorship in Arts Therapies and Psychomotor Therapy in Healthcare Hogeschool Arnhem Nijmegen has developed a VR therapy environment. The development of the environment was outsourced to a company called PWXR who created it in Unity. The environment consists of different tools and activities, which can be used by the therapists to deliver a meaningful experience for the client. These activities include areas to draw with markers and spray paint, areas for more physical activities like basketball hoops and a volleyball court to play sports virtually and areas for more mindful exercises such as meditation with music. According to their website, their

objective is to "make occupational therapists more skilled in the application of digital resources" [12].

2.2.2 XR Health

XR Health is a company which prides itself on combining "the power of AI and Extended Reality (VR/MR) to offer cutting-edge solutions for healthcare professionals and patients, transforming the delivery and experience of therapy" [13]. This company focuses on helping the therapists deliver a meaningful solution and giving the clients a meaningful, worthwhile experience. Therapists are offered a range of VR tools which focus on a variety of aspects like mental health, anxiety and depression. It is possible to create cognitive exercises which help to improve problem solving skills and memory [13]. It even has applications for physical therapy allowing clients to work on their mobility, strength and recovery [13].

2.2.2.1 Applications of Mental Health Therapy in Virtual Reality

An example of a mental health application is diaphragmatic breathing. This includes a relaxing environment, where the client will get visual and auditory cues to learn and practice diaphragmatic breathing [14]. They also offer several stereoscopic videos located in different environments with different exercises [14]. Another aspect for mental health is the inclusion of more educational experiences for the clients on topics such as emotions, panic attacks and stress. These go over potential causes, how they are experienced and how to manage them [14]. Lastly, different situations are offered in the VR environment that may be frightening for people suffering from phobias, such as public spaces, drawing blood and spiders [14]. This is a way to expose the patient to their fears in a safe controlled environment [14].

2.2.2.2 Applications of Cognitive Therapy in Virtual Reality

The first example for their cognitive applications in the VR environment is something they simply called "Memorize", which is an exercise to help with executive functions and memory span [14]. "Koji's Quest" is an attempt to gamify practicing cognitive skills, which makes it potentially more engaging and fun for patients [14]. Cognitive skills practiced are calculation, memory, visiospatial functioning and others [14]. Another cognitive application is a media center app called "Mindset"[14]. The app focuses on meditation and relaxation using wellness and cognitive therapy methods which have been proven to work [14]. It allows the client to explore and try different methods to establish what is most suitable for them.

2.2.2.3 Applications of Physical Therapy in Virtual Reality

Lastly, another aspect XR Health focuses on is physical therapy. This ranges from rehabilitation of specific areas on the body to full body workouts. For example, "Balloon Blast" is a gamified rehabilitation session for the upper body [14]. This includes looking at the range of motion of the clients' shoulders [14]. The goal is simple: clients have to burst the balloons in front of them. These appear in a variety of patterns, which indicate different kinds of movement [14]. Another example of a full body workout is "XRH-Fitness" [14]. This full body workout emerses the client in a virtual arena, where they

will perform movements similar to boxing including different punches, blocks and dodges[14]. This promotes full body movement. Yet another example is a mixture of both physical and cognitive aspects called "ColourMatch" [14]. It is aimed at helping clients recover from brain injuries and strokes [14]. The client is set up with an array of buttons in front of them and is asked to push which ever ones light up, promoting movement and motor cognitive rehabilitation [14].

2.2.3 Eye Play the Piano

While the previous example focused on different types of therapy in the virtual environment, "Eye Play the Piano" focuses specifically on music. The making of it was a collaboration "between the University of Tsukuba's Special Needs Education School for the Physically Challenged and FOVE" [15]. Fove is the "World's First Eye Tracking Virtual Reality Headset" [16]. While it may not strictly be music therapy, as a therapist is not necessarilly needed, it promotes the same values of emotional expression and freedom. It was designed in a way that the use of hands and arms is not needed, instead, it uses eye tracking [15]. It was made to enable fully paralysed people have the opportunity to play the piano and express themselves this way. The eye tracking technology tracks the movement of the patients' eyes and their blinks, which act the same way as pressing something [15]. It includes different modes, monotone and chorde [15]. This allows the patient greater freedom in what they want to play. While not specifically music therapy, it can easily be implemented in a therapeutic environment, since it promotes the same type of outcomes.

2.2.4 Oddball

The "Oddball" is a handheld silicone ball, which is also a bluetooth device with motion sensors [17]. Oddball themselves describe their product being "like a magic wand of music" [18]. What they mean with this is, depending on how the ball is interacted with, e.g. tap, move, shake, twist or throw, the sound it produces will change [18]. This device makes creating music into a physical activity without the user requiring musical knowledge. In the first expert interview (Chapter 3), the "Oddball" was mentioned as one of the tools used in their sessions, showing its versatility and usefulness in the music therapy field.

2.3 Summary

The two definitions for music therapy used in this review are broadly aligned, and to a degree complementary as one puts the emphasis on qualities of music used in therapy and symptoms treated with music therapy [2], whereas the other focuses on the how [3].

The literature review focused on three conditions that music therapy has been applied to, anxiety and depression, dementia and autism. The research across all of these treatments shows that music therapy did have a positive affect on the clients, with things such as lowered anxiety levels, feelings of joy and increased social interaction [4] [5] [6] [7] [10]. However, these studies often conclude that the difference from before treatment to after treatment is not statistically significant [5] [9] [11]. This

means more research needs to be done across all the treatments as some of the studies also show deficiencies in their setup and execution.

While not all of these existing applications are exclusively dedicated to music therapy in VR, they were developed for application in a therapeutic setting, which means that various aspects are relevant and inspiration can be drawn, when it comes to implementation in music therapy. For example, XR Health shows interesting ways to gamify exercises in the VR environment, making it more interesting and enjoyable for the user. But they also demonstrated ways to implement therapy in more educational formats as well. "Eye Play the Piano" offers a way for physically challenged people to engage with music therapy, broadening the scope of who is able to do music therapy. Although the "Oddball" is a product anyone can buy, it has proven to be a valuable tool in music therapy.

Chapter 3: Expert Interviews

This chapter describes the expert interviews that were held. Appendix A provides the information letter, Appendix B provides consent form and Appendix C provides the questions asked in the interview. Appendix D, E and F show the transcriptions from each interview.

3.1 Expert Interviews

To get a better understanding of music therapy sessions and what is needed, expert interviews were held. The client of this project gave the contact information of the first expert to interview. The second expert was contacted through the ArtEZ University website as they have a section to contact music therapists and students [19]. The supervisor provided the contact information of the third music therapist. They were semi-structured interviews and one-on-one. The first interview was held online while the other two were in person. The full list of questions and transcriptions can be found in Appendix C, D, E and F. The transcriptions were made with the MS Teams transcription function and the Microsoft Word transcription function and afterwards edited to make it more legible. This was done by removing acknowledgment words, such as "ok", "yeah" and "hmm" as well as words that were transcribed more than once in a row in any given sentence. The goal of the expert interviews was to get a better understanding of the elements of music therapy session and how they work in a therapy session. Defining these elements is important because once defined, they can be translated into VR. These definitions also aid in understanding of a meaningful experience in a music therapy session.

3.2 Expert Interview Results

The first interview brought up some points which proved to be important for this project. One key takeaway from this interview was the importance of making the client feel relaxed in a session. If clients are relaxed, they will be open to new experiences in their therapy. Another takeaway from this interview is the importance of rhythm in music therapy: although not everybody plays a musical instrument or has musical knowledge, everybody has rhythm regardless of what they say. These two points became requirements for the ideation. Aside from these new requirements, the expert also shared different activities they do in their session and with what kind of target group. While the age range varied greatly, from six years old all the way to sixty-three, they mainly worked with teenagers. These teenagers have various diagnoses from autism, attention deficit hyperactivity disorder (ADHD), or anxiety, with self-esteem issues coming through as well. The activities range from simply playing improvised music with the client, creating home movies and producing the music for these movies, analysing music of interest to the client and using the environment around them (the room and the objects within) to tap with their hands in order to make a rhythm together. The range of these activities show that they are curated to the client specifically so the music therapy can be applied to anyone, regardless of musical knowledge.

The second interview provided new insight into sessions with a different target group than the first. This music therapist has a focus on child rehabilitation. This rehabilitation focuses on children with physical disabilities such as missing limbs,

suffering from paralysis, meaning they are bound to a wheelchair or not being able to speak. In these cases, the music therapist works with someone who custom builds instruments to fit the specifications of the child's needs. They mentioned that they also work with speech therapists for children, who lack the ability to speak. They also described a great sense of enjoyment when using improv during sessions, which they believe is due to the possibility of an organic display of emotion without the usage of words. Another important point they brought up was how to best help their clients. While it is important to look for a solution to help, they also talked about the importance of giving the clients space to explore and approach the music therapist when they are ready. If the music therapist approaches them first, any solution may just be rejected. When clients are ready, they will be open to the solutions presented to them. This practice also aids in the creation of a safe space for the client which is important for their comfort level. As discussed in the previous interview, clients who are more relaxed will be open to new experiences.

The last expert emphasized the importance of adjusting sessions to the clients needs. An example of this is the length of a session itself: while a typical therapy session is forty-five minutes, they mentioned depending on the client twenty minutes might be more than enough, while others could go for an hour. An example for short sessions were people in a psychosis or with dementia. Of course, this differs from client to client and it is the music therapist's job to develop a plan which is best for the client. Another important aspect in the making of sessions, was how they approached them, clearly marking a beginning, middle and end. The beginning section was considered the "warm up" section where the music therapist will engage in conversation with their client. The second section will work on specific aspects and symptoms of the client . The end section or the "cooldown" prepares the client to leave the therapy session without still having a heightened level of emotion. The last important distinction the music therapist made was the two types of sessions, an active session and a receptive session. The active session has the client play an instrument or sing, while a receptive session lets them listen to music instead so they can analyse it. This still allows them engage without having to play.

3.3 Summary

From these interviews it became clear that there is not one single solution that fits all requirements, but rather one solution that can focus on a specific aspect or exercise in music therapy. This is supported by the observation that many clients need a customised solution taylored specifically to them. This also came through in the types of exercises music therapists want to do with their clients, as well as what the clients want to do i.e. having an active session or a receptive session. These interviews where an important input for the next step, the ideation phase.

Chapter 4: Ideation

The start of the ideation process was the extraction of the salient points from the expert interviews and turning them into a list of requirements, see Table 1. These requirements form a basis of the design. Once these requirements were clear, a mind map around the research question, "How can music therapy be implemented in a multiplayer virtual environment?" was created. To further develop some initial ideas, sketches were made to provide a visual of how it could potentially look. Once the sketches were complete, a final concept was chosen to continue ideation.

#	Requirements
1	The VR environment should be multiplayer.
2	The VR environment should be able to mix different therapies together.
3	The VR environment should have a low entry level (in this case using rhythm as stated in the Chapter 3.2).
4	The VR environment should instigate a relaxed feeling.
5	The sounds need to be in sync with the action

Table 1: Initial Requirements

4.1 Initial Ideation

To start off the intial ideation phase a mind map was used. The mind map is shown in Figure 1. As can be seen in the figure, the first ring of ideas surrounding the central idea of "music therapy in VR" are light blue. This indicates that they were the first ideas that were generated. The ring of purple ideas is either a continuation of the initial ideas or a combination of two different ones. This was done to keep the flow of ideas moving. After the mind map was created, sketches were made to get a visual of different ideas as seen in Chapter 4.2.
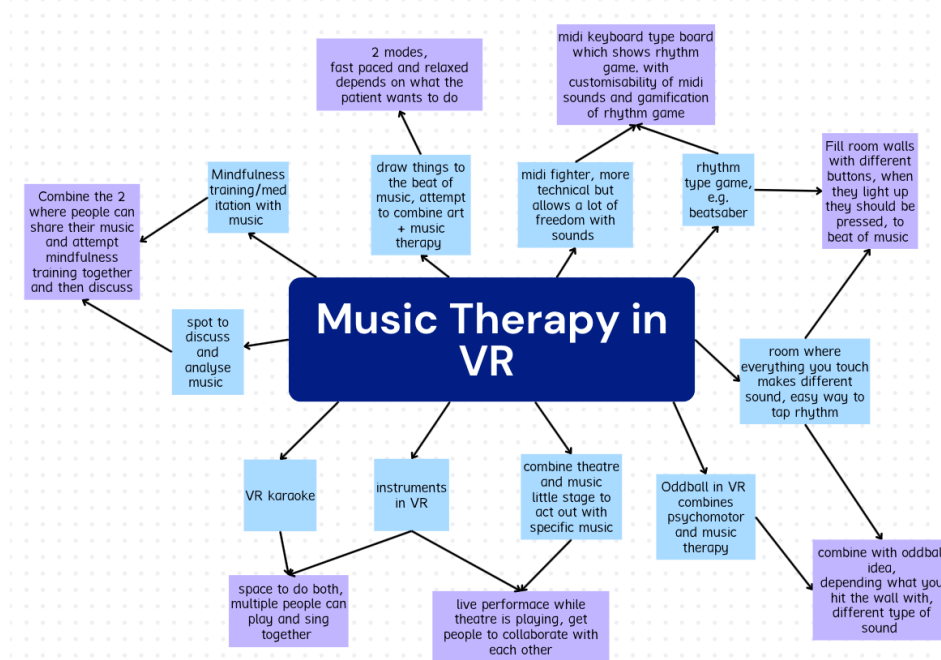
Figure 1: Mind Map of Initial Ideation

4.2 Continued Ideation

This section shows the next step in the ideation phase. After creating the mind map to make note of potential ideas, the next step was to start sketching the ones that stood out and continue their ideation.
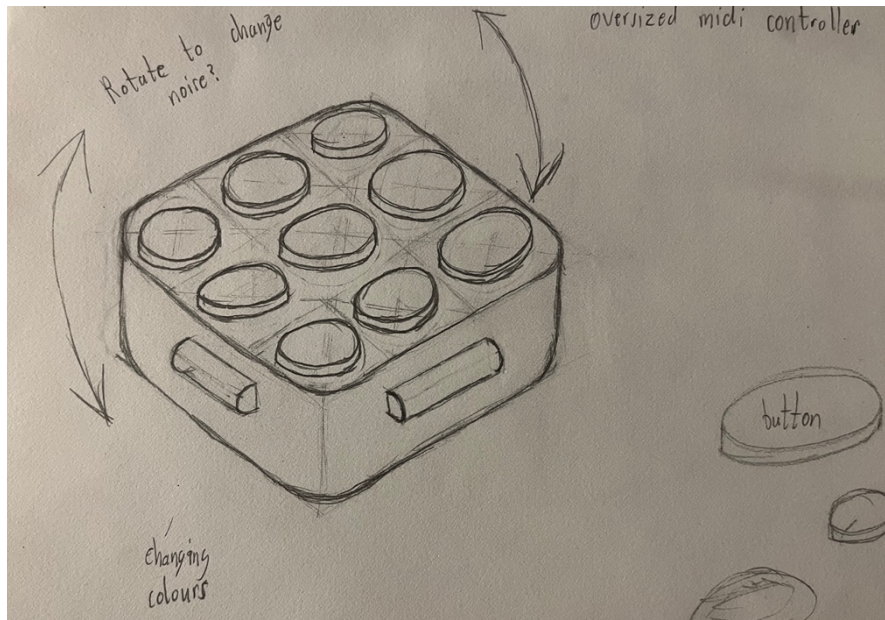
Figure 2: Sketch of Midi Keyboard in VR

Figure 2 shows the sketch of something similar to a midi controller. The idea is to make it oversized in the VR environment but have it still act like a midi controller. With a midi controller, a sound can be loaded onto it, and then played with each button playing those sounds at a different note. This design also leaves room to gamify it in the sense that it can be transformed into a rhythm game. The buttons would light up and the player needs to hit them in the right order.
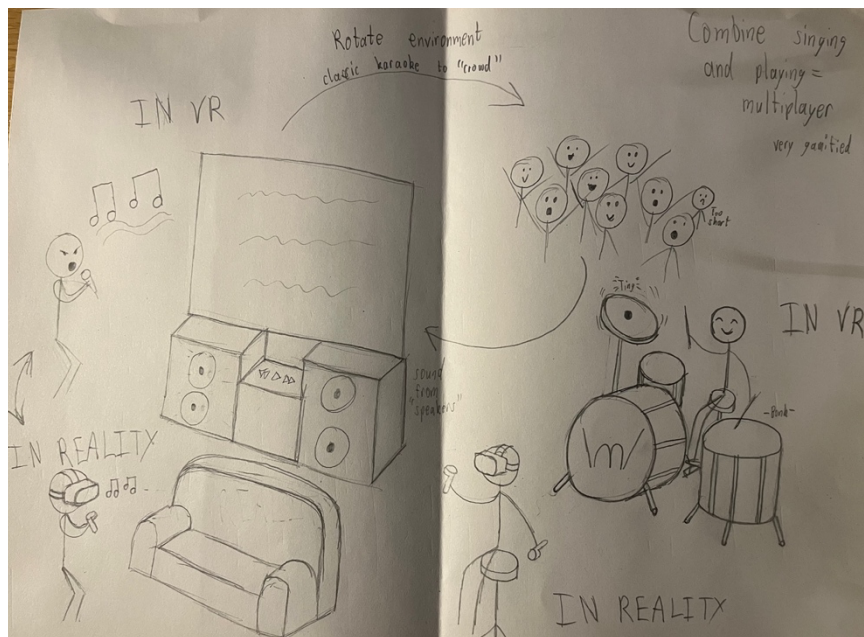
Figure 3: Sketch of VR Karaoke and Instruments

Figure 3 shows a sketch of a karaoke room and people playing instruments implemented in VR. Including both ideas in one VR environment enables collaborative activities: while someone is singing, the other can play an instrument. One of the benefits of VR is that it can be changed easily: For example, the environment could be changed to look like the users are performing in front of a crowd instead. This could also add the benefit of exposure therapy for people who are afraid of being in front of crowds.

4.3 Chosen Concept
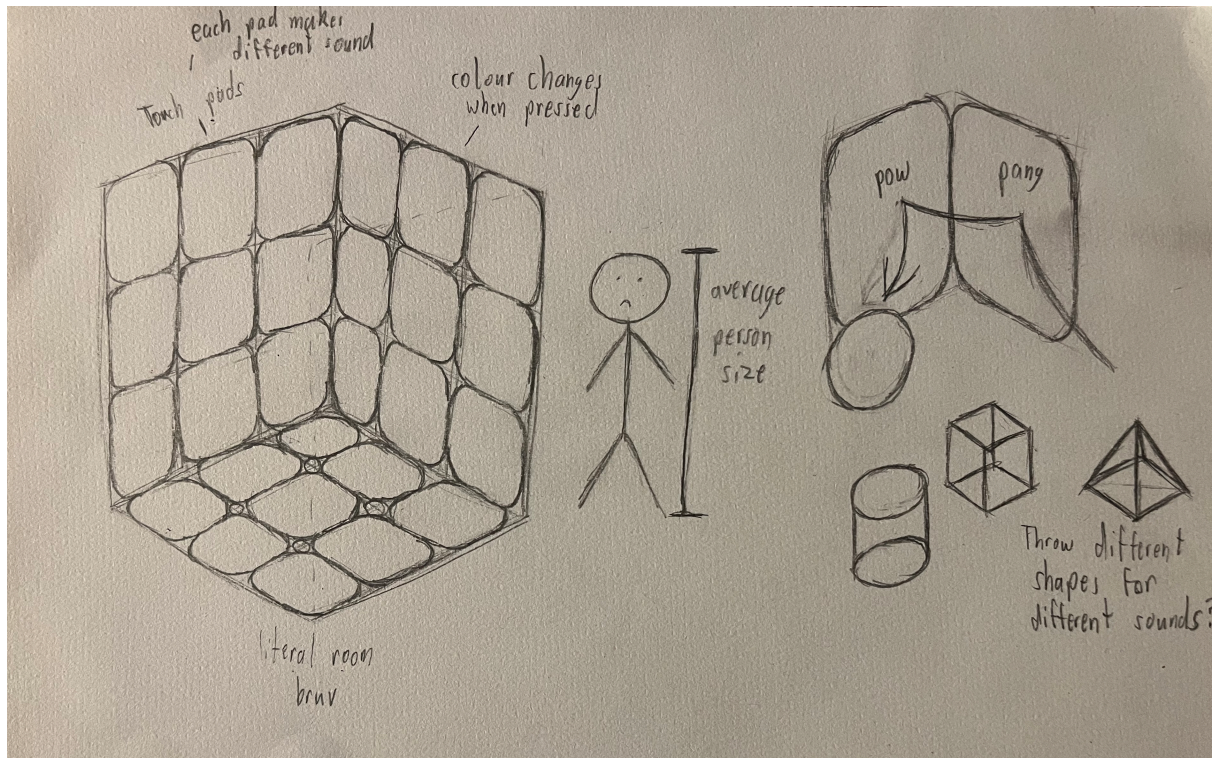
Figure 4: Interactive Room in VR

In the end the idea that was chosen and pursued was the interactive room in Figure 4. The idea of this room is that the walls are seperated into tiles and each tile makes a noise. This gives the users the freedom to tap and combine the sounds of the tiles how they want and create their own rhythms and beats. Since the idea is a small environment itself, it can easily be a multiplayer setting as multiple people could be in it and create rhythms. Although not shown in the sketch, the room would have at least three walls surrounding the user. Another reason for choosing this idea was that different items to throw into the room can be added. Throwing these items would produce a different sound compared to when the users would tap the tiles with their hand. This was inspired by the "Oddball" which was mentioned in Chapter 2. Aside from letting people improvise, this kind of grid could also include a game mode, where the tiles light up and the user has to touch them correctly in order to make a beat.

Chapter 5: Specification

This chapter focusses on the requirements and design choices for a successful prototype.

5.1 Requirements

A successful prototyping process starts with listing both functional and non-functional requirements. These are guiding principles in the process and as such paramount to the success of a design. Functional requirements are needed for the prototype to function, while non-functional requirements focus on the user experience. The requirements listed in Chapter 4, as well as additional requirements have been categorised into functional and non-functional. Table 2 and Table 3 summarize the requirements.

#	Functional Requirements
1	When the user hits a tile, the sound specified to that tile should play and the colour of the tile should change.
2	There should be an option to loop sounds, not only have them play once per hit
3	It should be multiplayer for at least two (therapist and client)
4	The sound needs to sync up with the action

Table 2: List of Functional Requirements

#	Non-functional Requirements
1	The VR environment should have a low entry level, meaning the VR environment should be intuitive without a need for much explanation.
2	The VR environment should be engaging to the user.
3	Once the VR environment is loaded on the headset, the user should immediately be able to interact.
4	The VR environment should give the user creative freedom to create rhythms of their choice.
5	The VR environment should be able to aid the music therapist in instigating a relaxed feeling.
6	The VR environment should be compatible with other types of therapy, such as psychomotor and art. **This is outside the scope of this project

Table 3: List of Non-functional Requirements

5.2 Design Specification

The design specification of the prototype was inspired by two aspects: firstly, the use of the surrounding environment and ones hands to create rhythms, as pointed out in Chapter 3.2 Expert Interview Results, and secondly, a drum pad, as shown in Figure 5. These two inspirations mesh well together, because they both focus on rhythm and timing.
Another design specification concerned the concept of a drum pad, specifically the layout of sounds on the pad itself. An example of a standard layout is shown in Figure 6.

For the pads in the VR environment, the sounds chosen were based on the ones in Figure 6 and the layout of which sample belongs on which pad was mimicked. However, there were some differences: instead of having multiple versions of the same type of sample, for example two kick drums, new samples were chosen to add variety in the types of sounds.

Figure 5: Example of a Drum Pad, Specifically a Midi Fighter [20]

Figure 6: Example of a Drum Pad Layout [21]

5.3 Technology Specification

Along with design specifications, technology specifications were considered carefully to the success of the prototype. Below is a list of the different technologies and equipment that were used to create the prototype.

#	Technology and Equipment
1	Meta Quest 3 Headset (provided by Interaction Lab UT [22]) as seen in Figure 7
2	Unity
3	XR Interaction Toolkit
4	Sounds taken from Cymatics sample packs
5	How to make a VR game – Unity XR toolkit 2022 by Valem Tutorials, tutorial playlist for VR game creation [23]

Table 4: List of Technologies and Equipment

Figure 7: Meta Quest 3 Headset and Controllers [24]

At the Interaction Lab at the University of Twente various technical equipment can be borrowed, and users can get help and support with that equipment. The staff working there are knowledgable in this field. Although the UT Interaction Lab had a wide variety of VR headsets to choose from, the Meta Quest 3 was chosen. It is the newest version of the headset from Meta and was also recommended by the experts in the Interaction Lab over the other models available, because of the XR Interaction Toolkit package in Unity. This package is used to set up a Unity file to in order to be able to develop VR games. It has been developed to be compatible with a variety of headsets, including the Meta Quest 3. Connecting the VR headset to the laptop running Unity was possible with the Meta Link Quest app and a USB-C cable.

Chapter 6: Realisation

This chapter focuses on the prototype itself. It shows the evolution of the prototype and also the controls for using the prototype. This is split up into three sections; the visuals, the audio and the controls.

6.1 Creating the Visuals

To start creating the prototype, cubes were arranged four across and two high. This effectively created a wall infront of the player, with each cube being a tile to be pressed. However, one wall of these tiles was not enough so this arrangement was repeated on each side at a 90° angle, as seen in Figure 8. Two more variations of this arrangement were created to test for preferences. These variations can be seen in Figure 9 and Figure 10. They are half the size of the original, with Figure 9 having the tiles by arranged two wide and four high, while the pad in Figure 10 is four wide and two high. In the initial design each wall had nine tiles. This was changed to eight because it fits better to the layout of a drum pad: two of the walls are dedicated to one-shot samples, discussed further Chapter 6.2, giving a total of sixteen, just like the drum pad. The third wall is dedicated to looping sounds. Another reason for this change is that an octave in music contains eight notes when ignoring half tones. This is important since a fourth pad, which was visually the same as pad three, was implemented to include the sounds of a piano. This allowed each wall be one octave of a piano scale. In total four pads were created, the three with percussion samples shown in Figure 8, 9 and 10, and a fourth with piano samples which was visually the same as Figure 10.
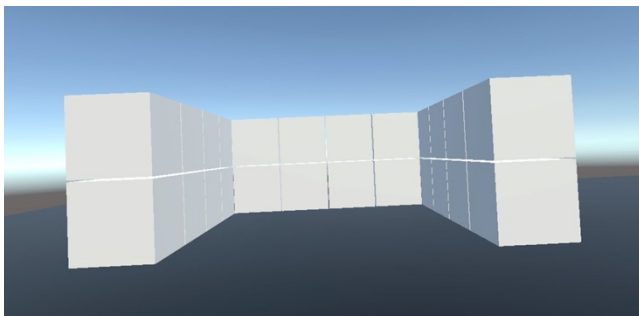
Figure 8: Drum Pad One
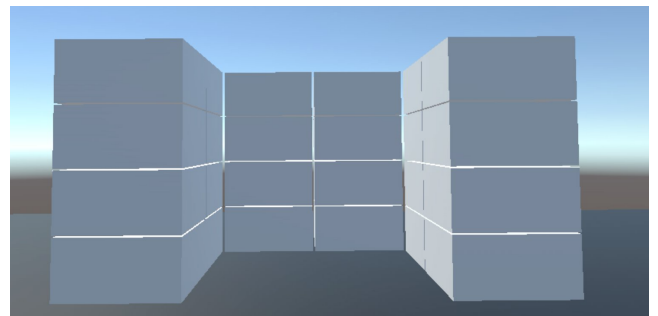
Figure 9: Drum Pad Two
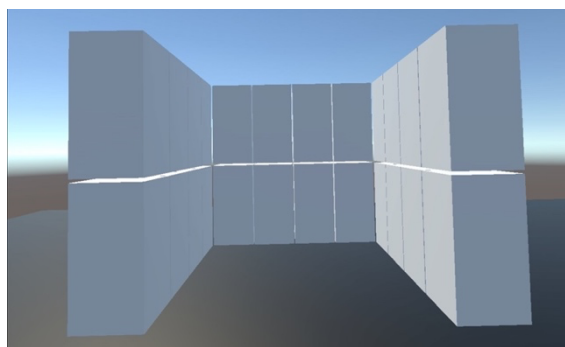
Figure 10: Drum Pad Three and Four

Once these basic forms were created, functionality had to be added to the tiles. This functionality included two forms of feedback, auditory and visual. The auditory feedback will be discussed in the next section. For the visual feedback, the tiles were made to light up a colour when activated. The requirements state that looping the sounds needs to be an option. When looking at the pads like in the figures above, the left wall contained the tiles with a looping sound function and the other two would play the sound once per interaction. For visual distinction when activated, the looping tiles would light up purple and the one-shot tiles would light up green, as seen in Figure 11 and Figure 12.
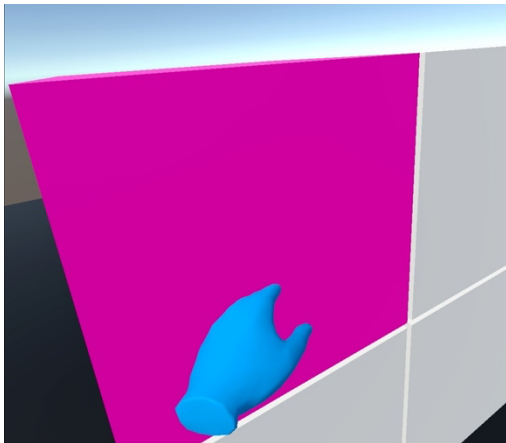
Figure 11: Activated Looping Tile
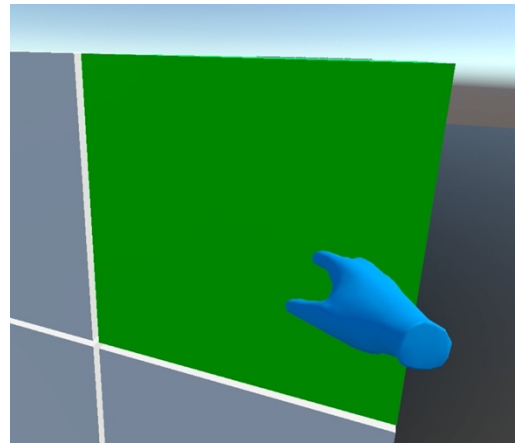
Figure 12: Activated One-Shot Tile

6.2 Audio

The percussion audio samples used for this project were taken from various Cymatics Sample Packs. All the samples taken are "one-shots", meaning the audio file contains the sound being made once. After making the selection of sixteen sounds, each got its own one-shot tile on the pad. For the looping tiles, eight were chosen instead of all sixteen. The reason for having only one wall for loops, rather than two like the one-shots, was the added complexity of a fourth wall: Keeping an overview over four walls is difficult for a player, in particular for an inexperienced player. Hence the fourth wall would have jeopardized the design criterium of a low entry level.

The percussion samples were the same on all three drum pads. The fourth drum pad however, was different. The layout of the looping tiles and one shot tiles was the same, but instead of percussion audio samples, it had piano audio samples. These piano samples were created using Ableton. Two octaves, for a total of sixteen notes were exported for these tiles. This meant that each one-shot wall could contain one octave. The looping tiles had the lower octave. All of the audio samples were placed as mono audio, meaning the sound plays equally through both sides of headphones and speakers. This was chosen over spacial audio so users can hear everything they activate.

6.3 Controls

The last section of this chapter covers the controls of the VR environment.
Figure 13 shows a diagram of the controllers and an explanation of the function of each button. These names will be used for the explanation of the controls.

Control one, the thumbsticks, were used to be able to walk in the VR environment. Specifically, the thumbstick on the left hand allowed for movement in all directions, while the thumbstick on the right hand allowed for turning the users view as if they turn their head.

To activate both the looping tiles and the one-shot tiles, they could simply be touched by the users hand. While the one-shot will play once, the looping tile will play endlessly until turned off. To turn off the looping tile, the hand has to touch the tile and control five, the grip button, has to be pushed on the controller of the same hand. This function is the same on both controllers.

Control six, the trigger buttons served two purposes. Firstly, it offered a teleportation option for the player to move quicker as seen in Figure 14. The circle on the ground is where the user would teleport to. This allows the user to 'point and click' where they want to go, making moving quicker. The second purpose also uses the same 'point and click', but instead it is used to activate tiles from afar, as seen in Figure 15. This function is the same on both controllers. Which purpose the trigger fulfills depends on where the user is aiming: if aimed at the ground, the player will teleport, if aimed at a tile, an audio sample will play.

Controls two and three were not given a function for the VR environment.

1. Thumbsticks   4. Battery covers
2. Menu button   5. Grip buttons
3. Oculus button   6. Triggers
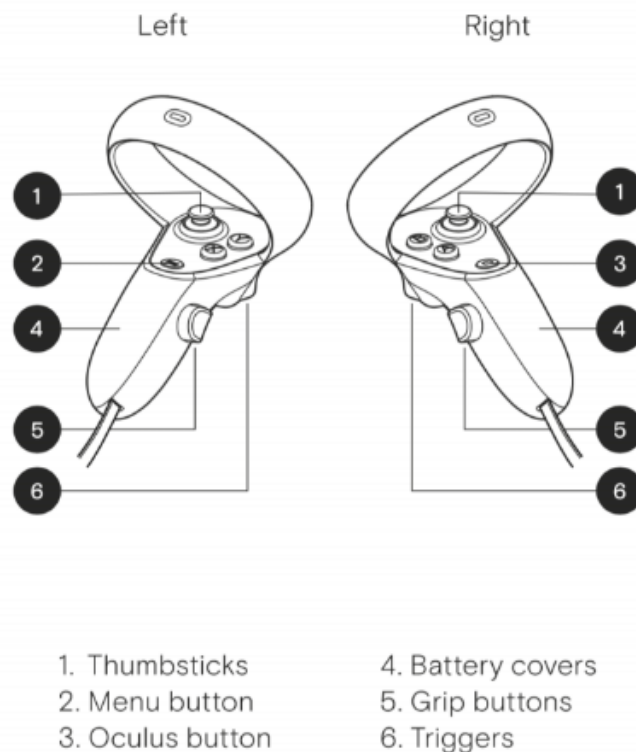
Figure 13: Diagram of Meta Quest 3 Controllers [25]
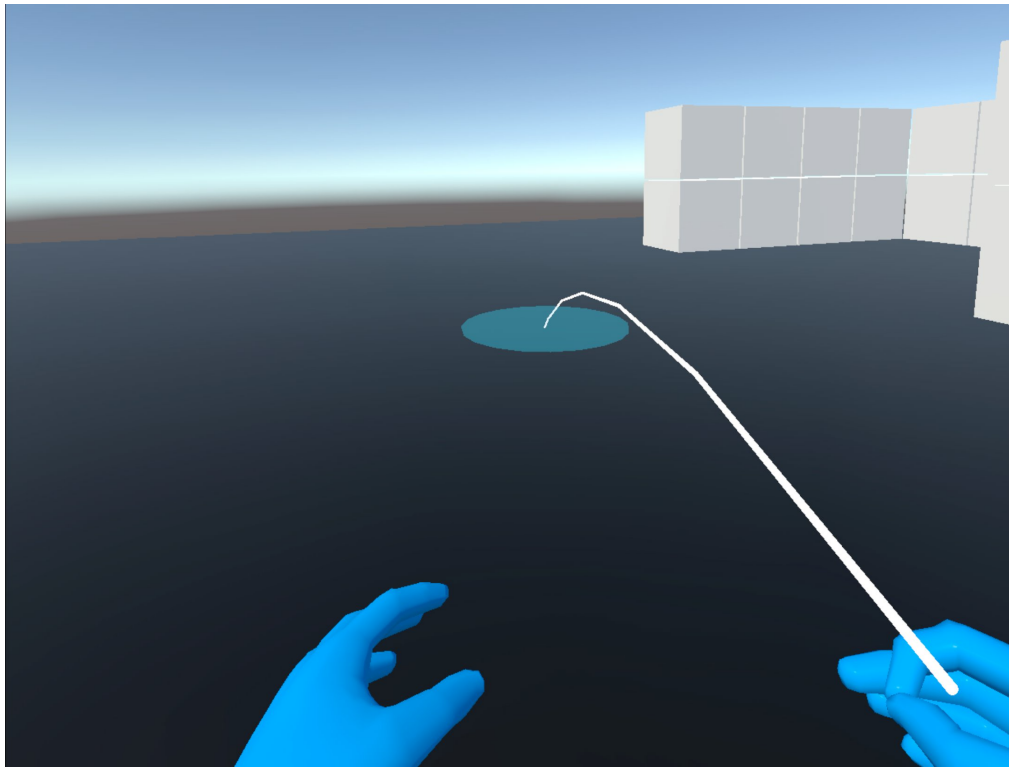
Figure 14: Example of Teleportation Function
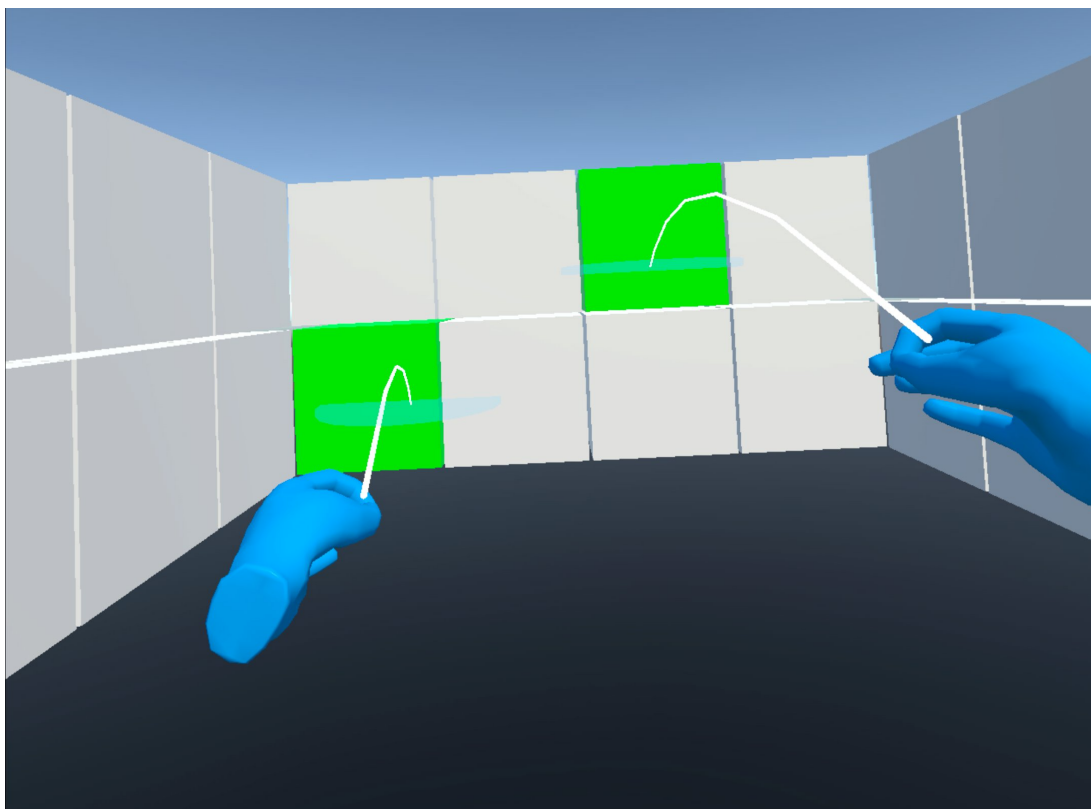
Figure 15: Example of Point and Click Tile Activation

Chapter 7: Evaluation

This chapter covers the procedure for user testing, the selection process and the results of the user testing.

7.1 Procedure for User Testing

Before user testing could begin, participants were required to read an information letter regarding the project and sign a consent form. These can be found in Appendix G and H respectively. The procedure for user testing was split into three sections. Section one put the user in the VR environment without explanation to allow the participants familiarise themselves with the VR environment. Section two consisted of an explanation of the controls and the layout and functionality of the pads. Since the first and second section can be considered the familiarisation time to figure out and learn the controls, the third section should be considered play time, for the player to explore with the pads and see what they can achieve. In sections one and three observations were noted down with the objective of identifying potential patterns, general preferences and odd behaviour.

After the user felt they had achieved what they wanted, a short interview about their experience in the VR environment was held. These questions covered the topics like ease of use of the environment, preferences in the layout of the pads and the controls, and features they thought would be beneficial to add. The music therapist was asked additional questions regarding the value it could bring in therapy sessions and what upgrades that could increase the value. The full list of questions can be found in Appendix I. These interviews were audio recorded and then transcribed. These transcriptions can be found in Appendix J to Q, with Appendix Q being the interview with the music therapist.

It is important to note that the playing times of user testers varied greatly. This ranged from two minutes all the way to twenty minutes. The main reason for this were feelings of nausea due to motion sickness for two of the eight users when using the VR headset. While this did not limit their ability to familiarise themselves and play with the environment, it did limit the number of observational notes taken due to a shorter test period.

7.2 Selection of Participants

The usability testing of this prototype was carried out with one music therapist and seven proxy users. These proxy users were students, who could be considered music therapy clients.

7.2.1 Proxy Users

Proxy users were recruited by asking both in person and via online messaging if they were willing to participate. Proxy user testing focused on the functionality of the prototype and the participants' enjoyment with it.

7.2.2 Music Therapist

The music therapist was recruited via email asking if they would like to participate. This email was sent to all three of the music therapists interviewed in Chapter 3. However, only one was able to participate in user testing. The other two were not able to join due to time and logistic constraints. When testing with a music therapist, in addition to assessing the functionality, there was also a focus on the potential for use in therapy sessions. This potential use in therapy sessions is most important as this creates added value for the prototype. If music therapists cannot see possible applications in therapy sessions, there will be no added value, making the prototype redundant for music therapeutic applications.

7.3 Results – Expert View

During the interview the music therapist focused on one point, namely, "*all the time I had in my head how would it be if you were in this game with two persons*" [Appendix Q, p.135][1]. As mentioned in Chapter 5.1, this is a functional requirement, for the prototype targeting therapy sessions. The expert also noted that "*For a therapeutic reason, that would be very interesting*" [Appendix Q, p.135]. Although multi-player functionality was a requirement, it was not implemented in the prototype, because single player testing was sufficient to test the feasability of the prototype. However, the user testing solidified the notion that multiplayer is a crucial aspect for the use in real therapy sessions.

  One of the non-functional requirements was that the VR environment should be inituitive. When the music therapist was questioned about their initial experience with the environment, they said "*when I saw it at first I was, well, I was actually happy that it was simple*" [Appendix Q, p.132]. This statement aids in adding validity that the VR environment was made in an intuitive way.

  One of the points discussed was their preference of the size and layout of the various pads, where it was stated that they "*would prefer the big ones*" [Appendix Q, p.133], which is the one seen in Figure 8. Their reasoning for not prefering the ones seen in Figure 9 or Figure 10 was that they have "*a lack of experience with navigating with with the joysticks. So I had trouble navigating into this square because I wanted to be in the middle*" [Appendix Q, p.134]. This suggests that having the bigger space to work in is more user-friendly.

  When asked for their preference for interacting with the pads the music therapist stated "*I like touching them*" [Appendix Q, p.134]. Even though they stated their preference, they could see benefits in both ways, saying the point and click controls make it possible "*to shoot at them gives the, gives a feeling of power*" [Appendix Q, p.134]. Hence, having both options available to users is beneficial, as the users get a choice of how they want to interact. When asked why there was a preference for touching the tiles, it was suggested that it may "*help with getting in some physical movement, for example 'cause you have to reach or go down low and then side to side*" [Appendix Q, p.135], to which they agreed.

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[1] Note that "*quotes*" used in chapter 7.3 and 7.4 are taken directly from the appendices, which are transcripts from the interviews. Therefore, wording and phrasing is colloquial and does not follow the standards of written texts.

For future iterations of the prototype, the music therapist had two suggestions in mind. The first of which is the ability *"to record it? Yeah, to save it for next session maybe"* [Appendix Q, p.140]. They felt this was important due to the fact that *"now everything's gone when you start again"* [Appendix Q, p.140]. Being able to record the rhythms that are created and save them for future sessions is important for the sessions to flow more smoothly, essentially creating a way to pick up where the previous session left off. The second suggestion was to implement *"interactions in which you can work on therapeutic goals like taking your space or cooperation or giving a saying no to someone like this and this would make such"* [Appendix Q, p.137]. For confirmation, they were asked if this meant to *"gamify certain types of exercises that you would do in these kind of sessions"* [Appendix Q, p.138], the music therapist agreed. Being able to translate these exercises into the VR environment would prove to add value for therapy sessions. This will be discussed further in Chapter 8.

7.4 General Results on Usability - Expert & Proxy Users

The general results on usability covers the feedback from the expert and the proxy users.

The main feedback for improved usablity was the possibility for customisation, e.g. the choice of the samples used, effects on the samples, and the layout of the tiles per pad. Concerning the samples, it was stated that there was a desire to add *"melody to it"* [Appendix Q, p.139]. The music therapist went on to explain that even adding a single instrument more, a bass for example, *"you could make it then you already have a drum and bass basics, for example for rapping. That's what a lot of kids love to do"* [Appendix Q, p.139]. Some proxy users went even further, suggesting *"a full orchestra that I can work with"* [Appendix P, p.131], as well as *"some more ambient sounds as well, like to have like a constant rain"* [Appendix P, p.130].

In relation to the samples, the music therapist also suggested being able to control the speed of the samples, stating *"if you turn up the speed a rhythm can change emotionally. Like from relax to be in a hurry. That's a different speed"* [Appendix Q, p.140]. One even went as far as saying *"I think changing the speed will be a huge difference"* [Appendix Q, p.141]. While they did not elaborate on this point, it is suggested that implementing speed as an option may lead to helpful outcomes for real sessions. A proxy user also suggested effects like reverb and echos for samples, to change the actual sound created, not just the speed. This proxy user suggested being able to hold on object with the desired effect and attach it to the desired tile, giving the user *"a little box with effects. You can just pull it on. And then maybe dragging them on like actually being able to move the blocks around"* [Appendix M, p.117].

The last point of customisation is the ability to change the layout of the pads. A proxy user stated that *"it might be nicer if you have a panel instead of a surround thing"* [Appendix J, p.94], implying having this extra room may feel nicer from a user stand point. When asked what kind of shape they though of for the pads the stated *"slightly bent but not 90°"* [Appendix J, p.94], like a desktop monitor. Another proxy user went one step further, wanting the ability to *"rearrange the blocks, either switch them around or putting them in one big line"* [Appendix N, p.120]. Being able to rearrange the tiles this

way allows users to change the setup exactly how they want, increasing the ease of use for each individual.

The main point of confusion stemmed from the tiles with the looping function, in particular on how to turn them off (see Chapter 6.3). In the first section of user testing, users would turn them on accidentally and then not know how to turn them off. To add validity to this observation, one proxy user stated "*I don't think I understood turning it off*" [Appendix K, p.102] and another mentioning "*the loops I think were accidental initially*" [Appendix L, p.107]. This was observed to be a common issue in section one of user testing. However, after the explanation of controls, users were able to work with the looping function without problems, which suggests that this specific control is, while not intuitive, easy to work with once the user gets basic instructions. Another observation with the looping function is that users did not know which loop was on or off, since the tile only changes colour briefly when activated but then goes back. This was also highlighted in the obervations made during sections one and two. A suggestion to fix this issue was "*showing that which loop is on*" [Appendix K, p.105], meaning that once the looping tile is activated, it stays purple rather than only flash.

During the user testing everybody tried both ways of interacting with the pads and then chose which they prefered. However, there was one proxy user stating that it depended on which pad they were using: For the pads with the percussion samples, their train of thought was "*it's also like kind of in the nature of the sound with hitting stuff is, you know, you make stuff like that. It's just like easier to time it. A beat is easier when you have the motor feedback I guess*" [Appendix J, p.95]. For the pad with the piano samples, they mentioned "*with the piano ones, I actually rather shot them than touch them*" [Appendix J, p.95], going on to explain that "*shooting like that is kind of more similar to like pressing it rather than like hitting the cube*" [Appendix J, p.95]. This underpins the benefit of having multiple ways to interact with the pads as preferences do not only change from person to person but also can depend on the pad they are using.

With respect to pad size, six of the seven proxy users and the music therapist preferred bigger pad, see Figure 8. One of the reasons for this preference was due to the fact that the proxy user "*made a lot less mistakes with the one that was on bigger side*" [APPENDIX N, p.119]. Another reason was that when a user accidently teleported into the space of the big pad, the extra space made it "*easier to get myself acclimated to that environment as opposed to the smaller one*" [Appendix O, p.122]. The last reason was in combination with the 'point and click' interaction, where the user preferred it since the "*bigger one had no issue if I took a step back either so that was nice*" [Appendix L, p.108].

One more suggestion two proxy users had was the inclusion of a metronome, stating that "*I think something like a BPM would be nice*" [Appendix J, p.98]. In this context they meant BPM (beats per minute) as a metronome. It was observed that these users used one of the looping tiles as a replacement for a metronome. Including a metronome would free up this tile again to be used as originally intended.

Chapter 8: Discussion

This chapter will discuss the results of the research, the limitations and suggestions for future research.

8.1 Discussion

The aim of this research was to implement music therapy into a multiplayer virtual reality environment. The user testing results of the proxy users showed that the prototype was successful in terms of enjoyment and entertainment. Although these results from evaluation of this prototype are hinting in a positive direction, they do not yet allow a firm assessment on its use in a music therapy environment. However, the feedback received from proxy users did provide insights for improved functionality of the prototype. Firstly, keeping the looping tiles purple when activated aids in ease of use as there is a visual cue for tiles currently activated. Secondly, the inclusion of a metronome in the environment would be beneficial as it will help users to stay in the rhythm and make syncing of different sounds easier. Lastly, proxy users suggested the possibility for customisation, by adding effects such as reverb and echoes, by adding the possibility to choose their own samples and by allowing to change the layout of the pads. Introducing effects and providing the possibility to choose samples will give the user a much wider playing field and open for possibilities far beyond the current setup of the prototype. Enabling a change of the layout of the pads will enable users to adjust the VR environment to their needs and hence allow for smoother workflows. Implementing the feedback of the proxy users would improve the functionality of the prototype as well as improving the workflow, as it could be changed to the users' needs.

The user test with the music therapist did provide vital insights with respect to necessary extension and upgrades for the prototype to add value in music therapy sessions with clients. The suggested key upgrades are functional requirements: the VR environment needs to be extended to multiplayer to enhance its potential impact in music therapy. A possibility to save progress is required to allow for efficient work with clients from one session to the next. For initial feasibility testing of the prototype, it was developed in single player. As part of a further development, the multiplayer aspect can be tested in the existing VR space of The Lectorship in Arts Therapies and Psychomotor Therapy in Healthcare Hogeschool Arnhem Nijmegen, which already has a multiplayer function. This will be discussed further in Chapter 8.3. The second functional requirement - the ability to save results – will aid in the flow from session to session, allowing the therapist and client to pick up where they left of rather than starting from scratch every session. As mentioned earlier, the option to save results created in the VR environment should be part of further development of this prototype. Implementing these two suggestions will create necessary functionality for the enhanced use of the prototype in music therapy.

The music therapist also suggested upgrades for non-functional requirements. In agreement with the proxy users, they proposed to make more instruments available, specifically instruments that can be used to create a melody. While there was a pad which had the notes of a piano, users, both the music therapist and proxy, wanted a wider range of instruments, which would allow creating complete songs rather than

only sections of songs. The music therapist also suggested that for all sounds there should be the option to speed up and slow down. Different speeds would invoke different emotions, allowing the music therapist to work on different things with their client. The last suggestion and perhaps the biggest upgrade with respect to the effort required, was the implementation of different exercises music therapists do in their regular sessions and translate them into the VR environment – see Chapter 8.3. While not discussed in depth, the music therapist also suggested exercises that focus on collaboration to help the patient to deal with feelings of frustration and personal space. This important upgrade to the prototype with the implementation of these different exercises could broaden the range of aspects the music therapist can work on with their patient.

8.2 Limitations

One of the limitations was that expert user testing was limited to one music therapist. Although there was more user testing with proxy users, which provided valuable insights into the experience of using the prototype, it did not provide further insight of how it would work in a therapy setting. While the one expert user test was able to provide that insight, it is clear from the expert interviews from Chapter 3.2 and literature research that these sessions differ greatly from therapist to therapist. Given the variety of approaches by different music therapists, the views from different music therapists on the prototype would have given a broader insight.

Another limitation was the limitation of single user testing only: music therapy greatly benefits from at least two simultaneous users in the VR environment (therapist and client). While this was not a necessity to test the functionality of the prototype itself, it is fundamental when used in a real therapy session. It is important to verify that two users can simultaneously use the prototype and to create collaboratively in this environment. Testing the prototype with at least two users simultaneously needs to be focus of future work.

8.3 Future Work

The goal of this prototype was to emulate the objective one of the music therapists mentioned in the expert interviews in Chapter 3.2: using hands to tap and hit things in their immediate environment to create rhythms together. While the prototype was based on that, it also took inspiration from drum pads which are used in music production, using similar visuals. The user tests confirmed that people enjoyed interacting with the prototype, but the link to therapeutic exercises and outcomes is – despite positive indications - yet to be firmly established.

The next step would be the implementation of the feedback from both the proxy users and the music therapist as discussed in Chapter 8.1. The most important of these being the multiplayer function. With this function, a new round of testing should be done with both a therapist and client using the VR simultaneously, to confirm that collaborative efforts are in fact possible. The outcome of this testing will give better indications for the future use this tool has in music therapy. For future work it would also be beneficial to interview music therapists in depth about their exercises and discuss possible implementations to the prototype. These efforts will also allow to get –

in addition to the already proven entertainment and enjoyment - a better understanding of potential use of the prototype in a therapeutic setting.

Chapter 9: Conclusion

This thesis aimed to answer these two questions:

Research Question:
How can music therapy be implemented in a multiplayer VR environment?

Sub Research Question:
How can music therapy be made to interact with other types of therapy, specifically psychomotor and art?

From the results of user testing, the positive reactions to the prototype show that it is headed in the right direction. The single player user testing provided insight in the functionality and playability of the prototype, but not necessarily how it would function in a therapy setting. Due to the limited sample size and the lack of testing in a multiplayer setting, these results remain inconclusive. The next step to draw a more solidified and valid conclusion would be to perform user testing where both a music therapist and their client are in the VR environment together, essentially field testing the prototype.

The sub research question received little arguments. The user test interview briefly touched on the subject but did not delve into it. It was expressed that due to the size and layout of the pad, specifically the one in Figure 8, the big size encouraged movement, which can in turn have a link to psychomotor therapy. There was no mention of art therapy. To generate a conclusion for this question, more testing, which specifically focuses on combining the two therapy forms, is needed.

While inconclusive for the research questions, the positive feedback and enjoyment when using the prototype show that it is a step in the right direction of implementing music therapy in a VR environment. The results are encouraging and support further research to be done in this field.

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Appendix A

Information Letter for Expert Interview
18/10/2024

The Lectorship in Arts Therapies and Psychomotor Therapy in Healthcare has been developing an environment in virtual reality (VR) for different types of therapies, such as psychomotor, art and music. The making of this environment has been outsourced to a company called PWXR. While psychomotor has been well established, music therapy and art therapy are lacking in this VR setting.

The purpose of this interview is to gain knowledge about what music therapy is and how a music therapy session would look like. Finding out the needs of a music therapy session will help in the designing and developing of placing it in a VR setting.

The interview will be semi structured and will take roughly 30 minutes. You will be asked to answer the questions to the best of your ability in order for us to gain insight. You are allowed to withdraw at any time if you wish.

The interview will be transcribed and the information that is collected during the interview will be completely anonymised. You have the right to request access to and rectify or erase any of your data. You are allowed to withdraw from the study at any time. If this is the case, your data will be immediately deleted from the project.

The anonymised data will be included in the graduation project report that will be published to/archived in the UT Repositories, which is only accessible by UT staff and students.

The audio recording of the interview will be deleted at the end of the project. The anonymous transcription however will be kept in the Appendix of the thesis paper.

The research project has been reviewed by the Ethics Committee Information and Computer Science.

For any questions or concerns, you may contact:

Researcher:
Kevin Friesacher
k.p.friesacher@student.utwente.nl

For complaints:
Ethics Committee Computer and Information Science
ethicscommittee-cis@utwente.nl

Appendix B

Consent Form for Improvement of VRhExp
YOU WILL BE GIVEN A COPY OF THIS INFORMED CONSENT FORM

Please tick the appropriate boxes	Yes	No
Taking part in the study		
I have read and understood the study information dated [18/10/2024], or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.	☐	☐
I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.	☐	☐
I understand that taking part in the study involves having the interview be audio recorded which will then be transcribed into text. The recording will be deleted at the end of the project.	☐	☐
Use of the information in the study		
I understand that information I provide will be used for the writing of a graduation project report that will be published in the University of Twente's library.	☐	☐
I understand that personal information collected about me that can identify me, such as [e.g. my name or where I live], will not be shared beyond the study team.	☐	☐
Consent to be Audio Recorded		
I agree to be audio recorded. Yes/no	☐	☐
Future use and reuse of the information by others		
I give permission for the anonymised transcript of the interview that I provide to be archived in UT Repositories, only accessible by UT staff and students, so it can be used for future research and learning.	☐	☐

Signatures

_____   _____   _____

Name of participant [printed]   Signature   Date

I have accurately read out the information sheet to the potential participant and, to the best of my ability, ensured that the participant understands to what they are freely consenting.

_____   _____   _____

Researcher name [printed]   Signature   Date

Study contact details for further information:

Kevin Friesacher

k.p.friesacher@student.utwente.nl

Contact Information for Questions about Your Rights as a Research Participant

If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Secretary of the Ethics Committee/domain Humanities & Social Sciences of the Faculty of Behavioural, Management and Social Sciences at the University of Twente by ethicscommittee-hss@utwente.nl

Appendix C

Interview Questions:

Opening/beginner questions:
- How did you get involved in music therapy?
- How long have you been involved in music therapy?

More detailed/in depth questions:
- What does a typical session of music therapy look like?
    - How long does it last?
    - What kind of activities are included?
- What kind of music do you use?
    - Is it dependent on the specific situation?
    - Elaborate
- What kind of elements do you consider important?
    - Use as follow up, do you have an example of a successful implementation of the element(s)
- Introduce the project goal, implementing music therapy in a VR environment. In order to do that, what elements make up music therapy need to be identified. Then these elements can be translated and expanded upon since the goal for VR is not a 1:1 but a possibility to do things you can't in real life.
    - What kind of elements could be suitable in the VR setting?
    - What can help in creating a meaningful experience for the patient?
- What kind of people do you have as clients?
    - i.e. people with anxiety, depression, other
- How do you feel about music therapy in the VR environment?
    - Why do you feel this way?

Closing questions/remarks:
- Are there any examples of VR therapy you would like to share?
- Is there anything else you would like to share that I did not ask about?
- Are you ok with me asking questions via mail if I think of something after the interview?

Appendix D

For all the transcriptions, words that could not be discerned are marked as "???".

Speaker 1 0:06
Yes, I got to check it out, which was quite nice. I had to borrow VR headset took a while, but I managed to.

Speaker 2 0:07
Oh, OK. Yeah. OK.

Speaker 1 0:17
Yeah, actually. See what it's all about and see the different activities and things you can do in there.

Speaker 2 0:22
Yeah, but it's very limited.

Speaker 1 0:26
But I still think it's, it's very cool, I think like it's definitely heading in a very good direction, I think. And if I can help with that, with the music part, I yeah, very happy to.

Speaker 2 0:38
Yeah, I would like to. Yeah, I for me, I I work in a in a company, we are with over 15 therapists, and most of them are PMT.

Speaker 1 0:55
Psychomotor, right? Yeah. OK.

Speaker 2 0:59
And I'm the only one music only music therapist. So. So it's mostly directed to PMT

Speaker 1 1:09
OK. The yeah that that explains then why it's very heavily on that in the the VR environment then.

Speaker 2 1:15
Yeah, yeah. But I I also in my work, I use things from PMT and things from drama. So we we mix a little, I, I like I like to make combinations, for example music with drama or not. I for example I, I make movies with kids and then make music to the movie they made I guess.

Speaker 1 1:25
OK. Oh, OK, OK.

Speaker 2 1:40
But OK, let's go to your interview.

Speaker 1 1:42
Yeah, I mean, that's already good information. So I'll definitely already keep that in mind, but.

Speaker 2 1:46
OK.

Speaker 1 1:49
Yeah. So. Just for some more basic opening questions, how did you get involved in music therapy?

Speaker 2 1:58
In music therapy?

Speaker 1 2:00
Yeah.

Speaker 2 2:01

Well. I've always played in bands and things like that since I was 15. And then I decided music was. Yeah, I wanted to do something in music, so I studied music for some years, but I missed the, what I hated on this, in studying music, it was the the competition in music. It's all about who is the best and who is the fastest and who can get the highest, and I'm not ambitious to be the best. And I missed the part of working with people. So, I quit and and then I found then, only then I found out about studying music therapy.

Speaker 1 2:54

Oh, OK, it's.

Speaker 2 2:55

And that's that's exactly where thing things matched for me.

Speaker 1 3:02

Yeah.

Speaker 2 3:03

I'm, I'm how you say hello Felina.

Speaker 1 3:07

Oh, I don't know if I can help you there. I'm sorry.

Speaker 2 3:11

Someone, someone who wants to help.

Speaker 1 3:15

Yeah. OK.

Speaker 2 3:17

So. It's, it's me as a person, I want to help people, and I like very much making music. So this is the perfect combination.

Speaker 1 3:21

Yeah, I was about to say that sounds like it was a very match made in heaven type deal like that was perfect then. Yeah, because I I agree music as an environment is very tough to even get into. I feel like it's always such high competition and if you like look on the Internet, it's just it's, it'll make you feel bad about yourself, I feel like.

Speaker 2 3:44

Yeah. Well, I I I let that go for some years, for some years now.

Speaker 1 3:57

Yeah, that's completely understandable. But yeah, that's yeah, a very good fit then I must say and.

Speaker 2 4:03

Yeah, yeah, sure.

Speaker 1 4:09

OK. I guess you kind of answered then with how long you've been involved in music therapy, that must be quite a few years now then.

Speaker 2 4:17

Well, I was quite old when I started to study music therapy. I was I was 26, but now I'm 57, so it's over 30 years now. Yeah, yeah.

Speaker 1 4:23

OK, it's been a lot of experience.

Speaker 2 4:32

Oh yeah, and I had a lot of different. I would say, I worked in a lot of different areas.

Speaker 1 4:40

OK.

Speaker 2 4:41

So yeah, I I have a very broad experience, I think.

Speaker 1 4:46

Oh, yeah, that, that's that's very good then, yeah.

Speaker 2 4:48

OK.

Speaker 1 4:52

And OK then time for I guess, time to delve into it a bit more. What does a typical session of music therapy look like to you?

Speaker 2 5:06

Typically, music therapy session? Oh, that's a difficult question.

Speaker 1 5:13

And you can try and break it down a bit I guess maybe with.

Speaker 2 5:19

I think, I think a typical music therapy session is a session in which words are not, are not new, are not needed. So, sometimes I have sessions you start playing or singing or whatever, and, and, and that's it, and there's nothing more needed.
You can say what's, what's the therapy about it? Because therapy claims that you that you have a problem that you know about, and you have a you work on that with your, yeah. In my case with music, and then you come to where you want to achieve a goal.

Speaker 1 6:13

OK.

Speaker 2 6:14

I think the the the best, the most important goal there is it's it's that people can relax And it's it's often seen, it's often seen as a minor issue relaxing, but I think it's the most important of all because when people are relaxed, they they are open to to new inputs.

Speaker 1 6:44

That's very interesting actually because I've obviously now I had to do some research as well into music therapy, and I haven't really heard that point of view or read about the point of view and but now that you mention it, it like it seems so obvious, almost like, yeah, of course.

Speaker 2 6:59

Well, that's that's not what you learn at school. When I I have. How do you say? When I when I have students that come to work with me, they always say they talk about things I learn in school that goals like emotional expression, and like that high goals. And I think they forget the most important goal like that people can relax and it's often seen as, well, you're not, you don' have therapy for fun so. It's not, it's not, you shouldn't relax, you should work hard in therapy, and I think it's the opposite. You should feel relaxed, so I think music therapy session, music is the perfect way to relax.

Speaker 1 7:47

Yeah, I would agree with you.

Speaker 2 7:47

Even, even, even, by playing playing a racket, you can relax only listening to music makes people relax, and that's scientifically based.

Speaker 1 7:55

Yeah.

Speaker 2 7:59

There are research, it's with brain scans what happens to a brain when people listen to music?

Speaker 1 8:08

Yeah. OK.

Speaker 2 8:08

So, I think the most important, my most important goal is to make people relax.

Speaker 1 8:18

OK, good. Yeah. Yeah. I mean that makes a lot of sense then because. Yeah. If they're relaxed, then they then they're more open to share or yeah, as you said, get new inputs and.

Speaker 2 8:28

Yeah. And then they are also open to mor,e more to, for example, confrontation or difficult things. But first they have to be relaxed.

Speaker 1 8:37

I'm very glad you brought this up. I hadn't thought of this at all. So this is very, very nice.

Speaker 2 8:42

OK, OK.

Speaker 1 8:46

And kind of some more nitpicky things with the session, how long would a session generally last? Like is it like 2 hours, an hour, half an hour only, or?

Speaker 2 8:57

No, no, no. Well, I normally think in an hour, but it depends. I I work now with with younger children, 6-7 years then. Well, officially a session is 45 minutes, but for younger children, especially when they have ADHD like things, then sometimes 20 minutes is too long.

Speaker 1 9:27

OK.

Speaker 2 9:27

But, you have to do something for 5 minutes, then, then let the tension go. It goes up and down, but I normally 45 minutes, but with older kids like 15-16 an hour is, is it's, it's fine.

Speaker 1 9:40

OK, so so it very much depends on who you have as a client, for lack of a better word or a patient.

Speaker 2 9:51

Yeah, sure, and sometimes it depends on the day, how does somebody get in?

Speaker 1 9:58

Hmm, OK.

Speaker 2 9:58

Sometimes somebody comes in and he has a story or he, he, something happened and he has to talk about it. So you do that first to make him relax.

Speaker 1 10:08

OK. Yeah. OK. OK. Yeah, that. Yeah, that makes a lot of sense. Then I, I hadn't considered that fact either that, yeah, maybe part of it is still just actually talking about. Yeah. Yeah. Like, like you said, if they have a story or something. Yeah.

Speaker 2 10:26
Yeah.

Speaker 1 10:27
And, also then in a session, what kind of activities, like you've mentioned, like playing and stuff like that, what kind of activities are included in the session?

Speaker 2 10:40
Yeah. You name it. Basically, everything that makes sound, but I, as I said, I always I also use making video or role play like in drama. But let's say let's focus to music sessions.

Speaker 1 11:04
Yeah.

Speaker 2 11:05
Last week I played didgeridoo with with with some kids, byt my, I'm on my best playing in a band band like setting. Somebody on drums, or somebody on bass and me on guitar or on, on piano. So that's but I also do singing. And it's one-on-one singing. Or only rhythm, you name it.

Speaker 1 11:39
OK. So it really just ranges any form of playing.

Speaker 2 11:44
Any form of playing yeah, right.

Speaker 1 11:45
That's what I'm what I'm gathering at least, yeah.

Speaker 2 11:47
For example, now you say creative technology, so you know Oddballs?

Speaker 1 11:53
I don't think I'm familiar with it, no.

Speaker 2 11:56
OK, it's very nice. Maybe when we have time, I'll show it to you. Oddballs, it's a it was a start up to two guys. One musician, one engineer and they they made these, and my boss found them and I bought them. I used them. They they are balls that you can, you can bounce them, and you can add, with your phone, or that you can add a sound to it, and when you bounce it, it makes a sound.

Speaker 1 12:29
OK.

Speaker 2 12:30
The harder you bounce the, the intenser the sound. So, when you bounce it on the floor it sounds different than when you catch it and you can, you can put drums on it or whatever, but you can, you can throw them at each other or you can make rhythms by bouncing them. You can even put your own sound, your own voice so that it's you should you should know them. It's creative technology.

Speaker 1 12:58
Yeah, that really is yeah, wow.

Speaker 2 13:01
I'll send you a link I sent you a link? Yeah.

Speaker 1 13:02
Yeah, please do. I would love to check that out because that.

Speaker 2 13:05

And I use them because it's, it's always the same when when people play, that's what creative therapy or music therapy. When people play, they are they are relaxed, they are spontaneous and then they're open. That's, that's always the same. When, when people play, that's what children do naturally, and that's what adults they forget about it. You shouldn't, you shouldn't crawl on the floor playing with with Lego. But when you have children, it's normal to crawl on the floor playing with Lego. That's what you. Yeah, that's OK. Yeah. And I I tried to bring him in that state that it's OK to play.

Speaker 1 13:41

Yeah. And then all of sudden, it's OK again. OK, that that's a very good mindset to have. I feel like, yeah, that makes it, yeah, very open. And yeah, with the the oddballs thing that sounds like it kinda, or it can depending how you use it, kinda include like psychomotor therapy as well since it's actually like throwing and catching and stuff like that. So it's a very good mixture in that sense.

Speaker 2 13:55

Yeah, yeah. Yes, that's it's a. It's a perfect mixture, yeah.

 Speaker 1 14:19

Very nice. Thank you. I I'll definitely have to look that up afterwards.

Speaker 2 14:23

I'll send you a link, Yeah.

Speaker 1 14:24

Yeah. That would be perfect. Thank you. And all right one of my next, my next question is what kind of music do you use? But I guess we kind of talked about that it really just is whatever is wanted, right?

Speaker 2 14:26

Yeah. Well, most that's because it's my, I have the most affinity, how do you say that? It's my my expertise is like pop funk music things. So that's what I use most, but well with a 6 year old you you use different music than with a 63 year old. That's my oldest patient. So it's very different.

Speaker 1 15:08

OK. And that kinda then because, I was also wondering if it's dependent on specific situations. So you would say then or I'm trying to put words in your mouth, but would it then be that genre differences would be, are often there due to like age differences or are there any other factors as well where preference of the patient maybe or something like that?

Speaker 2 15:36

Yeah, I have an example. I had a a boy with autism, and he was very like Autist scanned. He had a very specific focus. And for him it was, you know, the park, the Efteling. It's a it's a park. It's a very in Holland, a very famous park with a roller coasters and with. How do you say?

Speaker 1 16:05

And the amusement rides and stuff like that. Yeah. Yeah, yeah. I think I know which one you mean, but yeah.

Speaker 2 16:07

Amusement park. Yeah, yeah, yeah. But it's. It's a it's a very typical park with a like a fairy tale fairy tale ish like. And they have very specific music in every roller coaster has its, and every fairy has specific music, and he was very focused on that music, and he said I want to play that music but he he wasn't able to play it but I I never say you can't

do that so. I I played with him, that music, I, I improvised it with him so.

It was good enough and then we made a movie, a video about this park, one of the fairy tales in this park. It's a boy that beats a dragon. He played the boy and I was the dragon. In this, we made a video and then we played the music. The typical music from this park we played under the video so that, that's a very specific thing he wants to do so and.

Speaker 1 17:12

Yeah.

Speaker 2 17:16

I would never say you can't do that. Never. You always you always have to find a way that you can.

Speaker 1 17:26

OK. That that's very interesting. And so then yeah, when it comes to genre, then it really is just open to there's no limit, OK. The. Yeah, 'cause. I. I was wondering then if like an implementation like if it was only one genre for example, then it would be kind of pointless to try and make it in a way that multiple genres can't be included. But with this statement makes it very clear that should be the case then.

Speaker 2 17:33

There's no there's no limit, there's no limit, no. Yeah, I have another example that a boy, he's 15 years and his father left him when he was one or two. His father, he, he ignores him. He started the new family and the boy is ignored and he comes, he comes to me with music he wants, he wants to sing. I sing with him and he, he, I say, what do you want to sing? And he comes with songs that can't be sung. It's like a drill rap. You know, drill rap, it's very aggressive.

Speaker 1 18:24

OK, OK. Yeah, I know.

Speaker 2 18:30

I can't use it but. The boy tells me something with with this drill wrap, he says I'm angry and I, I'm full of aggression. So he brings his music, we listen to it together and then I say, OK, I hear you're angry. I hear you. But I think when you want to sing, you have to use something else. We can use this song or this song and and.

I sing very emotion, very emotional songs with him like John Legend or whatever, but not his drill rap, but I listened to his drill rap, and we talk about it and.

So, his story comes to me by his music and we work, we work on it with the music I bring. So I, I don't exclude his music, but I, I take it into therapy, but I don't use it for singing because I, it can't be sung.

Speaker 1 19:33

Yeah, that's definitely true, yeah.

Speaker 2 19:34

But it's part of the therapy. If I would say no, this we can't use this, then I, I shut the door because he opens the door by bringing this.

Speaker 1 19:43

Yeah, that sounds like a very good way to kinda like mesh it together, then, then even if you can't sing it, he can at least still bring how he's feeling and like, at least through discussing it, then you can kind of get maybe not to the bottom of it, but at least open up. And yeah, maybe a bit of why.

Speaker 2 19:57

Yeah, yeah. Right. Yeah, so. Yeah. So I have to find a way to use his music.

His, his input is I, I'm. I have to depend on his input. If he doesn't bring anything, I can't work with him. So when he brings something, it's not up to me to say well, no, I can't use this, it's, it's not, it's not good. So I have to incorporate it.

Speaker 1 20:18
Yeah, there has to always be a way to kind of incorporate what they bring. OK. OK.

Speaker 2 20:34
There has to be, yeah, right.

Speaker 1 20:39
Sounds like a bit of pressure I'm not going to lie, but I mean. Yeah, I guess that's part of the job then.

Speaker 2 20:45
Yeah, that's part of the job.

Speaker 1 20:48
And I guess we we we've kind of touched base on this, what kind of elements in music therapy do you consider to be important?

Speaker 2 21:01
Kind of elements. You mean personal elements or musical elements?

Speaker 1 21:12
If you have something to say about both, I'll, I'll gladly hear about it.

Speaker 2 21:16
OK, I think in in musically I think for example, a rhythm is a very, rhythm is one thing about rhythm it it's very organised when you play a rhythm, somebody who wants to have control or somebody who wants to. How do you say delegate? That something is clear to him.

Speaker 1 21:51
OK so.

Speaker 2 21:51
That you have übersicht.

Speaker 1 21:55
Yeah, OK. I know what you mean. Yeah, like overview, I guess in english, yeah.

Speaker 2 21:58
OK. Yeah. So rhythm is very structured. For some people, that can be very relaxing or it can give them the feeling of control.

Speaker 1 22:13
OK.

Speaker 2 22:13
And rhythm is very simple thing to do. You can, you don't need anything to make rhythm. You can, but when you have, when you have a drum, you anybody can play a drum.

Speaker 1 22:19
Yeah.

Speaker 2 22:26
You put your hand on it and it works. For example, a guitar is it's very technically and motorically a very difficult instrument. Left, right has to be combined. Eye with hand has to be combined. You are working on millimetres only to make one good sound. For a drum you can play it immediately.

Speaker 1 22:52
Yeah, you just hit it with a stick.

Speaker 2 22:54
Or without a stick with your hand, or even without a drum, you can play drum.

Speaker 1 22:56
True, actually. Yeah, very true, actually, yeah.

Speaker 2 23:00
Without a guitar, you can't play a guitar and with the guitar you still can't play guitar.

Speaker 1 23:06
Yeah. OK, that's very true

Speaker 2 23:06
So it's so that's the different, for example, a voice, everybody has a voice, but 59% of people are afraid to use it to sing. They are ashamed. They are afraid to be out of key, whatever. But anybody, anybody has this has a voice.

Speaker 1 23:30
Sorry. So just with the voice thing, if it's.

Speaker 2 23:32
So I yeah, so. How do you say? Easy to step in, it's a rhythm. You can, you can, when you give a child a drum within 10 seconds you are playing.

Speaker 1 23:51
Yeah.

Speaker 2 23:53
When you ask somebody to sing, they say no.

Speaker 1 23:58
That I can imagine yeah. Beause I I guess with the voice it's very. Sounds very easy to be wrong, kinda. So people are kinda scared to do it then, or there's that there's more fear in there, I guess, OK.

Speaker 2 24:10
Yeah. Yeah, yeah, yeah. OK, so that's very. Yeah, sometimes playing the piano can be very relaxing thing to do, or very yeah. It's the same like on a drum when I play the key of C, it sounds like a C, a perfect C. When you play the same key, it sounds like a perfect C too. From that view, it's a very simple instrument

Speaker 1 24:41
Yeah. OK, that's that's definitely true. So just to kinda reiterate the,, with when it comes to rhythm that that seems as I'm hearing it, that seems to be a very good entry way kind of especially if people.

Speaker 2 24:53
Yeah, that's the word I was looking for. Yeah. Yeah, I very often I start with the rhythm.

Speaker 1 25:00
Yeah. Yeah, yeah, yeah. I mean that makes sense then because, even if you don't have experience in music in any way, then it's still very easy to kind of pick up and get into it kind of, it seems.

Speaker 2 25:10
I think everybody has experience in music, but they don't know.

Speaker 1 25:16
OK.

Speaker 2 25:16

There's music, there's always music all around us.

Speaker 1 25:20
Hmm, that's very true.

Speaker 2 25:20
Everybody listens to music, so you have experience with music.

Speaker 1 25:25
OK. Yeah. I mean interesting point of view because I guess if you've heard of enough, there's probably somewhere in your brain that you can kinda then start playing or making even or yeah.

Speaker 2 25:26
And your body is, is working on rhythm your heartbeat your your bloodstream. Your nerves. How do you say?

Speaker 1 25:51
Like when they're sending inputs and.

Speaker 2 25:53
Your nerves. What your brain sends to you it's all in rhythm.

Speaker 1 25:58
OK.

Speaker 2 25:59
There's more rhythm to it to you than you think. That's what I tell people. Always. You, you are walking a rhythm machine.

Speaker 1 26:04
Yeah, I definitely. Yeah, I haven't even thought of that. That's actually a really cool idea.

Speaker 2 26:10
When you walk, when you walk, for when you walk in the street. That's, that's a perfect rhythm. There's nobody in the world except when you have a wooden leg, ut when you have two normal legs you're walking is a perfect rhythm.

Speaker 1 26:29
OK. So that's very interesting actually. I didn't even like thought about that.

Speaker 2 26:34
Yeah. So it's very natural. Rhythm is something very natural, but we are often afraid to, to use it like, like a voice. People say, well, I know I don't have rhythm, so I can't play drums. I think anybody can.

Speaker 1 26:48
Yeah, it seems like I can't use that excuse anymore.

Speaker 2 26:53
No.

Speaker 1 26:54
And just to kinda move on then as you know then the, the goal of the project on my end is to, yeah, implement music into this VR setting. And the, my initial plan is to yeah, transfer what I can, which then is a one to one. But obviously with VR then the goal is to expand upon it, right, and make it something more. So it's not just the same thing.

Speaker 2 27:19
Yeah.

Speaker 1 27:22
And in that kind of mindset, then from what we just talked about, what would you think is suitable in the VR setting or if all of what we just talked about would be like a good

thing to put in VR, essentially. So like we just talked about the the rhythm and.

Speaker 2 27:43

Yeah, well, it it would be nice to have to have rhythm in it, there is a little bit you, you saw the piano in the VR.

Speaker 1 27:52

I did see the piano, yeah.

Speaker 2 27:54

Yeah, but it's very I think the problem is for music you need you need synchronisation in the sound with the, with the, with the graphics.

Speaker 1 28:11

Hmm. Yeah, very true. Otherwise it's immediately like offbeat. Yeah. OK.

Speaker 2 28:12

That',s that's, that's that's often a problem. Yeah, I think rip it would. I would like also that. And maybe that's, that you can, do something with the singing, because what people, what people are afraid of is to sing because they they can be heard and they can be watched. And if you are in VR, my experience is that people in VR, they, they lose their fear. They get away from their environment, they they are in a in a bubble., and so that fear of singing, it's gone.

Speaker 1 28:59

OK, that's very interesting. Yeah, I didn't even considered singing really though.

Speaker 2 29:01

What if you had some kind of a karaoke like thing in VR?

Speaker 1 29:11

Yeah.

Speaker 2 29:13

And that you could, that your avatar could be changed to what you sing. For example. I don't know if that's technically difficult, but.

Speaker 1 29:26

I'd have to look into it, I honestly, I'm not sure myself, but yeah, that that's a very interesting point. I hadn't considered like singing. Actually, I was very mind set on, like playing instruments or like a a MIDI controller and like a music production. Like that kind of direction's what I was thinking, but I mean that sounds like a real advantage with VR then, if people become less I mean self-conscious, I guess about singing or something and then it can you can take advantage of that then it seems. Yeah.

Speaker 2 29:58

I've seen children who before a session said to me I won't, I'm not gonna dance or sing, and then they were in in VR and they jumped all around the the room. They forget about their environment and that's something you could use in, for example, making people sing.

Speaker 1 30:23

OK. Yeah, that that's that's very interesting actually. Yeah. So the the kind of being put in a new environment. So the VR environment then is just a very good way to, yeah, I guess make them forget about their real world like self-conscious ideas.

Speaker 2 30:43

And maybe. When you talk about rhythm, I sometimes do a play with children with the drumsticks. I start on the on the drum and then I go around the room. I make a rhythm and I keep the rhythm going by hitting the table, the chair, the walls, the, the, anything I

can can come to, but I keep on playing. What if you had in in, in this VR environment that everything you touch can have a sound. So when you when you tap it, it's it makes a sound. So you could make a rhythm by the things that are already in the room.

Speaker 1 31:27

Yeah, that'd be very interesting, actually. And yeah, I so like, yeah, you can see like, I guess walls and then different things in the room and if you know, if you hit them, it just makes different sounds. OK. Yeah, let me. That's actually that's a good idea. Actually, Igot to remember that.

Speaker 2 31:39

Yeah.

Speaker 1 31:46

But just to move on, because I see we're a a bit over time, I'm sorry already.
Yeah. So my my next question was what kind of thing would help in making a meaningful experience for a patient? But it it seems to be, I feel like it's kind of been discussed without being said already,it's about, yeah, giving people the freedom to, actually bring their stuff into it, it seems, and incorporating it in some way to make it meaningful for them.

Speaker 2 32:23

Yeah, that's that's very nice said, nicely said.

Speaker 1 32:26

Thank you. Is there any other things you think that go into making a meaningful experience then? Or is that kind of like the gist of it?

Speaker 2 32:38

I think it's it, it becomes meaningful when when when somebody feels, feels hurt. And and that that's that's what you say.

Speaker 1 33:01

OK, and I, I guess that then also goes into what we talked about earlier with the realixation, if they actually feel that relaxed state then that would also contribute to this experience then. And I guess you've touched upon this a bit as well, but I was also wondering what kind of clients do you have or like what kind of people do you have as clients?

Speaker 2 33:18

Now at this moment.

Speaker 1 33:20

Oh, I mean. Lets go with now, in this moment, yeah.

Speaker 2 33:27

I well, the, the youngest is 6 and the oldest is 63 as I told but, the main group is I would say from primary school and teenagers until until 18.

Speaker 1 33:48

OK. Like high school? Yeah. OK. OK. And does this include children who have like autism or like anxiety and depression or OK?

Speaker 2 34:00

Yeah. Yeah. We have a lot of children with autism or ADHD. Is that is that English? Yeah. Yeah. OK. Oh, it's an English term, right?

Speaker 1 34:12

Yeah, that's right.

Speaker 2 34:17
But also a lot of anxiety problems and it, it a lot, a lot comes to self esteem.

Speaker 1 34:27
Oh.

Speaker 2 34:27
They have they lack self-confidence.

Speaker 1 34:30
But often then it boils down to that core.

Speaker 2 34:34
Yeah, yeah.

Speaker 1 34:36
Problem I guess for a lack of a better word, OK.

Speaker 2 34:37
Yeah. And in a lot of you could say, boys they, they start acting out, they, they start fighting and and girls they take it in. That's a very generalistic way to see it, because it's not, but that's, that's very often what happens.

Speaker 1 35:03
And I guess then this is up to you to kind of be able to bring them out of that to actually maybe then have some self-esteem, I guess long term goal wise but.

Speaker 2 35:03
So. Yeah, yeah, yeah, yeah. I always try to work with the, how you say the healthy part of someone. Make that stronger, ake some somebody aware of it's healthy part, or healthy me, I would say.

Speaker 1 35:32
Yeah.

Speaker 2 35:33
And from there try to, to get hold on the yeah, the the less healthy part or the, the problem part. So I think music is a very good way to make somebody see that not everything you do is bad, so and you can have fun and you can feel good about something you made like that, and then, and then you you get more grip on the on the on the bad part, so that, that somebody thinks I never do something right and I'm nothing and everybody hates me and I like that so.

Speaker 1 36:18
Hmm. And I I guess then with music, at least if we're thinking of like the, the self-confidence issue. If you can actually get them like more relaxed and playing or making I guess then that can also very much help with that because it it it shows like oh you can do something you like, and you can build off of that then right?

Speaker 2 36:35
Yeah. Yeah, it's it's as simple as that.

Speaker 1 36:43
Maybe a bit late to this question because we we've already kind of discussed a bit of therapy in VR, but how do you feel about music therapy in the VR environment?

Speaker 2 37:03
How do I feel about it?

Speaker 1 37:07
Are you open to it?

Speaker 2 37:09

Yeah, sure. Yeah. Yeah, I think it it has a lot of possibilities like the one I mentioned about the singing.

Speaker 1 37:10

Yeah. Yeah, definitely. Yeah, I didn't even consider that but that's a very good possibility. I think you're absolutely right with that.

Speaker 2 37:18

Yeah. Yeah, yeah.

Speaker 1 37:24

Yeah, the reason I asked this is in case someone were to say no, like they weren't open to it, I'd ask why and then see if I can fix that problem as well, ut yeah.

Speaker 2 37:36

Yeah.

Speaker 1 37:37

Yeah, because yeah, if a music therapist weren't open to this, I would kind of put a damper on the project, but it if I can figure out why, then at least you know, then it can maybe change their mind, you know, and actually get them open to. Yeah.

Speaker 2 37:50

OK, OK. You don't have to change my mind.

Speaker 1 37:55

Yeah. Well, OK, perfect. And then just to kind of round it off, because I've already gone a bit over time. I'm sorry. I, I hope I'm not keeping you from anything.

Speaker 2 38:09

No problem. I talk too much.

Speaker 1 38:14

Very good points though. I love to hear it, this was great. Yeah, so for my kind of closing, are there any examples of VR therapy that you would like to share with me?

Speaker 2 38:26

I already did.

Speaker 1 38:28

Yeah, exactly. If, if anything else pops to mind, please send them by message that that would be great. I, I know I'm kind of putting you on the spot right here to just feel like, yes, think of something, but. Yeah.

Speaker 2 38:43

No, I think I mentioned some good examples, so.

Speaker 1 38:48

I think the oddballs one is a very cool example. I didn't know about it.

Speaker 2 38:50

Yeah, yeah.

Speaker 1 38:56

And yeah, is there anything else that I didn't ask that you would like to share about? Like if you think I'm, I'm missing something from my questions or if I kinda.

Speaker 2 39:04

No, no, no, no.

Speaker 1 39:05

OK, perfect.

Speaker 2 39:09

How many interviews do you do for your research?

Speaker 1 39:12

This is my, this is my first one and I'm hoping to do at least one or two more. I'm waiting on some answers right now. Someone else I wanted to interview isn't able to, but she said she'd emailed her colleagues, so hopefully I'll get some replies from that. So yeah, I I think one or two more of these kinds of interviews is what I'll be doing.

Speaker 2 39:15

OK. Good luck with that

Speaker 1 39:38

Thank you. And I, I think this one already has given me a lot more context as to how this kind of works and what I could be doing as well so that it was very good. Thank you.

Speaker 2 39:45

OK.

Speaker 1 39:57

All right and just because I will be going over these interviews again, obviously to kind of yeah, pull out all the ideas and if I realise there's something kind of either unclear to me or I would want more explanation, are you OK with me sending you a message asking maybe for a clarification or something?

Speaker 2 40:15

Sure. Yeah, you can, you can contact me if you if you need to know more.

Speaker 1 40:16

OK, perfect. Thank you very much.

Speaker 2 40:22

OK. Yeah.

Speaker 1 40:24

That's it from questions on my end. So I'd like to thank you for joining me on this interview.

Speaker 2 40:26

You're welcome.

Speaker 1 40:31

A bit longer than I said it would last, but.

Speaker 2 40:33

Yeah, it's no problem.

Speaker 1 40:36

And yeah, thank you very much, and if you want, I can keep you updated on how this project goes as well.

Speaker 2 40:42

Yeah, I would like to. Yeah, please.

Speaker 1 40:44

Well, I guess either way you will be definitely hearing about it anyway.

Speaker 2 40:48

You will be famous with your research.

Speaker 1 40:51

Not the the goal, but as long as I can help implement something meaningful that that'll be a success for me, I think.

Speaker 2 40:59

OK, do you play yourself?

Speaker 1 41:02

Yeah, actually, I play the trumpet. Yeah, it's been a while, you know, uni stuff gets in the way, but I want to try and make more of a habit again out of playing it because I know I always enjoyed it.

Speaker 2 41:17
I'm always enthusiastic when people play wind instruments. I'm a saxophonist.

Speaker 1 41:24
Oh, OK, nice. Alto saxophone or?

Speaker 2 41:31
Tenor and Baraton.

Speaker 1 41:32
Tenor and Barretton OK. It's the big one, right?

Speaker 2 41:35
Yeah, yeah. The one with the curl, it's a big one, yeah.

Speaker 1 41:36
Ah, OK, OK. I think I know which one you mean. Very nice. Yeah, I also very 180, but I also do or I used to do metal vocals as well. It's, it's very two different things, but. Yeah, both very fun.

Speaker 2 41:59
Like you know Ronnie James Dio.

Speaker 1 42:05
I know Dio I didn't know if that was his names, but.

Speaker 2 42:09
The band Dio the metal band deal. The, the singer Ronnie James Dio. Small guy. He was a trumpet player.

Speaker 1 42:11
Oh really? I did not know that. That's really cool.

Speaker 2 42:18
Yeah, yeah, yeah. So it's a good combination.

Speaker 1 42:24
Yeah, clearly.

Speaker 2 42:27
And, you know, Flee the bass player from Red Hot Chili Peppers.

Speaker 1 42:34
I know, I know the Red Hot Chili Peppers. Yeah, but.

Speaker 2 42:35
You know the, the bass player?

Speaker 1 42:41
Not visually at least, but yeah.

Speaker 2 42:42
You should check him out, he's he's brilliant. But he was a trumpet player.

Speaker 1 42:48
All great things start from trumpet I guess.

Speaker 2 42:54
OK, well good luck with your with your interviews.

Speaker 1 42:56
Thank you very much and, yeah, thanks for doing this and for giving me a lot of new

information.
Speaker 2 43:10
OK.

Speaker 1 43:10
Stuff that you just don't get from reading papers. I feel like like there was a lot of info here that I never would have even thought of. If. Yeah, if I'd just been reading science papers and stuff like that. So yeah.
Speaker 2 43:21
OK. That's nice. That's nice.
Speaker 1 43:25
Alright. Yeah, I hope you have a nice rest of your day, and yeah, once again, just thank you.
Speaker 2 43:33
OK. Bye bye.
Speaker 1 43:35
Bye bye.

Appendix E

Speaker 1

Ok, now it's recording and so for the first question, how did you get Involved in music therapy?

Speaker 2

Yeah, that's actually like, immediately like a deep question, I guess. Well, I was always like thinking to study medicine and stuff. Umm, like I wanted to do something to help people and I was very interested in biology actually. But then I was also playing music a lot like the saxophone and stuff, piano also. And then I was thinking, oh, yeah, am I going to give that up? Because, yeah, you know, medicine is quite a hard study and you have to put a lot of time in it. I knew when I was going to study medicine that I yeah, was not able to practice like anymore I guess, or just a little. So yeah, and then I was like, oh, no, I'm going to do something with music, and now I'm going to be a performer and stuff. But yeah, there was also like not the greatest option for me because I was, yeah, am I gonna do this? Do I wanna put so much time in and making music or, you know, there was something else what I wanted, you know, there was like what I'm going to do about this? And then I found this study, like music therapy, and for me, it was like the perfect combination of both, because then I could help people, and make music. So eventually that's why I decided to do this study, I guess.

Speaker 1

Ok, very nice. It's the kind of answer I've been hearing a bit where it's like wanted to help people, but really wanted to still play music because, yeah it's the kind of answers I've been hearing. How long have you been involved in music therapy then? Because you're now fourth year student?

Speaker 2

I'm a fourth year student. So yeah, I guess four years now, yeah.

Speaker 1

But you've already had some practical practice then I guess from what I understand as well.

Speaker 2

Yeah, I've been playing saxophone for like 15 years, so it's quite a lot I started when I was 7 and I'm 22 now and yeah, so, I started with classical music and then made a switch to jazz and stuff.

Speaker 1

That's cool, that's cool

Speaker 2

So now I'm playing a lot of jazz, and yeah, I'm still performing a lot as well. But yeah, this therapy for me is like the core where -

Speaker 1

That's like the main thing

Speaker 2

Yeah

Speaker 1

That's very nice, I like to hear that, that you still get to perform as well then. And so I get the easier stuff out the way. Let's get a bit more in depth than that. What do typical

sessions for music therapy look like? If you want some kind of more detail for it, it's like a for example like how long does it last? Like one session for example.

Speaker 2

Well, I think I've already told you, I'm working with children so normally, like my music therapy sessions don't last very long because like their attention is gone by like 30 minutes. Like most of my sessions, take 30 minutes.

Speaker 1

OK.

Speaker 2

But I'm also involved in groups, and then it's most of the time longer than 30 minutes because you have to like, really dive into something and you can't do that in 30 minutes with the group.

Speaker 1

Yeah, definitely.

Speaker 2

So most of the time, that's like. Yeah, like one hour.

Speaker 1

OK.

Speaker 2

And yeah, music therapy session for me is like always different, I guess with every job because you really adapt to what the child is needing. And umm. Yeah, so I really make a special plan for every child, and every child has his purpose. Yeah.

Speaker 1

Yeah. So you don't really necessarily follow the like classic therapy 45 minute procession thing. It's very much adapted to the kid.

Speaker 2

Yeah, like at every. Yeah. Like, at my, at the place where I'm working is very free, and some of the children I see, like for one year. So that's a very long time, but there are also like a lot of places where people have to stick to like a 10 week plan and then they really have to like, oh, yeah, in 10 weeks I want to get to this goal, but for me that's like different because, because sometimes I see the children for one year, so I can really spread it out for that year. But then it's like very important to keep the purpose of the kid in your head, and like, did he already get there or do we have to adapt the purpose or like change it a bit because it's already done? So that's yeah, that's the thing with a very long time period then you have to like really keep the purpose in had like, yeah.

Speaker 1

Keep the goal in sight pretty much and make sure not to veer off that kind of path then. And yeah, and with that then though, if you reach the goal like earlier than you thought, could you then go try and have a new goal with this kid, for example? If you want something else or?

Speaker 2

The thing is like sometimes, we say are we like, come to the conclusion, like oh yeah, no, it's not necessary anymore, this kid has reached his goal. Yeah, we're going to the end. It's done for now, but sometimes when you reach a goal and then sometimes that's like something else you can work on. Especially during giving therapy, you're like, always observing, like what's happening.

Speaker 1

Yeah.

Speaker 2

Sometimes when a kid comes to you with this goal, this is what we have to work on. Something else is popping up, and then you're like, oh, yeah, maybe we can work on that. But yeah, it depends on the kid as well so. Of course, like money is also a big thing, so if we think it's, it's done and like the kids reach his goal, then it's like, yeah, it's over. But when we are really thinking this kid could use some help with this too, then yeah, we can get money for that too. Like also like, yeah, I'm working with other disciplines as well, so, we're really diving into that, so yeah.

Speaker 1

OK, OK. And in, in these kind of sessions, what kind of activities do you do with the the children? So, I assume it ranges quite a bit like, not everything but few examples would be great.

Speaker 2

Yeah. So I'm working in the child rehabilitation scene. So it's all about, it's like children with a physical disability. They all have a very different physical disability. Some of them have like one arm, some of them one leg. Some of them are fully paralyzed in a wheelchair. Some of them lost their speech, so it's like a physical thing. And yeah, I'm working with them through music on their rehab. So for example, when I'm working on speech, there's this thing SNTA, It's like a very specific way to train speech. It's like with a guitar, and we're also working with, what's the word for local but is? Let me look up the word because it's important.

Speaker 1

Yeah, of course.

Speaker 2

They really say like speech therapist, but OK, like, yeah, we're working with speech therapists as well. Then we have like a very specific way to teach specific sentences or words or, just like the I A O E, the really basic stuff, because some children can't really speak.

Speaker 1

So actual sounds.

Speaker 2

So then you have to start at the basics again, but like music is in another part of the brain than actual speech. So yeah, when you're like busy with music then you can make the connections between music and speech again.

Speaker 1

OK.

Speaker 2

Then you can learn to pronounce stuff better, like learn certain words better, through this way, so speech is a big thing at our place. And I'm also working on motor skills, so with children who are like having a hard time with using their hands. Playing piano or playing drums because then they have to use their hands and like very specific movement of course.

Speaker 1

Yeah.

Speaker 2

And I'm of course I'm a saxophonist, so also, doing much with breath, with children with muscle disease, Duchenne is a progressive muscle disease, so eventually they're going to die of their muscle disease. Very sad but.

Speaker 1

Yeah, but.

Speaker 2

Of course you are like you are breathing and your lungs are also like a muscle, so we try to keep that in intact for a long time. So then I'm playing saxophone with them there, using an electric saxophone and I'm using my. own

Speaker 1

Oh okay

Speaker 2

And then through improvising where I trying to control the breath and like all right, deep breath in, all right, blow. And then we're gonna improvise and make some music and then. Yeah, it's like the fun factor is a big thing because.

Speaker 1

Yeah, I can imagine.

Speaker 2

When they have to do breathing exercises without music, then it's a bit boring, actually and It's hard to practice that at home as well because they don't have motivation for that, and with music it yeah, it's quite fun. Then they like to do it. And yeah, that's like more of the practical thing I do in sessions because like, these children have also like, a lot of emotions that are like coming out because, yeah, their physical disability.

Speaker 1

Of course.

Speaker 2

So there's a lot of frustration and sadness and they're always trying to keep up with their brothers and sisters, and sometimes that's a hard thing to do because they are physically ill and their brothers and sisters are just healthy and stuff so. Most of the time, we're also like working on acceptation of the disease and then yeah, I'm using songwriting quite a lot like. Umm, so they can put their thoughts on.

Speaker 1

So it's kind of like an emotional outlet

Speaker 2

Exactly so, they're making a song about it and yeah, then I'm always asking, like, so how are you feeling today and what do you want to, what do you want to talk about? Then we're going to put like some words or a mind map or something like that. And then we're making some of them, always asking, oh, so what chords should I play? What do you feel like is most, yeah, does fit into the song, so I really give them an opportunity to like, yeah, to really tell what they're like feeling at the moment and yeah, so it's quite, quite a lot.

Speaker 1

Yeah, I thought it was quite interesting to hear about that, actually, physical and practical things like you said, cause like in my other interviews, it was a lot more, I guess in the, the fun or like the actual just playing the music, but I can tell that, that like the breathing exercises, for example. I can definitely imagine if you're just doing it breathing, it's very doom and gloom, kind of. Oh, I have to do this because of this, but if

you're at least playing saxophone or instrument, it's at least like I'm doing this for fun as well

Speaker 2

Exactly. Yeah. I think it's like, you know, the emotional stuff, people are always like, oh, it's a bit, it's a bit vague, you know? Like, I don't know what I should expect of this unless they're seeing what we're doing. Like, I'm really like, oh, yeah, you should just go with me and, like, see what I'm doing in my therapy sessions, because then they get a get an image of that, but like with the practical stuff, it's very people get that, you know, it's like much more, It's also like much more proof, you know. It's like, yeah, lot of investigation about it and. Yeah. So that's most of the time also with when I'm working with another discipline. I don't know how to. Yeah. It's just like we have specific rehabilitation doctors, so, we're also like, really diving into the physical things with them, like combining our knowledge and get to the point, yeah.

Speaker 1

Yeah. So you can, so you can kind of get he best exercises for lack of a better word, for the child in that specific situation.

Speaker 2

Exactly. So there and I can really specialize in the in the physical things. And then we're like, oh, yeah, so maybe we can use music in the way to prove this physical thing, yeah.

Speaker 1

Yeah, that's I've been seeing a lot of that as well where like if you can collaborate like two different kind of therapies and practices like that it really has much more beneficial effects than just one of them, for example.

Speaker 2

Yeah, exactly.

Speaker 1

It's really cool to hear. And I was also curious, although I guess you kind of it a little bit, what kind of music do you? So you said you mainly play like saxophone and piano.

Speaker

A little bit.

Speaker 1

So like classical instruments that you usually tend to go to or?

Speaker 2

Yeah, that's also different because I also use producing a lot.

Speaker 1

OK.

Speaker 2

I have this little child and he's very into like making beats and stuff. So I also use Ableton Live.

Speaker 1

Good choice.

Speaker 2

Because it's like an easy way for children to like I, you know, I make my own songs too. So I'm also like, used to producing and stuff and. Yeah, but like Ableton Live is like a an easy option for the children to like, just choose something, you know, that's already there.

Speaker 1

Yeah.
Speaker 2
The loops and stuff. Because otherwise it's like it's a bit too hard to make an actual beat from scratch, you know?
Speaker 1
Yeah, definitely.
Speaker 2
So these loops are like very yeah, very nice to use for children. And sometimes it's a bit like the letters are a bit too small, but then I'm just helping them, you know, to pick one. So then we're using Ableton Live, and then most of the time when we made a beat, then we use this beat in another program, SONAR actually. Yeah, it's a bit of a band lab program, you know, so you can just. It's like Logic but. So it's almost the same as GarageBand, so it's it's a bit, it's a bit easier than Ableton or FL Studio, you know.
Speaker 1
Yeah, a bit lower down.
Speaker 2
Exactly. So then we're using like the beats in that program, and then we're recording other instruments as well. So we do a lot of recordings as well. And we also use a lot of different instruments. Actually there's this man at our place, he's like, making instruments for children with special needs.
Speaker 1
Oh that's cool
Speaker 2
Because some of them are like in a wheelchair and they can't play a normal instruments and we have instruments like the magic flute. Magic Flute is an instrument also with software and, like you can put the skills into the software and then the children in a wheelchair can just like only have to blow and move their head up and down and with moving their head up and down they're gonna play different notes. So then like, way high low actually. So that's a very nice thing and we also have like guitar, you can play with foot pedals, so the foot pedals make sure you change the cords. What do we have? Also things you can move with your eyes. So yeah, so when you look at a certain color. Like there's like a circle and then it's called the Eye Orb. And then like, the the skills are in circle, and if you're looking at the colours of the circle then the instrument's gonna change. So yeah, that's that's quite cool actually, because it's like and that's very special for our place because it's like, of course we are doing rehabilitation and we work a lot with children who have very special needs and who just can't play an actual instrument. So yeah, that's a very nice thing that he's like, really involved in making these instruments.
Speaker 1
Yeah. It's great to hear because it also makes a much more accessible for even more people than. I feel like music obviously should be accessible to anyone because it's such a yeah, as music therapy shows, it's a very powerful tool if you apply it like how you been applying, for example.
Speaker 2
Yeah, exactly.
Speaker 1

Yeah, it's amazing. So yeah, just kind of reiterate then like the kind of music that it's just kind of very dependent on what the kid wants to do then I assume, it sounds like it's like if they want to make just a trap beat, for example, that's kind of what you'll go for, or they want to make something classical.

Speaker 2

Yeah. So like, yeah, I really have to dive into also like into the pop music. That's like, popular at the moment.

Speaker 1

Yeah, I can imagine.

Speaker 2

I'm much more of a neo soul jazz musician, so sometimes it's like Oh yeah, now I have to listen to pop music.

Speaker 1

You ever have any kids into metal or something.

Speaker 2

Have I kids into metal? Yeah, sometimes I have, like children who are like 14 or 15, you know, like, that's when they get a very specific taste. But like when they're a bit younger then most times, it's like, oh, I just listen to the hip hits, you know, like.

Speaker 1

Yeah. Whatever's big at the moment.

Speaker 2

And when they get a bit older, when they're like in their teenager years, then they get a very specific music taste and then you sometimes have children who are into metal or rock or, yeah, hip hop, a lot of.

Speaker 1

I can imagine

Speaker 2

Yeah. So it's a very broad spectrum of music, I guess, yeah.

Speaker 1

Yeah, I'm only asking that because with my thing, if it's really like play whatever kind of music I obviously have think of that right. Can't just be like this one kind of genre because then yeah.

Speaker 2

It's not the thing I also used to play childish songs, you know, like.

Speaker 1

Yeah.

Speaker 2

Songs who I'm playing to the three-year olds, it's very different.

Speaker 1

Yeah, yeah, of course. And yeah, I think you kind of touched on it a bit, but what kind of elements do you consider important in these kind of sessions? Which I think then it would be like the yeah, for like, the physical needs for these children, it sounds like are the very important element, they can actually. I'm not trying to put words in your mouth, but that's kind of what it sounds like to me.

Speaker 2

Yeah. It's like of course the, the physical things are like very important. At my place especially. But yeah, we really shouldn't forget about the emotional stuff as well,

because that's like. No, also when a child like has physical problems and you work, you work with them on their physical problems. They're like, oh, yeah, OK. You're doing great you know, we're going to stop and then it's like. Sometimes we think, oh, yeah, now it's now it's done, but like the core of like their problems is also like very emotional, because they had to live with their physical disability for a very long time, and it's like always in their head like I have, I always have to live with this and. Of course you can get better at doing certain stuff, but most of the time they don't heal like completely, you know, so. Yeah also the emotional stuff is very important, I think. Just the needs of the children. In general, like really what? What do you want to reach with them and really keeping the goal in your head. I think that's that's very important to do, yeah.
Speaker 1
OK. Yeah. So just keep very clear of the goal for each specific.
Speaker 2
Yeah, like it's sometimes as a music therapist It's like, oh, yeah, so fun and making music and, let's, let's get into it and then the child is like, very musical, and they're like, oh, that's so nice, and then you're like, what was I working again? You know? So and I think it's sometimes you, yeah, you lose the goal for a bit. Okay, now I have to really dive into it again. What am I working on with this child? Because eventually we have to reach that goal because otherwise it's for nothing, you know, and of course it's fun. It's a fun factor, but we're music therapists, so we also have to work on something, actually.
Speaker 1
Yeah, of course. OK. OK. It's cool to hear a different answer like that because with the other person I interviewed for example. It was more of a practical element for them, but they said, like rhythm, was a very important thing because regardless of if you play an instrument or not, everyone has a rhythm, even if they say they don't. Which he liked to point out, but it's cool to hear a different answer like that, which isn't necessarily a practical thing in that sense.
Speaker 2
No, and for me, also like if it's about music. Specific then improvisation is for me it's very important like I always, I always work through improvisation because then, I think when you're working with improvisation, then like the emotional stuff is coming out much faster than when you're working on a specific song.
Speaker 1
OK.
Speaker 2
Of course, like sometimes, children are choosing songs, I want to play this, of course you go on with that. But then it's like much more about teaching a skill, you know, and that's not what I'm that's not what I'm doing.
Speaker 1
Yeah. Yeah.
Speaker 2
Like the most important thing I'm always saying, but that's in dutch. I'm gonna, like, translate it in English real quick. Yeah, like I always say, in music therapy, music is not, Is not the purpose, but music is the resource.
Speaker 1
OK.
Speaker 2

So like when you are like teaching something, then like music is a skill, but in music therapy, music is a resource, so you use it to get somewhere, and like when you're teaching you. Do you get what I mean?

Speaker 1

Yeah, I understand what you mean. Where instead of it being just the, the end thing, kind of it's the way to get to the point.

Speaker 2

Yeah. Yeah, this is not the end state actually. Like the, that's the thing, yeah.

Speaker 1

OK. I like to hear that. I was just thinking, makes sense that the Jazz player uses improv

Speaker 2

Of course.

Speaker 1

It makes sense. But how you're explaining it, it makes a lot of sense to do improv as well, then. And I hadn't even thought of that. Yeah, just in using improv can be a fast way to get the emotions out rather than trying to sit down, note for note, write a song or something like that.

Speaker 2

Because yeah, it's very pure, like improv is always very pure. Guess it's like, yeah. What you're feeling is coming out in that moment, you know, so.

Speaker 1

I can imagine that with some kids like the thought of improv can be like a bit, I don't know if scary is the right word necessarily, but a bit intimidating because like even when I played I was always scared to like, do improvisation. I was always like nah, I'll just play sheet music, you know? But is that something you have to kind of hurdle over with some of the kids?

Speaker 2

Yeah. The funny thing is, like with kids, they're not thinking a lot. Yeah. And like with us, it's always like and also like as a musician, you're used to play sheet music. And it's like, oh, yeah. It's hard to just do something from the heart you know, but with children, it's like when they're coming into the room it's like, oh, yeah, can I play drums for today? Then I'm gonna sing. And he's already playing, you know, like, that's how it goes. And they're just stepping into that. Of course there are children who are like very shy. But then I always choose like very small steps to get to like the bigger improv stuff because. Like when we're playing piano, for example, then when a child is like oh, but yeah, I don't know what to play then, like, choose one, one song you know you want to play and then the childs like like one tone. And I'm also going to play one. So. Yeah. Now the second tone and then. That was playing second tone and then we're really going to expand that eventually. And then it's like until the child was like able to just play freely and so you really give him tools to just like, Oh yeah, you, you can go, you know. But yeah, you sometimes you really have to start, like with one tone or like two tones and then. Maybe you, you can change them like if first one the first tone and then the second tone so you know. Yeah it's really a different thing with every child, but I have a lot of children who are, like, very out of the open and there.

Speaker 1

Just sit down and immediately wants to play.

Speaker 2

Exactly. And then they're just going. No stops.

Speaker 1

Oh, I wish I had that. So for my project, as you read an information letter, the goal is to implement music therapy into my, into the VR environment that the client I'm working for has already made. And in order to do that, that's why I've been asking about these different elements because if I can boil down what elements are important, I can try and implement those and hopefully make something useful. Because that would, that would be the thing and then also not making it 1 to 1. So it's not just like, oh, real life, but in a video video game in VR. But rathe to be able to expand upon it. And yeah, do something that, yeah, you can't necessarily do in real life. I don't know what that would look like yet. We'll get there.

Speaker 2

I think you should really get in contact with Ruth That's the, that's the man at our place who's, like, making these instruments because he's also, like, very involved in making games for like briefing exercises like through games and stuff and it's like really into it into. So I think it's a very nice person to have an interview with as well for your project. So I can give you his contact as well.

Speaker 1

Yeah. That would be great. Yeah, actually.

Speaker 2

Because I think he's also like very. He loves like he has his own. He has his own ???. Yeah, he's has his own website and stuff like with. He's also like a very involved in, like, reaching a lot of people.

Speaker 1

OK.

Speaker 2

I think that's quite an interesting person as well, and also he's also like very into music. So, yeah.

Speaker 1

OK. That would be great, actually. Thank you. And just for the elements that you've been talking about now, do you think these would be, well I don't know how much experience you have with VR necessarily, but do you think these would be suitable to kind of put into VR? At least things like improv and yeah, I don't know about the instruments necessarily. But like maybe some of the practical exercises like breathing or something like that?

Speaker 2

Yeah, I, and also for like children, I think it's a, it's a very fun way actually to practice music as well because it's like. Of course, it's very new and I think for children it's like. Yeah, a very new world they can get into and I think that's a that's a very nice thing. If you can really combine it with music therapy and. I'm still thinking like how that will work. Do you have an idea? Like, how do you want to make it work?

Speaker 1

I'm still in an ideation phase. But the one that's kind of stuck in my head. This was also a bit based off my previous interview. This therapist uses just in his sessions he would use the room, whatever's there and just start, you know, tapping wall table all that just to just to try and make a kind of rhythm, or yeah, rhythmic beat type thing. And then he would get his patients to join in. So before you know it, they're all kind of tapping on the

walls, the tables, all that to kind of make the rhythm and that really stuck with me so. Currently that that was the idea that I've been most interested in continuing with my ideation, but. Yeah, with these next interviews, including this one, that is definitely subject to change because, yeah, now I'm get more points of view, you know, on different important things.

Speaker 2

It's gonna be different with everyone, actually, because like, everyone is like specialized in different things and also like it's very own person. And yeah, I think like when you're a music therapist, it's very important to stick to who you are as a person as well because. Umm, when you don't do that you're not going to be pure and people are not going to like you giving them therapy because then you are. Yeah, just doing something they don't feel, you know? So I think, yeah.

Speaker 1

Yeah. It doesn't feel real that it's just kind of I have to do this.

Speaker 2

Exactly. I think we really have to make this connection with your clients. So then if you are like not close to yourself, then yeah, they're going to feel that obviously. So yeah.

Speaker 1

OK. So yeah, it kind of sounds like you'd recommend going into very much one direction for a specific cause, if I were to, yeah, when I'm designing something then rather than trying to put in all these different elements.

Speaker 2

Yeah. Yeah, I don't know actually. I think with VR it's like very different also because like. Because are you gonna do that with like the, how? How does it work?

Speaker 1

Well.

Speaker 2

What is the setup you know like?

Speaker 1

What my clients have done, they just made like a little world. Where they have just a bunch of different stations, kind of where for also psycho motor therapy and art therapy. And I think the goal then is to whatever I designed to be placed in that world that they have. But yeah, it's still very up in the air I gotta say.

Speaker 2

Yeah, get that.

Speaker 1

It's a big challenge.

Speaker 2

It's a very, very cool. I think it's a very cool thought actually, but then. I get it's very big. Like it's very, there's so much you can actually, I think, and I think it's a good thing if you're like, interviewing different people because then you get like different points of view and then you can really, like I think this this could actually work.

Speaker 1

Yeah exactly. And I mean with how that environment is set up and maybe not in the time of my one thesis, but in a longer span, we can implement these different things over time because it's not like they just have one thing for music therapy, one thing for cycle

motor. They have a bunch of different activities. So like. Yeah, maybe not the time of my thesis. Can do all these but.

Speaker 2

Yeah.

Speaker 1

If they're still interested afterwards to maybe implement more other music therapy, type things.

Speaker 2

Yeah.

Speaker 1

OK. And, I was also curious. What do you think can help create a meaningful experience for a patient? Which I guess you've touched on keeping it real kind of.

Speaker 2

Yeah, yeah, keeping it real. I think it's very important also like, creating space I guess, It's like a big thing.

Speaker 1

Like do you mean giving them the space to do something or creating like a safe space for them to.

Speaker 2

Both I. It's like a, space Is a very big word, of course, but, you notice like with creating spaces not like a very literal, it's like, literally it's like. How am I going to explain this? Like when you're in the same space as, as your client, they're like, think you really have to feel the energy of like what is he about? Or what is she about? What is he feeling, you know, I've had this child, was like, was a very difficult client. He was seven and but like in his brain, he's like two. A lot of behavioural issues. And we are really as music therapists, we're also like looking for solutions very often, you know, like now we're going to do this, now we're going to do that and then we're going to do that and eventually we're going to reach its goal. But with this child, it was like, so hard because then. Umm, you know, when I try to do something about his behavioral issues and like really dive into with him into the music and he was like was not letting me in his space because somehow it was too. Much, and then I was really like, oh, yeah, but I have to find a solution for it. Like constantly. Oh, but let's do this. Let's do. Or maybe. Oh no, this not working again, no. Then I was like, yeah, fuck, what should I do? He also was like pulling my hair also and like it was just a very difficult child and then I was like talking to my mentor and my mentor said like. You are fighting to hard you just like. You really want to look for solutions, but I think you should just wait and give him, give him the space he needs, so just, you know, just sitting in the space where he is also, but then just let him do his thing. And let him come to you, you know, and not you coming to him. But he comes to you and like, that I think it's a very important thing in music therapy. Just feeling like, oh, yeah, I just I'm in the same space with this child but, you really have to like change your energy and stuff. Like very spiritual, but like. When a child is like really into his own world, you just have to wait until the child is like open to give his energy to you and. It sounds very fake, but I think this, yeah.

Speaker 1

No, but I, I get what you mean because it, it kind of sounds like instead of you trying to make them. It kind of sounds like with their comfort level as well, like if you keep on doing stuff, it can make them overwhelmed or whatever so they won't get comfortable.

If you just kind of wait for them to do their thing, they can take their time to be comfortable and then let you in, so to speak.

Speaker 2

Yeah, exactly. So I think you have to be safe, create space and be very clear also so. Yeah, don't let. Yeah, just make the things you're going to do clear to the child. Because for a child that's very important, because otherwise you're going to do unexpected things. Then yeah, that's most of the time not very nice for a child. We can like. As older people, we can most of the time already think, oh, I think they're going to do this, or I think they're going to do that. We can manage that, but for a child that's not manageable, you know, we do unexpected things, and then the safety is totally gone.

Speaker 1

OK.

Speaker 2

So safe space and yeah.

Speaker 1

OK. Very nice. OK, I think. Yeah, kind of people you gave as clients. We kind of went over. So children with physical disabilities and often in turn, that's also some mental issues dealing with those disabilities. If I'm wrong then then just correct me please, also just trying to reiterate, so I, I know I understand.

Speaker 2

Yeah.

Speaker 1

And I think you touched a bit about. A bit. Let me just start again. I think you've touched upon this a bit already, but your feelings towards music therapy in the VR environment. Seems to be, like you're all for the idea. Kind of seems.

Speaker 2

Yeah, I'm very open to it, I think like. You know, it's a very good thing to know, most of the. I'm not very into like technical stuff and like, I really like to be in a moment with, with my clients and like use like, very physical stuff, because that's the whole other dimension I guess, than VR.

Speaker 1

Yeah, definitely.

Speaker 2

But I think it's like. At this moment, like the yeah, in this world at the moment, like, it's a very upcoming thing, you know, VR. And I've also seen like Ruth with his instruments and like his games and stuff, and it works so well. And I think it's when you use it the right way, then it can be like a very good add to what we're doing right now. But I think we always have to, yeah, to make sure it's not the only thing we have, you know like. Virtual reality like I think it's very good to be in the moment like and to really yeah, to really be grounded, you know like, really also feel the connection with the child. If you are using VR then it can also be like a maybe you can be a bit out of the connection, you know. But it's a very it's a very nice add I think like.

Speaker 1

Yeah. So I can actually put it in your arsenal and be very nice to have.

Speaker 2

Exactly. Yeah, I think so.

Speaker 1

OK, that's great. I'm glad to hear.
Speaker 2
Yeah.
Speaker 1
Those were all the kinda in depth, more difficult questions, so let's just kind of close it out. Are there any examples of VR therapy that you like if you? Any like? That you would like to share or, music therapy as well. I'm kind of open just to hear different, if you know any cool like projects or products. I'm curious to know about them. No pressure if you don't know anything, that's completely fine as well.
Speaker 2
What do you mean exactly?
Speaker 1
Like for example, my previous interview he showed me this thing called Oddball, which was just this ball that fits in your hand, and you upload a sound to it and then depending how you interact with it, if you shake it, tap it, throw it against the wall, it makes the sound come out differently. So you can very much do different rhythm kind of things with that. So any kind of products or projects which go in the vein of music therapy or VR therapy, if you know any. If not, that's fine too. Yeah.
Speaker 2
Yeah. Well, I think I told you about this a bit like with the magic flute stuff. That's a very new thing. We also have this thing called Cosmo. It's also a very nice thing, it's with these little dots, also magnetic so you can put them on the wall as well. There are a lot of different exercises with them. Ther are like 6 of them, and you can divide them through space. And also with like children of physical disabilities, it's very good too practice motor skills because they can, for example, put a song in it and then you have to reach the first dot to let the song play and then it stops, and then you there's coming a light out of the second dot, and then you have to touch the second dot, and then it's playing again, and then stops again, and then you have to find the third dot, and the fourth on like that, and you can also do composing games with them. Like put a song in it and then like then you have the drums and then you can put this, then the drums are playing. If you want violins on it, then you put another dot and violins and play. So Cosmo is also a very, very fun thing I guess. Umm, yeah. Do we have more? Yeah. Also like the Iharp, where you are looking with your eyes on the, on the screen, then the music is playing. Like ??? at our school is also very into this.
Speaker 1
OK.
Speaker 2
She's also a teacher. She's amazing as well. She can, really, I think she can tell you a lot about this actually, so. But Monique as well, I think so. I think if you ask her this question as well, then she's going to tell you a lot about it.
Speaker 1
I mean, the more I have to work with the better, right, so.
Speaker 2
Yeah.
Speaker 1

And then is there anything else that you like to share that I either did not ask about or that seemed to kind of fall through the cracks? If there's anything you'd like to mention still?

Speaker 2

I think I gave you a lot of information.

Speaker 1

Yeah, yeah, you really did.

Speaker 2

No, I think there's nothing left out actually, right now, especially for your project, I think.

Speaker 1

Yeah.

Speaker 2

You know, I don't know a lot about VR yet and, I would really like love to like, dive into it like a bit more and have this conversation with you, but like actually this is your thing.

Speaker

Yeah.

Speaker 2

I hope I gave you enough information for like your projects.

Speaker 1

Yeah. Definitely a lot to work with and just for one final question, bit more practical thing. When I go over this interview again, if I find something that I either want to get more info on or maybe I understood wrong or something like that, is it OK if I still contact you for elaboration, essentially?

Speaker 2

Yeah, for sure.

Speaker 1

 All right. That's all my questions. Thank you very much.

Speaker 2

Thank you.

Speaker 1

And I will just stop it.

Appendix F

Speaker 1

OK, so for opening question, how did you get involved in music therapy?

Speaker 2

I was a little bit older before I went into music therapy. It's my second career. I was already in the medical field a lot, but guitar playing has been my, my one and only biggest hobby since I was four years. So when I first had my career in the in the medical field I when I was 35-ish, I thought, hey, I'm going to fulfill my youth dream to speak. And I started studying guitar here at the Conservatory. And then while I was studying guitar as my main instrument, I thought well, who is waiting for a 40 plus year old performer, a guitar performer, and being from the medical field, I found out that it would be a perfect combination. To combine or to integrate, the my medical, all my medical experience with the love of music and hence I got to know about music therapy and the rest is history. Yeah, so I switched from major.

Speaker 1

Oh, that's great.

Speaker 2

From major to towards music therapy as a major instead of guitar performing as a major.

Speaker 1

So you still wanna have that thing of helping people?

Speaker 2

Combining the medical field with my biggest hobby.

Speaker 1

OK, perfect. Yeah.

Speaker 2

Mean that's a win win situation.

Speaker 1

Yeah. Oh, that's great.

Speaker 2

So this is how I got, so it's not a typical story about, oh, I came from high school. I always wanted to play music and I studied music therapy. For me it's from a different angle cause.

Speaker 1

Yeah, yeah.

Speaker 2

A little bit older when I started. I mean if you can find something that you love to do.

Speaker 1

Yeah.

Speaker 2

You should do it, of course.

Speaker 1

I mean, but this is the. I mean if you love music and you love working with people, I mean, this is the best.

Speaker 2

It's perfect.

Speaker 2
It's the best job that you can of right.
Speaker 1
Yeah, definitely.
Speaker 2
Yeah.
Speaker 1
It's like the, the two top things kind of combining. It's great. Love to hear that. And then also, how long have you been involved in music therapy now?
Speaker 2
I started studying when I was 38, so that was in 2000. So 24-25 years, yes.
Speaker 1
So a lot of experience like I'd assume a decent amount of experience from that.
Speaker 2
Yeah. Well, and combined again with the medical field gave me a lot of, yeah, yeah. .
Speaker 1
All right. Sorry, got thrown off a little bit. That's quite nice to hear. The kind of, yeah, how you got into it and stuff, and then kind of just to dive into it a bit more now. In terms of how typical music therapy sessions look like, I was kind of wondering. Let's start with something basic like how long does it last typically?
Speaker 2
Yeah. Keep in mind that it all depends on the target population.
Speaker 1
Of course.
Speaker 2
I mean, you do a different session kind of session with youngsters 4 years old or in a comparison with an elderly with dementia right so. A typical music therapy session is kind of hard to say, but normally spoken, depending on the, the attention span of your target population would take somewhere between 20 minutes and 60 minutes.
Speaker 1
OK. Yeah, that is.
Speaker 2
Roughly.
Speaker 1
That is the kind of range of her like with 20 minutes, more like little kids who have a shorter attention span. And then for the older.
Speaker 2
Yes, yes and some. Yes, and sometimes you know you are in and out of the room within 10 minutes because you cannot simply cannot do a session if somebody is psychiatric disturbed. He's in a psychosis or, a demented elderly, who is very tired or so.
Speaker 1
It's very dependent on. Because I know like, like a typical like classic. I don't know what else to call it really like where you go into therapist to talk that's 45 minutes from what I understand usually.
Speaker 2
Right if a normal classic quote unquote that will be 45 minutes. And it's divided into a beginning, a middle part, an cooldown part. OK, yeah.

Speaker 1

You kind of make sure to do that in your sessions with the beginning. Cool down.

Speaker 2

Yes, that's, that's very important because the structure, I mean, music itself is very structured, which hence it's very good working. But in within the session you also have to keep this structure. So we are working on a warmup, and then in the middle you are working on somebody's, why he has he or she has therapy, and then of course, you have to cool down and leave the room or leave the patient so that he can deal with it. It's like psychotherapeutic intervention. Only the, the biggest difference is that you use music instead of just the talking.

Speaker 1

So using music as like an extra tool

Speaker 2

Yeah, yeah, the main tool. Bause music therapy is the power or the strength for music therapy is, is, is exactly the fact that it you do not have to use verbal language.

Speaker 1

Yeah, and I can definitely that's quite nice for people who have either trouble expressing their feelings or but they can play it out instead.

Speaker 2

Exactly. That's actually the key. You do not have to talk. Let's play.

Speaker 1

Yeah. Yeah, yeah, I've heard that from some others as well. Where it's like, sometimes it just sit down and start playing rather than talking about something. And then along that kind of thought, what kind of activities do you kind of use in these?

Speaker 2

Yeah, but that's also very, very depending on the person sitting across from you, some people really want to do percussion, you know, or everything with or rhythm and drums and what not. Others really would like melody, melodic instruments because they are very much into the melody. Some people want to sing. Some people refuse to sing. Other people just wants to listen. There are two ways kind of, of doing music therapy that's active music therapy, meaning, obviously that you are actively involving the patient during the play. So you play together with the patient, that's an active session.

Speaker 1

OK.

Speaker 2

If the patient doesn't want to play himself, we are not talking, we hate the word passive because there's nothing passive about music therapy. So we are talking about active or receptive.

Speaker 1

I like that difference. It's nice.

Speaker 2

And it's a very important difference because there is nothing about, that has nothing to do with passive, but you receive it, so it's receptive, yeah.

Speaker 1

Yeah, definitely. Yeah. And like with passive, I feel like it can imply that you don't really do anything. But if you're receiving it, it automatically is like you're doing more.

Speaker 2

And I mean, there's nothing passive about it because while you are listening to the music, your brain and your body and your emotion, everything flows. So there's nothing passive about but you are receiving it instead of making it yourself, so keep that in mind. Active versus receptive.

Speaker 1

That's a very nice, I like hearing that because, I definitely like, initially I had the thought when you said active, my brain immediately went passive. Yeah, because I guess stereotypically it's that oposite.

Speaker 2

Yeah, This is why I this. This why I emphasize it yes.

Speaker 1

Yeah. Yeah, that's very nice. And, so with these different activities then?

Speaker 2

Oh yeah, so my answer wasn't ready. You asked me about how does it. So if I do an occupation.

Speaker 1

It's the build up.

Speaker 2

If I do an active therapy session, a warm up like I said is always hey, how are you doing? Of course, you start a little bit unless somebody's really not verbal at all, you start playing right away. But assuming that somebody is always a little bit verbal, you always go, how are you doing? Have you slept well? And what's on your mind at the moment, you know? so again depending on the target population, but you start slowly. And most of the time I just start with playing myself just to get the, you know, the atmosphere, the vibe, and of course, it's very good or imperative to know about the taste of somebody, right? If you would be my patient, I would ask you on the, our first meeting, what kind of music you like, etcetera. Because this is how I either catch you or not fight so. I would start with some play guitar or singing a song that I really think, hey, this is good for this person to set. You know the ,the good vibe. And so when this happens, when this is over, you can start the middle part of the session. And the middle part, the main part of the session is all about why are you here? What is the problem? Where do you want to work on? For instance, somebody with a lot of emotional distress, and not really wanting to talk about it, I will try to find ways through music to express his or her feeling. So I would ask, do you want to play piano today or do you want to go behind the drums or whatever? And it's so it's such a huge. I mean, I cannot tell you then I do this or then I do that.

Speaker 1

Yeah. Of course.

Speaker 2

All depends on, but in the middle part you are deciding together if possible how, what music instrument, or if it would be active or receptive. Sometimes I just, you know, do a play playlist. I know your playlist, so hey should we listen to so and so again and see what's going on. Or for instance, if somebody comes with a lot of let's say heartbroken because they love just.

Speaker 1

Broke up with them or something? Yeah.

Speaker 2

Broke up then I would kind of try and find to try to find a song about either a love affair or a broken heart, or because somebody will be helped. If he listens, he or she listens to a song that is about his or her feeling. Because then you feel, you know, understood, or you don't feel lonely or whatever, or you want to cry about it. Sometimes you know, picture yourself you are going home and you have a bad day. The minute you step in the door, most of the people know exactly which, which song to you want you want to hear because it fits with your mood, so to speak. And it's up to the music therapist to find this mood and hit the, the right button so to speak, right? So in the middle part you try to work on the, the patient or the client's, why is he in therapy right?
Speaker 1
Yeah.
Speaker 2
And you do this like about 20-30 minutes and towards the end of this middle part you of course have to get into a closure because you cannot leave the session. You cannot have the client leave the session while still in this hype of what is going on in his life. So, the cool down obviously will always be OK, this is let's, let's you know keep this at rest now and let's see how we can take a good, get a good closure of this session. It's actually like when you are doing sports, you warm up first and you are running and then you cool down so that your muscles cool down.
Speaker 1
Yeah. Yeah. It also kind of feels the same like, in like a band class as well. You know, everyone warms up together, then we play and then do some cool downs at the end so you're not in pain.
Speaker 2
And again, this is all about which population.
Speaker 1
Of course.
Speaker 2
With young children you would start playfully and finish playfully, but not in a way that you, you get him, the young kid back to the classroom very hyperactive. You really have to, you know, through music, everything what I'm telling you is all through music. Try to cool somebody down.
Speaker 1
And I assume this kind of like beginning middle to end you try to do it as naturally as possible to make it flow quite smoothly then as well, right?
Speaker 2
Yes, yeah, yeah. Yeah. That would be the, the perfect. Of course 8 out of 9 times it doesn't work like this.
Speaker 1
Yeah, I can imagine that's quite difficult to get down to make it feel so natural. I mean, yeah.
Speaker 2
And sometimes you know, you prepare for something and it doesn't work at all. You have to be very flexible. And also changing or being, yeah, this is why I always tell my students, you know what you learn in music therapy bachelor, we have the bachelor and we have the master. The first thing that you want to do in for a bachelor is you fill the backpack of the student with as many methods and approaches as possible. At the

end of the study he or she will be able to get out of his or her backpack, whatever is needed for the client, and that sometimes soothing song. Sometimes it's a very active drum solo, whatever and everything in between.

Speaker 1

OK. And I assume this kinda also filling their backpack, so to say with all these different methods, it also teaches them to be able to adapt quite quickly then as well, right? If they see something's not working like you said, they can be like, OK, how about we try this instead, then or.

Speaker 2

I always metaphorically tell your backpack is filled with all the knowledge. It's for you to choose the, the thing in your backpack that fits your client best.

Speaker 1

OK. That's very. It's a very interesting metaphor. I like that.

Speaker 2

Yeah, yeah, yeah, yeah. And it's easier said than done, of course.

Speaker 1

Yeah, of course.

Speaker 2

And everybody has his or her own preference. You have people that really want to work, psychodynamic or, you know that there are different approaches, again depending on, on your target population. Some people only want to hear, you know, I don't know, only want to do receptive music therapy or only want, you know only want to listen. And of course you try to also have him actively involved, but it doesn't have to be. Do not have. The first thing most of the clients tell you when you say hey, would music therapy be something for you? The first thing they say, yeah but I'm not musically enough. I'm not skilled. You do not have to be skilled.

Speaker 1

Yeah.

Speaker 2

The only thing that would be a very big plus is that you love music because there are people that doesn't love music at all.

Speaker 1

Yeah, I guess for them it doesn't, the connection doesn't seem there as much though, but if you have a love for it, regardless of skill I guess.

Speaker 2

Right. Yes, yes. If somebody has, has an has, to go into rehab after a knee operation, you do not per say want him to go back to sport if that person never had any anything with sports, you know. It depends on preference as well.

Speaker 1

OK.

Speaker 2

So it's not the magic miracle wonder music for everyone.

Speaker 1

Yeah, that's what I've been gathering as well that the amount of like methods that can be applied. Almost infinite it seems. There's just so many different things you can do like. With some people I've talked to where I thought it was very interesting, speaking of like needing no skills at all. Where the therapist then would just use the environment, so

the room around him on the tables and justice start like tapping and on whatever, and then get the patient to join in and.

Speaker 2

Yeah. You all have your own instrument, body percussion.

Speaker 1

Yeah, exactly.

Speaker 2

Your voice, everybody has a voice. Yeah, it's there a lot of them are scared to use it. But you know, yeah, improvisation is a very, very nice way of making music together because improvisation means there are no rules do whatever you want, but let's get, let's see if there's a head and a tail. Yeah.

Speaker 1

Yeah, let's see if we can make something kind of together.

Speaker 2

Talking about that. If you have a kid or a teenager as a client who is very, very hyperactive and one of the, the goals of therapy is try to make these kid be more concentrated and everything, music improvisation is, so, such a good tool to train this because you train it through music and if he's doing fine in music, you know for instance sit together side by side on the, on the piano and give him small tasks, you know. You're not allowed to touch the whites, only the black keys, or you are not allowed to touch or come over my hands. And then you build it up and OK, you can go over my hands. You teach him how to keep the borders or to, you know, make a deal with each other. So if this is playfully trained behind the piano. Then after that you can make the comparison OK. Let's picture yourself on in the schoolyard and you are bullying every kid. Now picture yourself like we do now, behind the piano that you have to, to keep your borders and you have to do what is or, or not do what I'm telling you. Try to picture the training, what we just did about behind the piano, also in the outdoor. So, you are integrating what you do in the music in the real life. Otherwise it's no point doing it right.

Speaker 1

Yeah. That's what I was thinking now as well that that's that next step from, from music to real life. That is where it's really key. It seems then, right?

Speaker 2

That's exactly what it is, yeah.

Speaker 1

Yeah. OK. And I think you kind of touched base on this already. The kind of music you use, as you said, it focuses very much on whatever the patient has a preference for. So it could be anything? Metal? Jazz?

Speaker 2

But sometimes, if you really want to cross the border of the patient to train his, you know, sometimes one of the reasons why somebody does therapy is to control his anger, for instance. And then sometimes you want to first, you know, get him out of, or get him angry, so to speak. And you can make him angry, but. By doing a music piece that he really hates, you know, I mean, yeah, you start laughing but you.

Speaker 1

I hadn't thought of that.

Speaker 2

Yeah. So I would frustrate you, for instance, by playing music that I know that you hate. And I can tell that you get you know. Uh, angry about it? Or or at least?

Speaker 1

Annoyed or something like that?

Speaker 2

Yeah, yeah. Annoyed about it. Then again, you can place this musical example into OK if this happens in real life, see I train you. Get your anger down and in real life you know, try also like you do now breathe and let it go and everything so. Of course, this is with big steps to ten session period or so, but.

Speaker 1

Of course.

Speaker 2

It's the bottom line is you try through music examples you try to, sing music suations as a metaphor within the music you try to integrate it in real life.

Speaker 1

I quite like hearing that point about like playing the, the music that the patient hates for example, because so far I didn't even, yeah, heard thought of that at all. Like, like the example, it makes a lot of sense to do it like that.

Speaker 2

Right? Yeah. And again, I want to emphasize, it all depends on which client is in their head, you would never do this with a person who is psychotic or with, you know, into a deep, deep depression or whatever. Of course you have to always keep in mind is this client fit for it at this moment?

Speaker 1

Very situational based then, right? Yeah. OK.

Speaker 2

Very yes, yeah.

Speaker 1

It's kind of going through my head right now, but that's.

Speaker 2

For an elderly person, I work a lot with elderly persons with dementia, of course. Not, of course, but with dementia. And they, they are very, very helped a lot of times by listening to music from way back when they were young and they were happy and, and nothing bothered them.They were still, you know, so for an elderly person, it's most of the time also go back to the happy good old days. Way back when and forget al.l about, I mean they, they hardly realized that that, that, you know, they are really living in the past. So instead of, you know getting all the all the emphasis on what is wrong with their memory or with their cognition and everything. You just go back to the good old days and because you cannot cure their disease. But you can make dark quality of life as good as it gets, right? Then with elderly person you kind of don't challenge them.

Speaker 1

Yeah, I guess that also I like with music then that kind of brings the nostalgia back as well, whether they realize it or not, I guess. It, it gives that like Nice feeling then. And I can imagine if you play music they hate, you'll kind of taking a step backwards.

Speaker 2

Or a good example also in elderly care is be careful what I mean. For instance, a lot of people who has suffered the war don't want to hear any German songs because it reminds them of when the enemy were German speaking.

Speaker 1

Yeah, of course.

Speaker 2

Yeah. Or they want to hear the American songs that were played over the radio when the liberators came, you know, stuff like that. So they you can, with music you can relive or forget the trauma also, what they have suffered, right?

Speaker 1

Yeah, yeah. And that makes it sound like as well, it's not even only genre based really, but like language or country based in that sense.

Speaker 2

Even. Yeah. And time.

Speaker 1

Yeah, time yeah.

Speaker 2

You hear a song here. Picture yourself when you hear something on the radio. When you, I mean, you are still young, but for instance, I'm 60 years old and I met my, my, the love of my life when I was 20 years old. So when on the radio I hear something music from when I was 20. I am this young girl of 20 years old, again falling in love with the love of my life you know, so the music connects the memory of the time that once was, you know, and it goes in a positive way, but it also goes in a traumatic way. So you always have to be very aware of what music Involved, is involved in what period of life of this person.

Speaker 1

OK, I haven't heard much about like how it is with dementia patients then. But this is very like eye opening then as well. That's what I've been liking about these interviews. Everybody's bringing points that like I hadn't even considered because like, I've read a bunch of papers, but none of them really bring these kind of points where it's like, I guess the points that experience show. So it's been very nice to hear these kind of different approaches.

Speaker 2

You should. Yeah. If you really are into it, you should read anecdotal music therapy session reports. That will be very helpful.

Speaker 1

OK.

Speaker 2

I can recommend some books.

Speaker 1

That would be great.

Speaker 2

Yeah, we can go to the library and I can recommend you something or. You make some copies for you or yeah.

Speaker 1

Yeah, that that could be great actually. And then to kind of continue with this.

Speaker 2

Yeah, I'm sure we have talked too much
Speaker 1
No, it's OK. I very much like hearing these different examples and. Because yeah, like when I first was looking at music therapies like I was aware how big an open-ended, it was kind of, but. It was hard to see what examples of it would be so, the more I hear, the nicer it is to kind of get a more full picture.
Speaker 2
That makes sense, yeah.
Speaker 1
But then in music therapy, what kind of elements do you find important?
Speaker 1
Here's a very interesting question, because music is so broad, right? And music, this is kind of like a lecture. Music is melody, tempo, rhythm, harmony, key, tone, whatever. So all these elements that music contains are important in music therapy sessions because sometimes it's just. The rhythm that makes, makes the difference. I mean, for instance, upstairs right now is a group of people with Parkinson's disease. They are training their walk and they're training their movements, which are all infected by the, affected by their the Parkinson's through rhythm. But if somebody is really in an emotional state, it's melody, a lot of melody that will do the job because, and here's the scientific background or the scientific explanation. Every element in music has its own, let me put it this way. Melody inside the brain activates the part of the brain where, for instance, language and speech is activated or emotion. Rhythm is the motor, the motor area of the brain that is activated by rhythm. A memory of course, is, is also all the all the music elements are, are, are involved in the memory part of the brain. It's a very short explanation what I'm telling you now, but you need to know that every element in music has its own effects on certain brain area.
Speaker1
OK.
Speaker 2
So depending again on, again on why this client is referred to music therapy, you either work with one of these elements.
Speaker 1
OK. That's very interesting.
Speaker 2
So if you ask which elements. All of the elements depending on what part of the brain should be activated.
Speaker 1
OK, OK. Yeah, that, I mean that makes a lot of sense.
Speaker 2
Does it make sense?
Speaker 1
Yeah, because. Yeah, some of the other ones I've been talking to, like one said for example, rhythm. But not because of the sense that it's done with physical, but more because of the sense everyone has rhythm even when they say they don't they have rhythm, right?
Speaker 2
I would emphasize it more. Every uh, all a lot of bodily functions are based on rhythm.

Speaker 1
Exactly, yeah.
Speaker 2
Breathing.
Speaker 1
Walking as well, he said the same thing, he used those examples too.
Speaker 2
Yes. Yeah, yeah, yeah. Heartbeat. I mean you can change, can try to lower down your heartbeat by having the patient listen to soothing slower music.
Speaker 1
And then I guess you can also do the opposite by having a fast aggressive or something like that. Yeah, yeah.
Speaker 2
Go to a house party. Yeah. Yeah.
Speaker 1
Yeah, that's. Yeah, I like hearing that it's all important to just depending how you apply it then it sounds like.
Speaker 2
Yeah. How you apply it and how the client receives it, because no client is the same.
Speaker 1
Of course. Definitely. OK. And then Speaking of these elements, the reason I ask is because my project goal is to try and implement music therapy into the virtual reality environment as the information letter said, and in order to do that I'm asking about these different elements. Yeah, because I want to get to identified and then if I can identify them, I can start ideating on how to actually put them from the real world into the virtual world, right?
Speaker 2
Yeah, right. So you should know about all the different elements of music.
Speaker 1
Exactly, yeah. And the goal with the VR and it's not to just make it one to one because then it's just like you might as well just do it in real life, but be able to expand upon it and do something that you know you can't necessarily do in, like the real world environment then. Yeah. And yeah, with that kind of thought in mind, I was just wondering if you would still think all these elements would be suitable in the VR setting or if there would be others that might be more suitable in this kind of.
Speaker 2
Well, obviously some of the elements are more, are more easy to, to be integrated in the VR setting than others. I mean this of course I have to say VR in my opinion a virtual reality setting will maybe touch the real setting a live setting of therapy but it will not be the same, obviously. I mean, everybody knows that of course. For instance, how real music instrument sounds by played live cannot, no matter how sophisticated the technology is, will not be the same. Because I can play while guitar is my main insturment. I can play very, very sensitive the way if I look at my client and I see a sad sad face I can play right away sad. And if if it's, you know, I don't know if this is a good comparison, but I can right on the spot, I can adjust the way of live playing music through my, in my session. I don't think technology can take that over that because he does not see of course the, the right.

Speaker 1

Yeah.

Speaker 2

Your question which elements are more suitable to learn? It depends on exactly this. For instance, the, the sound of a guitar. If I shake my guitar, it will have another vibrato, vibrato. than when I don't, and that is that will be I think extremely hard to integrate in a VR setting.

Speaker 1

Yeah. So kind of like, I don't know if this is the right word, but like these kind of more melodies sounds to it would be harder to.

Speaker 2

Yeah, the melody itself, because melody, is you can do that. But the way it is sounds would be different, so yeah.

Speaker 1

Like you can do the melody at its base, but then like these things you're saying like with the shaking of the guitar or something like that kind of thing would be very hard to if even possible to implement.

Speaker 2

Yeah, yeah, yeah. I mean, think about the human voice. Everybody can relate to the human voice. By singing a song, it can make the difference between getting somebody into tears, or into laughing, or into you know depends, and how sophisticated can a VR setting do these very subtle?

Speaker 1

These kind of small like adjustments, kind of. Yeah.

Speaker 2

Yes, yes, yes. And in therapy, if you purely look at the word or the meaning therapy, therapy involves also, the human connection between the therapist and the client, of course, and can VR take that over? I don't think so.

Speaker 1

I can imagine that gets a bit lost in that sense.

Speaker 2

Right? Yeah. So it's always for me, it's always a little bit tricky to use the words or the term music therapy in different settings, but with a real life human therapist, you know? Yeah.

Speaker 1

Yeah, that's a very interesting point.

Speaker 2

For instance, I'm doing a virtual or online sport training now, and I'm watching videos by seeing this physical therapist do the, do the movements, but it's not the same because I want somebody to tell me, or lift my feet and put me in the position of how I should do the feet, you know, so. That's maybe a strange comparison, but you know what I'm saying.

Speaker 1

No, no, I get what you mean though, yeah. Like you'd like to have that then. For example, if something were to be slightly wrong, you'd like to have that person to be there, to be, like, adjust the your arm or your leg healing.

Speaker 2

Yes. Right. And I'm not saying this because I'm afraid of my job because it's very convenient to do it on your own pace and during, or via the Internet. But it's not the same. Everybody knows that, I guess.

Speaker 1

I think you're. right The like one to one in real life, it's always different.

Speaker 2

Yeah, yeah, but that's a different. That's a different story.

Speaker 1

Yeah. But yeah, also then with this it's kind of or, the, my idea of it is to add it as an extra tool to a music therapist's arsenal, rather than be like this is the one thing I wanted to be an extra. So if they can see a good use for it in a situation that they're like, let's try this out if they're also interested in tech or something, or VR.

Speaker 2

Yes. And it was, and it was obvious during COVID, of course it was so much needed.

Speaker 1

Yeah, exactly. And I mean, yeah in specific situations. Yeah. And then to kind of continue, what do you think helps creates a meaningful experience for the patient themselves.

Speaker 2

What it would create it?

Speaker 1

What helps create a meaningful experience for the patient?

Speaker 2

What helps? It's difficult question in terms of everything that has not been said yet or?

Speaker 1

For example, I think one, one of my other interviews said being able to make the person feel relaxed, like just something just a simple like core idea like that. When they're relaxed, they're open to actually new ideas and things like that.

Speaker 2

Yeah, yeah. But this is in VR setting or?

Speaker 1

Music therapy, I mean more.

Speaker 1

Oh, in music therapy. It's, it's all about trust, trust and feeling comfortable. I mean, they say that out of a therapy session if a therapy session 85% of of a successful session is about how you, how comfortable the client feels with the therapist. Only 15%, the rest of the 15% is about the intervention. That's the rule of thumb. Yeah. Yeah. It's a rule of thumb. Yeah. So what helps? Getting the clients trust you. Trust a therapist and feel comfortable and, and rely upon. This is why this warm up is also at the warm up of the session is always very important.

Speaker 1

OK. Yes, like the initial warm up kind of helps build the trust between you two, so then you can get like really into it in the middle.

Speaker 2

Yes, yes, yeah. And of course, everything else that I have said about, you know the, the, the good way of the music preference. The main are the the most favorable sound or song or, instrument, I mean, I've had someone for the first time I was with this patient

the first thing he said was I hate guitar. And I was, I had my guitar with me and why does he hate? Because he has traumatic experience with the guitar or somebody that played guitar. So you always then you would be very stupid to. I can only you know I can only play guitar. That's also listened to the patient.
Speaker 1
OK, I hadn't thought of that as well, but that makes a lot of. I can imagine this is awkward though, just like. OK, hide this. Let's put that away.
Speaker 2
Or if I know that you hate the color red, I should never wear a red shirt, because then there's this big wall.
Speaker 1
Yeah, it immediately kind of puts distance between the two, OK.
Speaker 2
Yeah, yeah.
Speaker 1
And I was just curious as to what kind of people do you have as clients, if it's like a range from children to adults or people with specific symptoms of something or?
Speaker 2
Yeah. I have worked with elderly, I still work a lot with elderly, with psychiatric disturbances, dementia, cognitive disturbances, people with movement disorders like Parkinson, Huntington's disease, children with lower intelligence, cognitive abilities, down syndrome children, teenagers that are, you know, have very much trouble bonding with parents or adopted children, and I've worked a lot with addicts, addiction, alcoholism and drug addiction and drugs.
Speaker 1
I haven't heard that last one. Or I haven't really seen much about that.
Speaker 2
Addiction?
Speaker 1
Yeah, I've seen more with, like, anxiety, depression, dementia I've seen quite a bit as well. Also seen like autism. But I haven't seen anything about addiction really, but it makes a lot of sense.
Speaker 2
Well, then yeah. People with addiction or who has overcoming addiction yeah, I mean they, they, they still have a lot of psychiatric or psychological disturbances, sometimes already the reason why they got addicted or. Yeah. So, I work in a clinic where a lot of alcoholism, Korsakov syndrome. I don't know if you've heard of Korsakov is most of the time infected or alcoholic alcohol. People with alcohol problems sometimes get a brain damage that can turn into a so-called Korsakov syndrome. So they do not drink any longer, but because of their alcoholism, have a very small social life, because everybody has turned their back, etcetera so. They have to deal with the damage caused by their addiction and this is a lot of times why they are already are also in in therapy, yeah.
Speaker 1
OK. OK. And then yeah, that's also where you kind of come in with music therapy as well to kind of help continue?
Speaker 2

For instance. Yeah, yeah, for instance, yeah.
Speaker 1
OK, and that's very interesting. I like being able to hear from these different kinds because I've heard now about like children with physical disabilities as well. I've also, just heard about children or people with depression and anxiety.
Speaker 2
Yeah.
Speaker 1
But I haven't heard this angle kind of from. So it's very nice to hear all these different applications.
Speaker 2
Forensic psychiatry. So there is people who are behind bars, prisoners who has to deal, who have to deal with, with all the crimes that they have committed or who are, you know, in in psychiatric prisons, you know, I don't know how you call it in English, but they have to. They have to deal with, with the fact that they are behind bars, and also on a psychiatric program, and that can also involve music therapy as well, because through music again I'm repeating what I said at the beginning, through music you can approach different angle of their, why did they do what they have done, you know? And I mean you have to give them, that are behind behind bars to and and see if they can be also be accounted for their their crime, etcetera, you know.
Speaker 1
And it's. Yeah, your kind of job with through music to kind of, yeah, pave the way for music to the real life. It seems to hope that they can.
Speaker 2
Yeah, for. Or at least let them realize what they have, you know, been doing, yeah.
Speaker 1
And then one more question before we get to the kind of closing of it. You said you're not that experienced in VR, but specifically then I think that's a very good question to ask is how would you feel about music therapy applications in virtual reality?
Speaker 2
Well, like I said, it would be great for, I believe it would be great for a whole number of situations, but like I said, I'm the, a critical note that I just heard it would not be suitable for every client, every type or.
Speaker 1
Yeah, of course.
Speaker 2
But the like. You know the, I think I repeat myself when I say, I think it's great, but I do have some question marks or skepticism or whatever because it will not replace in a lot of ways it cannot replace the real, yeah.
Speaker 1
Of course.
Speaker 2
I can think about a lot of situation where it can be very helpful.
Speaker 1
OK.
Speaker 2

Yeah, I mean, I have done programs not VR, but you know online situations or videotaped myself. Of course, this is not VR really, but it's videotape sessions and then have patients look at it. So I know that, they can, it can be beneficial if, if the patient does it in their own free time, or convenient time

Speaker 1

And I mean, yeah, like, like I said, this isn't meant to replace one to one music therapy because I think you are right. You can't replace that in person face to face kind of environment, but I'm glad to hear that you would find it like a useful tool in your arsenal ift he situation calls for it.

Speaker 2

Definitely, that's exactly what I mean.

Speaker 1

Yeah, that's great to hear. Because I was also asking this in case someone were to be like, no, you know because then I would be like, why though, you know, but I'm glad to hear that people are very.

Speaker 2

Then you would say oh, but she was 60 plus years.

Speaker 1

You know, but I mean, if someone were to say no, my goal, my goal would then to be like. But I want to work with it so that they would be open to, you know, but I'm very glad to hear that. Everyone I've talked to is very open to this being an extra tool that they could have. Well, for then some closing questions kind of make it a bit more easy again. Are there, maybe not for VR therapy, but are there any music therapy, or examples of music therapy that you would still like to share that maybe you haven't gone over yet, maybe like?

Speaker 2

Our. I'll give you some, the anecdote book I can borrow you one of my books if you promise me, obviously that in a couple of weeks you will get it back, I can, then you can read it in your own.

Speaker 1

Yeah, I mean that would be great as well. Yeah, if you have some literature to show me, that would be great.

Speaker 2

Very, very nice examples of that.

Speaker 1

Yeah.

Speaker 2

And I've written some of these chapters in the books as well.

Speaker 1

OK, very nice.

Speaker 2

So yeah, because if I start talking about nice anecdotes, we will be here in five more hours.

Speaker 1

OK. Yeah, yeah. I asked this as well. Just because I found some interesting products through asking this like, the one other music therapist I talked to has this thing called

Audiball Where you upload a sound to the ball and then depending how you interact with it, tap, play, throw, it makes it sound different. And yeah, so.
Speaker 2
Actually. What I would recommend you to do is come back one day and I can arrange it for you so that you can see what's happening upstairs with Parkinson's group, or that you can see what happens in the music therapy technology classes. We have all laboratories with all these these tools.
Speaker 1
Yeah. Yeah, that that would be very cool actually.
Speaker 2
Actually you should see it, yeah. If you can find a time, of course.
Speaker 1
I'd have to look, I still have to make my timetable for this coming quarter but.
Speaker 2
Well, you know what I mean you are in Enschede, and we are in Enschede. Make use of it and I can arrange for you to come on a Friday afternoon when the, when the bachelor students have their technology classes, it will be great if you would see it.
Speaker 1
Yeah, that that be very cool actually, yeah. If I can find the time for that, I'd very much like to see that because.
Speaker 2
I mean, this is your, your opening. I mean, this is your first step into the Conservatory, and we are more than happy to help students that are willing to, yeah, to learn.
Speaker 1
Yeah, definitely. Yeah, that that great.
Speaker 2
So let's just eep in contact and then you can come on a certain Friday and next or in two weeks to get the book and then we can see what we can do.
Speaker 1
Yeah, definitely. Yeah, that'd be very nice, actually.
Speaker 2
Fridays are good days because that's.
Speaker 1
I think for me generally as well. Makes it, yeah. Yeah, if it works best then then I can definitely work with that. And then is there anything else you'd like to share that I maybe did not ask about or like any small points or because, I know like you said there could be.
Speaker 2
Yes. Yeah, I think I've talked a lot. Yeah.
Speaker 1
Yeah, yeah. OK and.
Speaker 2
And that's of course still a lot that I don't, that w didn't talk about.
Speaker 1
Yeah, of course. Just now, in this last in this semester, I'm getting introduced to music therapy. It's still very new to me, but I very much.
Speaker 2

Well, if you are again, if you are interested in, I mean you can read about it, but the best way is to see it so. Yeah, if you have the time and the room to do it still in this semester, I invite you to come and see for yourself. We have very nice technology classes.
Speaker 1
That would be lovely. Thank you. Yeah, because I've already noticed just from reading like scientific papers, to interviewing people, I feel like I've learned so much more from interviewing and getting a real like. Like a real life application to see what it is like. It's been much nicer and I I guess you've already touched base on this, but I just wanted to, so it's fully there recorded. Are you OK with me contacting you again? If I have more questions and stuff like that?
Speaker 2
Yeah, definitely.
Speaker 1
OK, perfect. Yeah. And that's all my questions.
Speaker 2
Good. And I will make sure that if, if we meet next time or whenever you get the time for it, then I can borrow you the book, I will bring, I will bring the book with me, you just have to come by and collect it. You live in Enschede?
Speaker 1
Yeah, I live in Enschede, I live on the campus.
Speaker 2
So, ten minutes or five to cycle
Speaker 1
Yeah, very easy. All right, I will pause this.

Appendix G

Information Letter for User Testing
08/01/2025

The Lectorship in Arts Therapies and Psychomotor Therapy in Healthcare has been developing an environment in virtual reality (VR) for different types of therapies, such as psychomotor, art and music. The making of this environment has been outsourced to a company called PWXR. While psychomotor has been well established, music therapy and art therapy are lacking in this VR setting.

The purpose of the user testing is to test the prototype with experts in the field of music therapy. This is in order to find potential problems with the current state of the prototype as well as what works well.

User testing will take roughly 45 minutes. It will consists of 3 sections. The first section will let you go into the VR environment and play with the prototype without any instruction. The second section will consist of an explanation of how the prototype works and then you can play with the prototype again. In the third section there will be a short interview asking about your experience with the prototype. You are allowed to withdraw at any time if you wish.

During section 1 and 2, obervational notes will be made by the researcher about your interaction with the prototype. These notes will not include any private information about the user. In section 3, the questionnaire is completely anonymous. The interview will be transcribed and the information that is collected during the interview will be completely anonymised. You have the right to request access to and rectify any of your data. You are allowed to withdraw from the study at any time. If this is the case, your data will be immediately deleted from the project.

The anonymised data will be included in the gradutation project report that will be published to/archived in the UT repositories, which is only accessible by UT staff and students.

The audio recording of the interview will be deleted at the end of the project. The anonymous transcription however will be kept in the Appendix of the thesis paper.

The research project has been reviewed by the Ethics Committee Information and Computer Science.

For any questions or concerns, you may contact:

Researcher:
Kevin Friesacher
k.p.friesacher@student.utwente.nl

For complaints:
Ethics Committee Information and Computer Science
Ethicscomittee-cis@utwente.nl

Appendix H

Consent Form for Improvement of VRhExp
YOU WILL BE GIVEN A COPY OF THIS INFORMED CONSENT FORM

Please tick the appropriate boxes	Yes	No
Taking part in the study		
I have read and understood the study information dated [08/01/2025], or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.	☐	☐
I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.	☐	☐
I understand that taking part in the study involves written observational notes being taken by the enumerator during testing and a questionnaire at the end which will be completed by the participant.	☐	☐
Risks associated with participating in the study		
I understand that taking part in the study involves the risk of motion sickness since the prototype is in virtual reality.	☐	☐
Use of the information in the study		
I understand that information I provide will be used for the writing of a graduation project report that will be published in the University of Twente's library.	☐	☐
I understand that personal information collected about me that can identify me, such as [e.g. my name or where I live], will not be shared beyond the study team.	☐	☐
Consent to be Audio Recorded		
I agree to be audio recorded. Yes/no	☐	☐
Future use and reuse of the information by others		
I give permission for the anonymous observational notes and anonymised answers of the questionnaire that I provide to be archived in UT Repositories, only accessible by UT staff and students, so it can be used for future research and learning.	☐	☐

Signatures

_____   _____   _____
Name of participant [printed]   Signature   Date

I have accurately read out the information sheet to the potential participant and, to the best of my ability, ensured that the participant understands to what they are freely consenting.

_____   _____   _____
Researcher name [printed]   Signature   Date

Study contact details for further information:
Kevin Friesacher
k.p.friesacher@student.utwente.nl

Contact Information for Questions about Your Rights as a Research Participant
If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Secretary of the Ethics Committee/domain Humanities & Social Sciences of the Faculty of Behavioural, Management and Social Sciences at the University of Twente by ethicscommittee-hss@utwente.nl

Appendix I

- To what extent were you able to understand the VR environment before the explanation of how it worked?
    - What was your experience prior to the explanation?
    - Walk me through your thought process? (might not work well if they have to recall off the top of their head)

- When using the different sized versions, did you notice a difference?
    - Did you have a preference?
    - Why? Maybe size, layout make the preference

- Based on how they use it (controls):
    - notice which version they use and ask about that
    - I noticed you used this BLANK version to interact with the cubes more, did you prefer it over the other?
    - Why?

- One feature for future implementation is the ability to record and stack loops. Do you think this feature would improve the usability?

- Could you see yourself using this in your sessions with patients?
    - If not why?
    - If these problems were addressed and solved, would it then be useful in sessions?

- What would it take for this to have added value in sessions?
    - Why

- Are there any other features you think would be beneficial?

- Is there anything else that we haven't discussed yet?

Highlighted questions were only asked to the music therapist during the user testing interviews

Appendix J

Speaker 1

First question. Uh, to what extent were you able to understand the VR environment before I explained it?

Speaker 2

I think that the environment felt quite intuitive like you, you just mess around and you just find out and it's not that there's a lot of hidden things that you have to find out.

Speaker

Hmm.

Speaker 2

Yeah, I think it's quite quite straightforward. If you just tap and you can also, that's the one thing that I think is not necessarily stated, that you have to find out, is you can shoot the things.

Speaker 1

Yeah. Yeah, it's a bit, not hidden necessarily, but unless you do it, you're not gonna see it, right? Yeah.

Speaker 2

Yeah, I guess you have to be pressing buttons in the first place to find that one out

Speaker 1

Yeah.

Speaker 1

And so just. Yeah. So that messing around kind of thing makes it easy, Or not easy, but like as you said, intuitive to kind of figure out what's what just by pressing around seeing what happens.

Speaker 2

Yeah, I think you need to be the person that messes around and then the environment needs to allow for messing around.

Speaker 1

What would you say was your experience? Prior to the explanation with yeah messing around and playing with it.

Speaker 2

Think it was the same. Think it was similar in the same sense. It was still. Yeah, it was still figuring out. I mean, the whole session was kind of figuring out.

Speaker 1

Yeah. Yeah.

Speaker 2

Yeah, I think I pretty much got everything as well before. Yeah, but I think as time went on, I started to do other things as well.

Speaker 1

Yeah.

Speaker 2

Use the different ones. Think that just gives it with time.

Speaker 1

So kind of going from figuring it out to more playing around with it as the time has continued. OK and, If you could walk me through your thought process a little bit,

maybe with like the figuring out part, let's go with that. Was it just as you said, as simple as I push button, I see what happens. Or was there maybe more thought to it?
Speaker 2
I. I. Wait, hold on. It was. I mean, I started, You see all these boxes, you walk up to the boxes, you start like touching the boxes, and then from there on you notice that if you like, touch this one, it repeats. Fair. Yeah. Then you try the other ones, try to make a beat with that one using the repeating ones as a base, as in yeah, base.
Speaker 1
a baseline.
Speaker 2
Yeah. From there on out. I started moving to the other ones to see if I could combine the same beat in multiple repeats I guess. Yeah.
Speaker 1
OK. And then I kind of also wanna ask similarly after the explanation. How would you think your experience was? It. Well, actually, I'll let you answer before I put words in your mouth.
Speaker 2
Yeah. I mean, yeah, it was similar. It's just that there had been more time passed of me being in the simulation.
Speaker 1
Yeah. So yeah. You felt like you could play a bit more rather than being like I have to figure out how it works.
Speaker 2
Yeah, yeah. I understood from the first round and then the second round was see if I can do something extra.
Speaker 1
OK, OK. Nice. And we'll move on a bit. This is now more about the different layouts and when using these like different sized versions. Did you really notice a difference in your experience?
Speaker 2
Yeah, I think the big ones might have been, like they're the square ones, were very far placed to me. So I had like quite a, like I had to walk up to each one of them.
Speaker 1
Yeah, kind of reach a little bit, yeah.
Speaker 2
Reach. Indeed. I think at some point I also started standing on the outside. So like my hands would not interfere accidentally with stuff. you can see like, you can just touch the thing in front of you.
Speaker 1
Yeah.
Speaker 2
In that sense, I think it might be nicer if you have a panel instead of a surround thing where you can turn around if you step to the side.
Speaker 1
OK. To so like 1 long flat thing rather than something like a U surrounding you?
Speaker 2
Yeah. Or like a slightly bent but not 90°.

Speaker 1

Like a curved monitor kind of thing. OK, OK.

Speaker 2

Yeah. Yeah, I think that's just how we grew to live with stuff in real life. Yeah, it's like, I said that my desk is 90°.

Speaker 2

Yeah, what else? What else? What was the question again?

Speaker 1

Like, did you notice a difference between using them? So you mentioned that with the big one that you had to like either reach and I noticed use like the shooting ones a bit more with that I think. But I guess that's generally because you have to reach.

Speaker 2

Because the distance was super big and then also with the piano ones, I actually rather shot them than touch them.

Speaker 1

OK.

Speaker 2

Because I felt like it's like. With a beat, you can time things. Yeah, and with pianos, I think you could switch so quickly that shooting it made it easier.

Speaker 1

Yeah, but actually hitting. Ah fair, I didn't think about that and I mean I don't know if maybe that's kind of how you're thinking as well then both the piano and kind of like shooting like that is kind of more similar to like pressing it rather than like hitting the cube.

Speaker 2

Yeah, I think so. I think it's also like kind of in the nature of the sound with hitting stuff is, you know, you make stuff like that. It's just like easier to time it. A beat is easier when you have the motor feedback I guess.

Speaker 1

Yeah, I get what you're saying is to make the actual like drum beat the movement kind of helps with it. But with the piano, that doesn't really apply as much then. OK. Yes, that's good to know. And then with these different sizes, did you actually have a preference with any of them?

Speaker 2

Yeah, I'm debating between the vertical bars or the horizontal bars.

Speaker 1

So the smaller one either way, OK.

Speaker 2

Yeah. I think at some point, I went between I think it was the vertical bars.

Speaker 1

Where it is 4 high you mean

Speaker 2

 2 high. Yeah, the bars are looking standing up, yeah. I think I like those because you can like switch between sounds and then this became a movement that makes sounds in itself. Like sounds, yeah.

Speaker 1

OK. Yeah, hands up and down.

Speaker 2

Stuff like that. Yeah, I think. Yeah, I think that that there's like great potential in the in the linking of movements to sound. It's like, yeah, it's a good start for doing this.

Speaker 1

So just to kind of summarize this part then with the layout. So instead of such a harsh 90° angle, a bit of a slight curve might be better. And then also you preferred one of the smaller ones, which are the two high 4 wide. OK. Um. And this is more asking about the actual controls, and I noticed you use both quite a lot. Either the shooting to hit the cubes and the touching. Did you prefer one over the other, or was it as you said before, depending what kind of like, the piano sounds or the percussion sound?

Speaker 2

I think. Yeah, I think stuff like this also needs to accommodate for, like how different people would do it and. How I guess the same people would use the different ones too. So I think it definitely depends on the sound as well. Again with percussions, it's easier to make the whole movement and then with the piano I'm a piano, so I just.

Speaker 1

Yeah. so for you intuitively the shooting made more sense with the piano, OK. So yeah, so from what you're saying, it sounds like it's good to have both. So let people kind of decide what they'd rather use, rather than only have the one.

Speaker 2

Yeah, Don't limit. Don't limit the person. In what they can do and how they could do it, how they could express this music?

Speaker 1

Yeah. So giving them the options, the more the better it seems then OK. And then the next thing out of controls. One feature that for future implementation. So as in wants to be done is the ability to record and stack different loops. Yeah, right. Right now this is kind of like a cheap way of doing it for lack of a better word, I feel. Because yeah, you can only have one setting, right? Can either have a go and that's. But if you can record it, you can space it how you want to make your kind of rhythm and have it playback right. Do you think this feature would improve the usability of this?

Speaker 2

Yeah, yeah, definitely, I think. I know with I guess how music production goes naturally like now, not really naturally, like how the most people do it is with like a track recorder, I guess.

Speaker 1

Yeah.

Speaker 2

Then you can also visualize how much, but then you can also like loop a certain part and then you can space out your drums in terms of that.

Speaker 1

Yeah.

Speaker 2

So I think definitely.

Speaker 1

Yeah, 'cause right now, right? Like, you can't do the space and you can only have it at one exact. Although you kind of worked around it with combining the different ones. I noticed they made like triplets almost and stuff like that. And yeah, so then for in a

multiplayer setting not in the sense of two people playing at once, but in the sense of like a collaboration.

Speaker 2

As in two people with VR in the same?

Speaker 1

Yeah. Two people in this environment, not necessarily playing at the same time, but like talking with each other to kind of figure this out. You think this kind of thing would also help in terms of collaborating with each other?

Speaker 2

I don't think I understand what you what you mean. Two people in the same environment.

Speaker 1

So two people will be in this environment

Speaker

Yeah.

Speaker 1

They won't necessarily be playing at the same time, because I think that gets very messy very quickly, especially with sound feedback and stuff. Just doesn't work as well, but with being able to record and stack loops. Say for example, one person can start. They made like 1 loop and then they can have a playback and record and the other person can. Yeah, they. Then together kind of figure out more how to make something together rather than one person doing it on his own, how you have been doing it now, essentially. Yeah.

Speaker 2

Is that, is that? Sorry, the question was, is that better?

Speaker 1

Yeah. Do you think for like a multiplayer experience? Quote UN quote 'cause. It's not like traditional multiplayer. You think this would also then show its benefits with this kind of feature?

Speaker 2

Definitely. I think it could.

Speaker 1

OK.

Speaker 2

I feel like it's same as I guess. Never done it really, but like a band session, you know, I think feedback and off each other.

Speaker 1

OK. Yeah, I think that's the kind of explanation I was trying to go with. Like a jam session kind of thing. OK there.

Speaker 2

Yeah, true. I think that would work.

Speaker 1

I need to look which questions I can ask here. No not this. These are all music therapy questions. I was wondering if, are there any other features that you think would be beneficial that we maybe like, haven't touched on or talked about or that's not even there?

Speaker 2

I think something like a BPM would be nice.
Speaker 1
A bpm. OK. Fair. So you. Yeah, 'cause. I noticed you were using some of them like as a bpm almost. Like some of the kicks, for example. OK.
Speaker 2
Yeah but like also a way to, say for example, if I like, you have the kick Drum like the whole time and you can just like maybe slide it up or something like you can press and hold and slide it up
Speaker 1
OK. And have it go faster.
Speaker 2
Yeah. And then it would not repeat the full sound, but it would cut off every time it's like.
Speaker 1
OK, OK. Yeah.
Speaker 2
It's maybe it's like sounds a bit shorter, but the feedback of the beat is still there.
Speaker 1
OK.
Speaker 2
Umm. Yeah, some other feature I think is nice for pianos. Or any other ones actually. The ones for the shooting at least. Is to give them the pointy laser thing, you know.
Speaker 1
Oh, like a yeah. The one right now, it's kind of like curved, so like a straight one would be nicer for that.
Speaker 2
Straight and then also have it be seen without you aiming necessarily. Without shooting, yeah.
Speaker 1
Because you already have to like, hold the trigger a bit to see it.
Speaker 2
Yeah.
Speaker 1
So before you even do that, to be able to see it, OK.
Speaker 2
I think, so you can like hit beats on their first try, which makes like, reduces the friction to make sound.
Speaker 1
Yeah, 'cause, I noticed as well sometimes whether it's by mistake or not that you would hit multiple at a time. And I guess that kind of messed with you a little bit as well then, OK.
Speaker 2
Yeah, on that note, I also think, OK, I have a few that are with that.
Speaker 1
Yeah.
Speaker 2
Would be cool to have a way to have different sounds when you press versus when you touch.

Speaker 1
OK, so like one cube has like 2 sounds that could be happening but it depends on if it's with the trigger or if it's with the touch.

Speaker 2
And then also a way to loop a single one. To loop every sound that was on the board by maybe touching a different button. Say like 1 is maybe for the click and then the other one is for the repeat.

Speaker 1
OK.

Speaker 2
Wait there was another one. Yeah. And then also maybe I think that the one, yeah, maybe that's different. But then to make sure to isolate the sound for like you have to hit it from a certain angle, and if you go down, it's completely the opposite of what I said with the combining of different sounds as well.

Speaker 1
Yeah. OK. Yeah.

Speaker 2
Yeah. Umm. Yeah, I think there's like 2 two ways, two things that I wanna say with both of them. Like one of them is like purely for the sound, and that's the one where like I think I wanna say isolate the sounds so you can hit them and then try to get like a perfect beat.

Speaker 1
Yeah. And I wont hit others by accident then. You mean OK.

Speaker 2
And then the other standpoint why I said the other thing with moving around and creating sounds that way is 'cause. I think it also is like the movement.

Speaker 1
It's like more playful then almost.

Speaker 2
Yeah. And then the like, I guess the movements, the moving around and making music as you move is also a whole new experience in itself. And to enhance that, you would. You would say, make it so that you can move in a certain interesting way and create a certain sound. I know. What, what, what I wanted to say was also for the loops have visual feedback to so say which one is on or not

Speaker 1
I was literally about to ask after this because I noticed sometimes I got a bit lost which loop was playing. And like there is a visual feedback when it turns on but, it needs to be on the entire time rather than just the second you click it.

Speaker 2
Yeah.

Speaker 1
OK. So yeah, in this example then, so if you turn it on like it stays purple, for example, until you turn it off.

Speaker 2
Like I think you can get like a whole new level of cool.

Speaker 1
Because everything is a bit more clear than as well, I guess. OK.

Speaker 2

It's like it's reducing. I think the most part is reducing frictions because the whole the setup is there. The setup is there, you can do, you can do already a lot you need to.

Speaker 1

Yeah, refine it

Speaker 2

Yeah, refine it. Make it so that the, so like you could do this in two seconds instead of 10, say.

Speaker 1

OK, nice. Then just one last question. Is there anything else that we haven't discussed yet that you think would be a good point to just bring?

Speaker 2

Well, I know this is like a test version of it. But I think like a cool environment would make this cool. Like a nice, all I'm thinking about, you know, the witness, the game The witness. It's like a puzzle solving game, but it's the environment that really makes the game for me.

Speaker 1

OK. OK.

Speaker 2

Stuff like that.

Speaker 1

Yeah. Fair one reason I kind of stayed away from making a full environment was because I wanted to look at functionality. I do agree with you the fact that a nice immersive environment would definitely change even how you look at what it is. But yeah, I can. I kind of left it out because putting it in my clients. Obviously you'd want to have it matched to what their environment is and stuff. So yeah, but. Fair. I do agree with you the fact that a nice environment rather than a very, this is very like plain and functional, for lack of a better word, right?

Speaker 2

Playing beats in an office space.

Speaker 1

Yeah. Rather than in a nice forest or something, right? Yeah. OK. That's all my questions. Is there anything else from you?

Speaker 2

I like this. I think this could be. I mean, it is already a product, right?

Speaker 1

Yeah.

Speaker 2

I think. Yeah, I think this has good potential to like be used and yeah, get out there in the public and world, make some cool ****.

Speaker 1

Nice. Thank you. And I will pause it.

Appendix K

Speaker 1
Attempt two. I'm just gonna start asking questions.
Speaker
Yeah, let's go.
Speaker 1
OK. So this is with your initial interaction with it in the first time before I explained anything.
Speaker 2
Yeah.
Speaker 1
To what extent were you able to understand the environment before I explained anything?
Speaker
I I first. But I guess because you've told me in what sort of space you were going at, and I mean from that story as well, like music therapy. I had an image in my mind that like I would walk into those squares and music would start playing.
Speaker 1
OK.
Speaker 2
So I was first walking around and then I hear didn't hear anything. And then I don't know if it was by accident or some other way, but then I figured out that you could actually touch them or you said that. You said that I don't know.
Speaker 1
I'm not sure.
Speaker 2
Well, I I touched them and then I heard the sounds. And then it made more sense.
Speaker 1
So kind of started rolling a bit more from there to, OK this is what it is. Yeah. Yeah, I guess your experience kinda matches with that then in that first section where was kind of more confusion for lack of a better word. Yeah, at least initially.
Speaker 2
Yeah, yeah. Once you hit them, it sort of makes. And you hear like a scale and then it's like, oh, yeah, these are probably different notes. And then later on I figured out the purple the loops.
Speaker 1
Yeah.
Speaker 2
I still have not really figured out the whole rhythm of the loops, but.
Speaker 1
I think part of that issue might be because they're not all the same like length in the sound file, so it kind of makes their speed a bit different. I think that could be part of it, but you seem to have a bit of trouble with the looping, Like turning it off in that first section, I assume. Yeah. If you could maybe explain what was going through your thought process with that then? maybeA little bit, yeah.
Speaker 2

Well, First off. The loop it doesn't show that it's on. So like you click on it, it turns purple and then you take your hand away and then It's just normal again

Speaker 1

Yeah.

Speaker 2

But then you do hear the sound. Yeah, but you're not really sure from which square it comes from.

Speaker 1

OK.

Speaker 2

So yeah, you're just not really sure which one are on at that point and then turning it off was, I don't think I understood turning it off. Did I understand in the first run?

Speaker 1

I think you did it a few times accidentally, but I feel like you still aren't. At least how I perceive that you weren't exactly sure how it worked.

Speaker 2

Yeah. Yeah. So no, I did not really figure them out at the at the first run.

Speaker 1

OK.

Speaker 1

But then, at least then. After the first run, so then once you've had the explanation and kind of been told how the controls work. How was your experience with it then?

Speaker 2

Then then, then it changed. Then then it made more sense, like turning it off was easier because I understood it.

Speaker 1

Yeah.

Speaker 2

I also the second run. It was a bit less chaotic. The sound really at some point when there's so much sounds going on, you just sort of get disoriented

Speaker 1

Yeah. Yeah. OK

Speaker 2

I felt disoriented so then at some point any information was just not going in anymore. So I had to reset it or it had to be reset or just turned it all off and then I could finally go in again.

Speaker 1

So I guess like in game at least, rather than having to like turn off the game and all that like a reset button in game could be very beneficial and it sounds.

Speaker 2

I think so.

Speaker 1

So you can just start from scratch instead of having to, yeah, turn it on and off again. It seems. Yeah.

Speaker 2

Yeah Also. Well, I'm not sure if that's the point or not but it could be nice or for me it would be nice to have like a indicators on what they do.

Speaker 1
OK.
Speaker 2
So maybe it's the point of exploring, of course, that could be, but at least in the second run, I was more like, oh, now I just, I cannot remember every square so I have to figure ut each time, and when you're really in there to start making loops or something. Then yeah, I would want to know what's on there?
Speaker 1
Yeah. So like for an example with that then, like by the piano maybe saying like which note it is for example something like that or on the percussion ones. I don't know. Like saying yeah, clap or snare or 808.
Speaker 2
Yeah
Speaker 1
So, just, yeah, tiny descriptors then to. Give some context essentially. Yeah, I mean I get that's beneficial. Yeah, originally I hadn't done that. 'cause, if you look at like a normal drum pad, you usually don't get that. In this kind of environment, it's not meant to copy that one to one so. if you think it's beneficial, I think that's important to consider then. And now this is going into like the different sizes. When you were using them, did you notice a difference between them?
Speaker 2
Yes, I think that was quite, quite clear from the start already that there's different sizes in between from them. Yeah. So.
Speaker 1
And with. With these differences, then, did you end up having a preference between them?
Speaker 2
Yes, I prefer the the square 1.
Speaker 1
So yeah, that's the big. Yeah.
Speaker 2
So the one because the other ones were harder to control, I couldn't always get them right. The square ones were easier to get right every time.
Speaker 1
Yeah. So yeah, because with the other ones, you seem to often press 2 by accident rather than just the one. I guess then that caused quite a bit of issue then, yeah. OK, so and I was wondering with the layout then. So in this kind of U shape, did that work for you? Or yeah, how was your opinion on that?
Speaker 2
It confused me a bit because on the left you have you have the loops but the loops are taking like a few choices from all the choices.
Speaker 1
Yeah.
Speaker 2
So without the names then it was really hard to guess like which one was which.
Speaker 1
OK.

Speaker 2
Uh. So there the layout of like having the loops there and then a multitude of other things there was a bit confusing.
Speaker 1
Mm.
Speaker 2
Because I would guess that you know if it's left top is is 808 then left top on that one would be 808. Other than that I think that U shape was a bit small sometimes. It felt like if I was hitting there and I had my hand here or something I could sometimes hit those.
Speaker 1
Yeah, I guess that problem didn't come as much with the big one, but the smaller ones that issue came, OK.
Speaker 2
Other than that. I at some point liked walking a bit backwards and then pointing and shooting, and then it was nice to have the U shaped. It's easy to.
Speaker 1
Yeah. Yeah, it kind of curved to.
Speaker 2
Yeah, yeah.
Speaker 1
OK. Alright, nice. And now this next question is to do the controls. With getting the sound to activate. So either the touch and shoot or the touching. I notice you use both. I think you use the touching one a bit more. Did you end up having a preference between the two, or did it maybe depend on which one you were using for example?
Speaker 2
Well, once you explained it, because in the first run I didn't know it. The other one, but once you explain it, I think the the point and shoot was also nice Only that it didn't work on loops. if you wanted to loop something just kept it going until you let loose.
Speaker 1
Yeah, yeah. That's true.
Speaker 2
Or you had to do like a trick thingy.
Speaker 1
Yeah.
Speaker 2
So for the loops, I guess the the touching was better. And for the point and shoot the trajectory, sometimes it would mess with because you cannot just straight point it.
Speaker 1
Yeah, I I think that goes a bit hand in hand with the teleport function then, since it's the same button. But yeah, I also was told in another user test that for like playing it a straight line would maybe be more beneficial.
Speaker 2
Yeah.
Speaker 1
One feature for future implementation is the ability to actually like record the things you're making and then stacking the different loops that you create just so like in a

music program, like Ableton or something. And do you think this feature would be able to improve the usability of this idea.

Speaker 2

Yeah, I think so. I think it would be nice to maybe link it in some way to some sort of rhythm so that you don't, because otherwise it might be very hard if you just sort of record it until I don't know you say stop.

Speaker 1

Yeah.

Speaker 2

It might be nice to have an actual like loop going on in a certain rhythm. So you can sort of place notes on that instead of just. Because otherwise you might never match them up I guess.

Speaker 1

Also, in that kind of vain maybe like a BPM might be nice to have in the background to yeah, kind of keep more on track when you're playing something.

Speaker 2

Yeah, but I think a recording function Would be really cool.

Speaker 1

OK, nice. I can't ask these questions because you'd have to be a music therapist. Are there any features that aren't there or that we haven't talked about that you think could be beneficial to implement in this kind of idea, prototype?

Speaker 2

Well, we said the BPM the showing the Notes that are playing.

Speaker 1

Yeah, I guess a big one as well was like showing that which loop is on as well.

Speaker 2

Yeah, I think that would be nice, yeah. A reset button.

Speaker 1

Reset button.

Speaker 2

Maybe if you have multiple ones like a reset button for each U shape so that you can mute the specific U shape.

Speaker 1

So it's isolated for lack of a better word, on this specific one rather than the whole game.

Speaker 2

Yeah, just yeah. OK, mute. The piano for yeah. Yeah, I thought of. I don't know, maybe the environment.

Speaker 1

Yeah, like like the looks of it. Mean OK.

Speaker 2

No, no. I think something like that.

Speaker 1

All right, nice. And just as one last basic question. If there's nothing that worries, but is there anything else that we haven't discussed that you think would be a good point to just bring up, whether it's an improvement, experience, whatever.

Speaker 2

Could be cool to have like an actual piano

Speaker 1

OK, fair.

Speaker 2

You could have like actual instruments, so you know exactly what is where.

Speaker 1

OK. So, like VR instruments essentially like actual ones then? Yeah. OK.

Speaker 2

Garage band but then VR

Speaker 1

Yeah. All right. Nice. If that's it, then thank you and I'll stop this recording.

Appendix L

Speaker 1
We'll get started. First question, to what extent were you able to understand the VR environment before the explanation of the controls and things like that?

Speaker 2
I think quite easily, but I might also be that I know how the games work, so controllers are definitely understandable to me. It took a second to figure out what is playing. Oh, this can teleport as well, so that does take a couple of seconds, but the controls, at least for someone who's used to gaming are quite how do you put It?

Speaker 1
Intuitive?

Speaker 2
Yeah. That's exactly what I was looking for

Speaker 1
OK. And yeah, I assume. Like after a few minutes it's already like, OK Im Kind of understanding the basics of it, OK.

Speaker 2
Yeah, exactly.

Speaker 1
So. So I guess then experience wise. It was just kind of a couple minutes figuring it out. And then yeah, more playing around I guess. And then same kind of question but after the explanation, how was your experience then? It differ at all, or was it just kind of continuation maybe?

Speaker 2
I mean, it did differ 'cause now I understood how to start the loops because the loops I think were accidental initially and I didn't really put one and one together so I attributed it to a button and not the side of the wall.

Speaker 1
OK.

Speaker 2
But yeah, after the explanation it was a lot clearer on how to actually get go.

Speaker 1
OK. And then that allowed for more playing rather than figuring out I assume, OK. What was your, I guess we kind of went over this, your kind of thought process was just kind of like pushing buttons maybe or seeing what happens.

Speaker 2
Pushing buttons, seeing what happens. Where can I walk? What can I do?

Speaker 1
Yeah. So pretty standard for a new game, I guess, OK.

Speaker 2
Yeah.

Speaker 1
And now for the the next question. We're gonna get into the different size versions of them. When you were interacting with them, did you notice any difference when playing with them?

Speaker 2

I think you do notice like the different sizes and shapes, but overall because of the similar color and the similar yeah, colors when they are playing. It did kind of like melt together, so I couldn't really distinguish between the three sections. I knew I heard a sound, but I couldn't remember where that sound was and how to refind it, or what was playing.

Speaker 1

OK. MMM, OK.

Speaker 2

But I do like the ones that were a bit wider, so like more space to stand in, but also. Yeah, it was easier to like, kind of like, look around and get my bearings with a bit more space.

Speaker 1

So like the the ones that's actual cubes, the big u, that was your preferred one? Yes. OK.

Speaker 2

Yeah, I like the big u. Especially with the distance point and click I can see how the smaller ones are nicer if you're standing and reaching, but for someone because I was sitting Pointing and clicking. The bigger one had no issue if I took a step back either so that was nice

Speaker 1

So you essentially liked having the space and being able to kind of point and click rather than having to go up and like touch them all and move around in that sense.

Speaker 2

Yeah, have an overview that way.

Speaker 1

OK. Yeah, I guess that kind of goes into why already. And based on the controls, so with the pointing. I noticed you mainly use the the point and click to actually touch them. Did that end up being your preference compared to like touching it?

Speaker 2

Definitely 'cause. I think walking up and moving around too much was making me more nauseous, so having the ability to just like have one like set space and then from there point and click.

Speaker 1

OK.

Speaker 2

It was very nice 'cause. Then the constant motion. I would not be able to focus because yeah.

Speaker 1

OK. Yeah, it'd be too much.

Speaker 2

Yes, so I like the option of having.

Speaker 1

Yeah, yeah, I heard that a bit as well. Like, given the specific player, it's nice to have the options there rather than only one specific one because it's a generally preferred. OK. So those point and click mainly. One feature for future implementation that I would like to do on this is being able to actually record your own loops. And then being able to stack them so very like music production kind of logic, right?

Speaker 2

That's fun.

Speaker 1

Do you think this feature would improve its usability as a whole?

Speaker 2

I think it would. import your own sound loops, as in you make your own sounds and upload them into the wall, or that you can record which loop you're currently playing.

Speaker 1

More like in game. So like if you have like say you have a record button in the game and then you press record and you can make your own rhythm say like using two of the squares and instead of like having the one loop that it has now where it's just constantly playing. The one sound you can space it how you want it. You know and yeah. So it gives a bit more freedom as to How the rhythm goes for lack of better word.

Speaker 2

OK, I think that would be fun. I think that would be pretty cool. Maybe that you could like pick up the block and kind of like put it in a space, you know, and have, like, shelves.

Speaker 2

you know how in music production you have the different the like sound acoustics blah blah.

Speaker 1

OK. Yeah. Yeah.

Speaker 2

Maybe you can make them different shelves and then you can pick up a block and place it there.

Speaker 1

See what you're saying Yeah. And then from there be like, OK, this these notes are playing like this, while this block is playing like this. So you OK stacking in that sense, OK. Pretty cool, actually, yeah. I can't ask this 'cause you're not a music therapist.

Speaker 2

Yeah, I've done a little paper. Like. I mean, I've done research on it. Don't know if you can use it, but the question won't help.

Speaker 1

No, sadly, it's if they can use them in their sessions.

Speaker 2

OK. Fair enough.

Speaker 1

Yeah. Are there any features that maybe popped up in your head that you think would add to this.

Speaker 2

Two main ones. First one is something to distinguish the noise, might that be like the picture of an instrument or like a name or A1B1 you know.

Speaker 1

Yeah, like on the block itself, you mean?

Speaker 2

On the block. And if a sound is playing, that color stays lit up because a lot of the time I was trying to like figure out where the loop I accidentally turned on was.

Speaker 1

OK.

Speaker 2

And then you're clicking a bunch of things, and that takes a while. Maybe if it's playing, it stays glowing.

Speaker 1

OK. Yeah, yeah, yeah, I heard that one before as well, OK. Yeah, that's good. OK, getting the the same kind of points. Know exactly what to fix then. And other than that, is there anything else that you maybe think, That you may be thought of with this that we haven't talked about yet. All or if.

Speaker 2

I like. I like the ideas. I would put them a little closer to. I don't know if I would actually put them closer together.

Speaker 1

Yeah. I mean, this is very much a test for functionality, so it wouldn't be necessarily how this looks end game.

Speaker 2

Yeah. I didn't want to ask why you only had a certain amount of loopable things with a bunch of noises.

Speaker 1

That's fair actually is a good question I wasn't expecting to get asked the question. Mainly, it was partly due to the fact I liked having that kind of U shape and then because I thought 4 walls for example, I thought that would be too much because then there would be one behind you always and you can't see everything no matter how you look at.

Speaker 2

That's fair.

Speaker 1

And I think that was mainly the thing, but at the same time, I definitely see the issue with not being able to have all of the sounds to loop.

Speaker 2

Maybe you could do some one wall loop his left hand click right hand loop.

Speaker 1

Yeah. So just put it in the controls themselves rather instead, and then have all the sounds be available to you, OK? All right. That was all of my questions. If there's nothing else, then I'll end the recording..

Appendix M

Speaker 1

So for first question is about your experience initially. To what extent were you able to understand the environment before I explained anything?

Speaker 2

I mean, it had four different blocks. Three we boomps (percussion). And one with piano. That was clear. I was very confused with why it wasn't stopping when I touched it. And I didn't think to think about the fact that they have different colours. Just thought left and right, but no, that was not the case. Later I did figure out that if I click on it, it does stop, but it took me awhile.

Speaker 1

So it took some minutes to kind of like get used for lack of a better word.

Speaker 2

Yeah. Some minutes, 15

Speaker 1

The first run wasn't that long.

Speaker 2

It felt really long, but yeah, fair.

Speaker 1

Alright, so yeah, so your experience you would kind of say was. Maybe confusion is a bit extreme of word.

Speaker 2

But no, I think it was quite clear. It's just I didn't know what to do with it.

Speaker 1

OK. Yeah. So yeah, being dropped into without explanation was kind of like, yeah. Just like, OK, this thing exists, but I don't know what to do now, OK.

Speaker 2

Yeah, pretty much.

Speaker 1

And then afterwards with the explanation. How was your experience? Like did it differ at all or was it kind of like a continuation more or?

Speaker 2

I now knew that you can loop stuff and which ones to loop, so I tried to remember which ones I've looped, so I don't have to click on absolutely every single one to figure out. that worked.

Speaker

Yeah.

Speaker 2

It's just I'm not musically talented so I couldn't loop stuff nicely.

Speaker 1

OK.

Speaker 2

But it was, yeah, it was clear. Maybe the only thing would be nice is maybe if it stays purple. If you looked it. Because then I don't have to look for it again.

Speaker 1

Yeah. So very clear indicator of, hey, this ones on

Speaker 2

This ones on. Yeah, this ones off. So then yeah, it doesn't have, Doesn't really need to show you which one like what. If two purples next each other are on, it doesn't have to tell you. This one makes a boom boom and this one a "tss tss" instead. But it's nice that those two are on, so I can like figure that out.

Speaker 1

So having that visual feedback would be a great help just to kind of have more of bearings.

Speaker 2

Yeah, exactly. And with the piano, it was also really fun.

Speaker 1

Yeah, you seem to enjoy that. The most it seems.

Speaker 2

Yeah. But that's a probably again because I don't know how to work with beeps and boops.

Speaker 1

And now this next question will be more about the actual. Not the control, sorry. The different sizes, so the configurations of them. When you use the different versions, so ignoring that there could be a different sound one, but just purely on using the sizes. Did you notice a difference when playing with them compared to each other?

Speaker 2

Yeah, well, I think. 'Cause at least I'm not sure. OK, from the perspective I was looking at it. The four of them. The one here was with the piano 'cause that's what I was looking at. This one and this one was slightly different like this one was a little bit wider than this one. At least it looks like that.

Speaker 1

Do you mean the one with the one that actual square tiles or?

Speaker 2

I think that's the far right one here. The first one that I was playing with that one had actual square tiles.

Speaker 1

Yeah, that was the biggest one. The other two are the same size, like they're both smaller than that square one, but, How the tiles are laid out is a bit different, so one of them is only 2 high, but four across, but the other one is 4 high and two across. But size wise I think they should be around the same.

Speaker 2

OK, I thought it was slightly different, but that might have been perspective.

Speaker 1

Yeah, I I mean there there's a chance that it's like a little off, but they're they're closer to each other than. The big one is to those, yeah.

Speaker 2

Yeah, 'cause the piano one. And the one that's in front of the piano. They were both long ones.

Speaker 1

Yeah, exactly.

Speaker 2

I think I like the long ones more.

Speaker 1

So the yeah, the long skinny ones that are 2 high, OK.

Speaker 2

Yeah, exactly.

Speaker 1

Is there any specific reason for that?

Speaker 2

Think I'm not really sure, but it also felt like there was more space in the cube when we were there.

Speaker 1

OK.

Speaker 2

I don't know if that that is necessarily true like this direction the horizontal way instead of the height, but it felt like it was more space because when I went in there and I would like turn around, I wouldn't accidentally turn them all on. But it could also be my position inside the cube itself, but in the first one, when I just turned around, I go boom and then loops a bunch of stuff that I didn't know.

Speaker 1

The first one, you mean the one that's 4 high or like the one with the big squares.

Speaker 2

The one that was here. So if piano is here diagonal to piano.

Speaker 1

OK, that's the really big one then. OK, fair. Yeah. So. 2 high skinny Ones seems to be your preference, OK. And now into the actual controls with touching the cubes. I notice that you like the point and click one the most it seemed. Why?

Speaker 2

Yeah. At well, first I was short in the world. So I think that like with pointing and clicking was nicer because otherwise I had to go like really far up.

Speaker 1

Yeah, you had to reach quite a lot.

Speaker 2

Yeah. And then I risked it on my way down with my hands, I would turn on or turn off something that I didn't want to. So with the pointing it was a bit more accurate. At least for turning them off, that was nicer. But I think that's also because my fingers didn't really figure out. I kept clicking this the same one to turn it off and on just by, so that's something. But in general I think going in there to turn it on was also it was OK. It's just turning off part that was a bit annoying.

Speaker 1

Yeah, OK. But mainly still you prefer the point and click.

Speaker 2

Yeah, I think if it was taller. If I was taller in the world.

Speaker 1

Were the same height as the cubes maybe?

Speaker 2

It would have been maybe easier and then I might actually prefer not the skinny ones, but the more condensed ones. Because If I am like this and if this is like eye level, I go

like this. But then this one I have to go like this. So maybe if there was like. Like. This just basically belly button level to head level.

Speaker 1

Yeah. Yeah. OK fair.

Speaker 2

That distance seems nice.

Speaker 1

So you don't have to reach too far down or too far up.

Speaker 2

That's fine, but I think that's also with different users. The headset sometimes has, like the function that you can adjust to different heights.

Speaker 1

Yeah, yeah you can.

Speaker 2

But other times not fully working, at least his it doesn't always work for me.

Speaker 1

I played around with it a bit as well. Sometimes it is a bit wonky on how to get the height you want because I've noticed even now, even though I haven't changed the settings. With different people, sometimes I think even with you now on both versions you were at different height, although technically you shouldn't have been.

Speaker 2

Yeah, but I think with one of them is because I was standing and then the other one was sitting because of motion sickness.

Speaker 1

Yeah, that makes a bit of a difference there.

Speaker 2

Yeah, but I don't know why. Yeah.

Speaker 1

OK. And one feature for future implementation. Is implementing the ability to record your own loops, so like currently if you press the cube it'll have that one set loop at exactly that rhythm only, but a future implementation would be like you can kind of play it how you want and have that loop be the thing instead. Instead of having it repeating so quickly, maybe only like 4 times in that.

Speaker 2

Yeah, fair enough.

Speaker 1

Uh. And then also to be able to stack them on top of each other. like in music production, I guess, make them more of a fully fleshed song. Do you think this would kind of improve its usability and as a whole?

Speaker 2

Yeah, I think so because. I wanted to like pair up all the frogs. but it didn't really work because they are on different rhythms and sometimes to test out, I would start clicking in the rhythm I wanted. But then when I put it up to hold it, it would have its own rhythm.

Speaker 1

Yeah.

Speaker 2

Maybe you could have like some combination with the controls where you like. Click, click, click and you punch it with the other hand, and then it's like set into that.

Speaker 1

Okay I see what you're saying.

Speaker 2

And then it's like set into your own loop as you said.

Speaker 1

Yeah. I mean, I haven't thought of it like that, but like that, that be pretty good as well. 'Cause the the whole recording thing. Yeah, yeah.

Speaker 2

You haven't figured out the process yet? I mean this could be it I think. But then you need to have like different functions for two hands, because right now they do the same thing.

Speaker 1

Yeah, right now each hand is the same, but you need to have it differ.

Speaker 2

But I think that it's doable. Like if you have one hand also for turning on, the other one for turning off could also be or maybe not turning on and off, but just one hand for like doing the beat and the other one for like keeping it in place. I think that could be nice. And I don't know if this is like if the game or experience purpose is to get you like moving as well or not really.

Speaker 1

How do I put it? It's not the main thing, like it's not the primary thing in question, but as a secondary question, part of my project is, Is it able to combine with different types of therapy? So one of them would be psychomotor, which is actually like moving around and getting movement in. And in that case. Yeah.

Speaker 2

Think the clicking should then be disabled.

Speaker 1

Yeah, like the actual touching thing in that case would make those link a bit more. But for this, that is a secondary question rather than the primary one. I think for initially it's to get the functionality of it. See how it works, how people like, what people don't like. And then afterwards combining.

Speaker 2

I think what, maybe it's a different question, but like now they're like blocks that are connected to each other. Maybe if they're more like floating next to each other, because then you might also avoid the accidental touches. Then you know exactly which one you want.

Speaker 1

So a bit more spaced out even. Either that and then it also has to do a bit with, I think the hitbox of the hands, they might be a bit big currently. So I think a lot of people have had trouble like with the skinnier ones, at least pressing one at a time.

Speaker 2

Yeah. Also, like when you're in a corner, it's a bit difficult.

Speaker 1

Yeah. Yeah, fair.

Speaker 2

But I think if they're a little bit more spaced out, maybe then they're like can also be circles or something like an actual.

Speaker 1

Yeah. And then you can change the shape and all that. OK, that's fair. OK, these questions, I can't ask 'cause. You're not a music therapist.

Speaker 2

How do you know?

Speaker 1

Are you?

Speaker 2

I don't know. Maybe secretly. I therapy myself with music. Does that help?

Speaker 1

Technically. Technically, it's not the same. I had to do research about it. It is something else actually, but OK. Are there any other features you think would be beneficial that we maybe haven't talked about yet?

Speaker 2

OK. I mentioned to sticking to color. The spaces.

Speaker 1

Because I feel like mainly I saw that the trouble was seeing which loop was turned on.

Speaker 2

Yeah, exactly.

Speaker 1

I feel like that was like the main issue.

Speaker 2

I think that's an easy fix as well. Just. Stick to that color.

Speaker 1

They have it turn on, yeah.

Speaker 2

Thinking, thinking, thinking, thinking.

Speaker 1

I mean some examples of what other people have said would be like a BPM counter for example. So you can kind of keep your own have that going as the like rhythm and then build on top of that.

Speaker 2

But that's, like I can think of, like already turning the beats you have into like visual things that are at the corner of your eye, that you can expand and like drag there without having to walk around more. That's maybe like defeating the purpose.

Speaker 1

Maybe a little bit. I guess it depends on the context.

Speaker 2

Yeah. If you actually tried to make music, then that could be useful 'cause then you have. The stamp when you like, run through it. But yeah, I think usability wise what I've mentioned already is what I can think of.

Speaker 1

OK.

Speaker 2

What about recording your actual own sounds? Like have those boxes that you can just be like. And sometimes what you have you're missing.

Speaker 1

Yeah, so being able to put in the sounds that you want and not have like a preset like only these 16 sounds are in there, OK.

Speaker 2

And then maybe another function is that you should like play with pitch of them.

Speaker 1

like add effects like reverbs and stuff like that.

Speaker 2

Yeah. You could have a little box with effects. You can just pull it on. And then maybe dragging them on like actually being able to move the blocks around.

Speaker 1

Like the ones that like have the effects you mean? So like if this cube has a reverb, you put that on the square you want.

Speaker 2

Yeah, I just grab it and like, walk with it to my like thing and I'm like, OK. What else do I need? I grab more. I walk and I dump it in there and then you can have like a little basket like little boops, boops boops that you got like, a big boops and beeps.

Speaker 1

Yeah. Alright, nice. I get what you mean. I can work with this.

Speaker 2

Try writing this into a thesis though. My client my interview, said Peeps boops boops.

Speaker 1

Yeah the transcriptions gonna be wild. And then just for one final question, is there anything else that's on your mind about it that we haven't talked about, whether it's features, feelings about it or anything?

Speaker 2

I think I need more color.

Speaker 1

More color. OK, that's fair. Yeah.

Speaker 2

I'm a visual person. Like this is, but I know right now that's like a really it feels like a low fly version of like it's just functionality rather than aesthetics.

Speaker 1

Yeah. I mainly wanted to test functionality, but I agree. Being able to actually make the aesthetics nicer and more appealing would be a big thing for it.

Speaker 2

Yeah, exactly. Maybe also, Wait, I guess the boxes they were the same, but it was more for sizes. Not going to be. Just like you have now the same box with the same sound.

Speaker 1

Yeah. It was a test more the sizes, what would be preferred kind of. Initially I didn't think that people would want to use multiple at a time, but that seems to be a bit of a common thing as well. So I guess maybe in the final version it might also be beneficial to. Maybe not 4, but like have maybe two or three or something. Maybe with different instruments even or something like that, but yeah.

Speaker 2

Think that's really nice.

Speaker 1

If there's nothing else, then I think we can call it there. Nice. Thank you very much.

Appendix N

Speaker 1

Alright, so for the first question. I want to ask about your experience with the initial playing, so without an explanation to what extent were you able to understand the environment before any explanation of controls and such?

Speaker 2

With the exception of completely figuring out how stopping the loop function work, I think I literally got everything there was to offer. As far as I know.

Speaker 1

Alright. Yeah. And do you have any kind of thought process regarding it? It just kind of like. Push button. See what happens.

Speaker 2

Or yeah, but it was like a very heavy **** around and find out process for me. Mostly intuition and just seeing what I could do and what I could not do, for example. I figured out that you could not look around and walk around at the same time that the teleportation function also works for pressing the buttons in which order the tones went from the piano. So yeah, OK.

Speaker 1

And then so after that you received a brief explanation of the controls, what each thing is and how to, yeah, interact with it for lack of a better word How would you then compare your experience Afterwards?

Speaker 2

When you explain to me how stopping the loop function work, all the blocks, I say that the experience was the same. Then that I actually knew that I had found everything. So I could now resume to try now, like the extent of what I could do with the things that you've set up for me. So seeing if I could actually like play a small song, if you could make a rhythm worker, to what extent I could break the game or whatever.

Speaker 1

I mean fair. So it was after the explanation. Was more just like play around rather than figure out.

Speaker 2

Yes. Now that I figured everything out, it's now time to see the extent of my abilities.

Speaker 1

OK. So you also used the different size versions. Did you notice any difference when interacting with them?

Speaker 2

Yes, I did. I made a lot less mistakes with the one that was on bigger side.

Speaker 1

So the square tile ones.

Speaker 2

Yeah. Also, I noticed with the smaller ones that I kept accidentally pressing the blocks on the side because it was too close to me. Perhaps I just held my hands out too far, but that was the way I was comfortably standing. So I guess that was the thing. Yeah, other than that I found fun trying to see if I could stand outside of the actual U form and if I can play from the back. I don't know why I did that, but it was a lot fun.

Speaker 1

You were the first person to try and play it like that. I mean. Yeah, if it worked for you, right? Why bash it? Yeah. So it's pretty clear then your preference leads towards the bigger size. So you have space for yourself without accidentally hitting things, OK.
Speaker 2
Yes, I guess.
Speaker 1
And the next question is based on the controls of it. I noticed you mainly used the like the point and Click to touch the tiles instead of actually like touching them. I assume that ended up being your preference?
Speaker 2
Yes, definitely.
Speaker 1
Any particular reason why?
Speaker 2
Yes, because the character was on the smaller side, I had difficulty pressing the ones above like on their own. When I tried to press it. When I pressed both of them because my hand was in the middle of the two blocks. Yeah, I guess it just felt more natural. The only thing that was a bit of a thing was because the line from pressing the box from a distance was in an arc, I just missed the cubes.
Speaker 1
Yeah. Yeah, that's fair. Yeah, that's partly due to it's teleportation technically.
Speaker 2
Yeah. It was a superior way of playing. You don't understand.
Speaker 1
And then one feature for future implementation is the is the ability to actually record your own loops and then stack them on top of each other. Much more in a like music production kind of sense of actually making a song. Do you think this would improve its usability as a whole?
Speaker 2
Definitely would have a way better oversight. You would be able to make a lot of different stuff instead of painfully trying to time stuff and then not seeing it just won't work and starting again.
Speaker 1
Yeah. OK, nice. I can't ask this 'cause you're not a music therapist.
Speaker
I'm not.
Speaker 1
Yeah. Yeah. Are there any other features you think would be beneficial in this kind of thing?
Speaker 2
Yes, definitely. I would like to rearrange the blocks, either switch them around or putting them in one big line.
Speaker
Oh, OK.
Speaker 2
Because I'm used to piano. So having piano actually go from left to right is just how it feels like. It's correct to me. Other than that, sometimes not that I wanted specific

sounds that I use more often to be close to each other, so I didn't need to move my hands around as much. Other than that, perhaps the ability to record, a specific sound and put it on a specific block.

Speaker 1

So you can like have your own sound to put into it.

Speaker 2

Yeah, own sounds, instrument, slash, whatever you want it to be. Other than that the ability to make the sounds come out of the blocks themselves. So that they're not permanently in my ears.

Speaker 1

Spatial audio and rather instead of through the speakers.

Speaker 2

Yes, spatial. Yeah. And if I combine it with the ability to move the box around, I think I can do a lot of fun stuff as well.

Speaker 1

OK. All right, nice. And then just as a last question, is there anything we haven't discussed yet that you think would be beneficial to at least make note of?

Speaker 2

Um prior experience with both music and VR, I'd say. And then in my case I have a VR set at home, specifically my brothers. I haven't used it a lot, but I think I have about 100 or 200 hours of playing around on it, so that definitely helped with the experience. And other than that for musical knowledge. I have played different instruments for at least five to seven years of my life.

Speaker 1

So you're saying that that kind of made it easier to understand playing with all of it?

Speaker 2

Yeah. Understanding the process like, yeah, trying to actually get a beat or a song going and figuring out the controls and everything, yes.

Speaker 1

All right. That's it for me, then Coolio and you're finished.

Speaker 2

Yo.

Appendix O

Speaker 1
To what extent were you able to understand the VR environment before any explanation of anything. So Section 1.
Speaker 2
I feel. It was quite intuitive. I mean, I kind of was playing around with the controls in terms of like movement wise. But I mean like pressing the buttons to like play the things on the walls, like with the blocks was pretty simple and easy to understand. I was quite confused with the teleporting. Was not aware that that was the thing, but that was indeed the thing. Oh, and also, at some point I played with loops that I didn't even know were thing and I was just very confused. But yeah, other than that, I think it was pretty OK.
Speaker 1
So yeah, it's just the teleporting in the loops that caused confusion. OK. And then after the explanation of controls and features. How did your experience differ?
Speaker 2
I feel like it was more or less the same simply because I mean the nausea plays a factor into this. Wasn't able to explore as much as I would have liked to in the second round.
Speaker 1
Yeah. That's fair.
Speaker 2
I feel like the instructions were given quite thoroughly. But yeah, I wasn't able to explore with them. Then had to cut the play testing short.
Speaker 1
If you'd have more time, you'd be able to create more for lack of a better word
Speaker 2
Yeah of course
Speaker 1
OK. And I did see, though that you at least tried to use all the different sizes of the pads that were set up, did you notice a difference when playing or interacting with them compared to each other?
Speaker 2
I mean from the first round I really kind of knew that they were different sounds. So, like pianos and snares I guess it's called or whatever got different percussion sounds.
Speaker 1
Yeah, different percussion sounds so.
Speaker 2
And yeah, I don't think there's a big difference from how I play in the first and the second round.
Speaker 1
OK. Yeah. Did you have any preference with the different sizes? So for example, like the really big one or the tighter smaller one?
Speaker 2
I think I like the bigger one simply because when I was exploring in the first round and I accidentally teleported, it was easier to get myself acclimated to that environment as opposed to the smaller one.

Speaker 1

OK.

Speaker 2

The smaller one kind of makes me feel a little bit claustrophobic

Speaker 1

Yeah, fair okay. So that one is quite. Yeah. So with the big one, you feel like you have some space to move around and do stuff.

Speaker 2

Yes, even if I accidentally teleported.

Speaker 1

Yeah, yeah. Wouldn't be the first time I've it done it too. It's OK. And yeah, with the controls now I notice that you mainly use the point and Click to press the tiles instead of actually touching them. Would I be right to assume that was your preference?

Speaker 2

Yeah, that it was just my preference because. Was just easier.

Speaker 1

OK.

Speaker 2

I mean, I knew that in the second run I could go up and touch them, but I just didn't want to do that because I just like clicking things from afar. But I think That's where also my confusion came from with the teleportation. I was just clicking and then suddenly I was transported to another block and I was very confused.

Speaker 1

Yeah. Yeah. So maybe having those two maybe be a different button might be a bit better.

Speaker 2

Yeah, might be a bit better.

Speaker 1

OK.

Speaker 2

But wouldn't necessarily say that it's the way that it's set up now would cause like such a massive difference in the way that you would be able to move and select things, yeah?

Speaker 1

OK. Yeah. And then one feature for future implementation would be the ability to actually record your own loops instead of the kind of preset ones that are there and then stack them to make, yeah, like a beat or. So do you think this would improve the usability of this prototype?

Speaker 2

I think it could. But probably it's because I have very limited experience with VR games in general and also with just percussion stuff and like sounds in general.

Speaker 1

Yeah.

Speaker 2

It wouldn't make that much of a difference to me if I could have loops or not, because as you very much saw, I was very visibly confused when the loop still kept going on and on and off.

Speaker 1

OK. Yeah.

Speaker 2

But I think for someone who's more experienced and understands the way that this would work, it would have a better effect for them.

Speaker 1

Yeah, like ideally as well, this would be a thing that a music therapist and their client is in together. So even if the client has limited musical knowledge, the music therapist should be able to help them. And actually guide them into like making something. So like I get it though if you have no knowledge it will kind of not matter in that sense.

Speaker 2

All right.

I guess I mean one indicator, what do you call this, I guess, for people who aren't as used to this kind of virtual reality having an indicator of where those loops would be like in the second round so.

Speaker 2

Well, just being the first round like did. That's fine, but if in the second round I can like have indicators of where those loops are even without someone teaching me would be nice to explore.

Speaker 1

Yeah. In that sense, so kind of having like some visual indicators showing, hey, this wall is loops or maybe even like each tile has like a oh, this one is this sound this this square is this.

Speaker 2

I don't think it needs to be like labeled to that extent, but Simply for the loops. I thought yeah, because. Yeah, it's a little overwhelming when we have 3 loops and you don't know where it's coming from.

Speaker 1

Yeah, it can be a bit out of control very quickly. That's true, yeah.

Speaker 2

Yeah.

Speaker 1

Yeah. Are there any other features you think would be beneficial? To this.

Speaker 2

Speaking from someone who has very little experience, I think presets sounds would be nice to explore. So in the second round, if I for example had like a indicator or something where I could like, follow certain things and like oh, I can make like this. Or this certain accompaniment, I think that would be really nice.

Speaker 1

OK. OK.

Speaker 2

Because then it takes away the need for someone to explain to me. Like what? The what?

Speaker 1

OK.

Speaker 2

It gives me more autonomy in a way

Speaker 1

In that sense so a little bit like a like a tutorial to a game kind of or like that train of thought at least, OK.

Speaker 2

Kind of. Yeah, yeah. I think it would also be quite interesting to see if I could like move and make some matchups like I know they're very much set into like 4 different sections. If I wanted to be as chaotic as possible, or if I was someone more experienced, I could. Take a block from each of them, and then just stuck them together at the center and then, like, make a Symphony or something along those lines.

Speaker 1

Yeah. So you can like make your own customized pad for lack of a better word. yeah.

Speaker 2

Yeah. Exactly.

Speaker 1

OK. Oh, nice. Yeah, if there's no other features that you can think of, is there anything else in general that you think would be worth pointing out that we haven't discussed?

Speaker 2

Let me think. No, I think that's basically it, yeah.

Speaker 1

Perfect. Thank you very much.

Appendix P

Speaker 1
OK, for your first sections or your first time playing in it, to what extent were you able to understand the VR environment before any kind of explanation?

Speaker 2
Well, I had some experience with VR in general in the past like I know how to move around, but coming into this game it was, I couldn't compare it to anything it was complete chaos. I mean, I quickly figured out how I can teleport.

Speaker
Hmm.

Speaker 2
But then the hand controls were still a big blank and that was the question, right?

Speaker 1
Yeah, just how your experience may be.

Speaker 2
What was the question?

Speaker 1
What was your thought process in it? Because I notice you said trying to relate it to other games you played.

Speaker 2
Yeah, yeah. I started moving around. It felt pretty alright. The height sometimes was an interesting element. And then once I started interacting with the cubes.

Speaker 1
Cubes. Tiles.

Speaker 2
It was very messy and it felt very overwhelming, especially when I couldn't figure out how to stop a loop. It was very annoying.

Speaker 1
Yeah. Yeah, I think that's a common feeling in that first section with people who tested it because it gets very chaotic very quickly. Yeah, that's completely fair. And then after you received the explanation of controls, what's what. How would you say your experience differed if it did?

Speaker 2
It was much more enjoyable, yeah.

Speaker 1
OK.

Speaker 2
As a musician myself. I really. I really enjoyed the experience. Also, I enjoy the control in the sense that I could control what I'm listening to and the loops and I really like the high hats as well. Just the constant loop behind while I was experimenting with other things. Then figuring out the collision with some cubes. Was a bit triggering that I didn't have fully full control of what I was turning on and off like, even though I knew how it was supposed to happen. I didn't fully control everything how I wanted. And also the lack of labels on each tile was interesting. In the sense that, you know, like I don't know which one is the frog. Don't know which one is the cricket which note is what? So it was a lot of play around and find out which was nice eventually, like after the 15 minutes I I

think I had really good understanding of where was what. And what was going. And I even made some nice loops. I really felt in the moment and that I kind of lost track of time as well. So I really enjoyed it.

Speaker 1

So you'd say as your time went on then it was less finding out more actually playing and enjoying without distress of like oh, I don't know what does what.

Speaker 2

Yeah. Yeah, exactly.

Speaker 1

OK, nice. And I noticed when you use the different size versions. I noticed with the smaller ones you said you were, you felt a bit claustrophobic when you like, looked into the space.

Speaker 2

Yeah, especially if I walked into the space itself.

Speaker 1

Yeah, would a right assumption be to say you prefer the much bigger open one.

Speaker 2

That would be a correct assumption, yeah.

Speaker 1

Yeah.

Speaker 2

I like the bigger 1 and I like the when the cubes. Umm. Are vertical and not horizontal like. I think 'cause when they were horizontal like the long ones were more, was more difficult to touch and control and play with.

Speaker 1

Oh yeah. Yeah.

Speaker 2

But the bigger one that had also very square cubes was really nice.

Speaker 1

OK. So yeah, just having the space to actually like, feeling like you have room to breathe so you can look at everything and play how you want.

Speaker 2

Yeah, yeah, yeah.

Speaker 1

Helps with your experience like.

Speaker 2

It would be nice. Is this time for feedback or do I come?

Speaker 1

Yeah, no, of course. If you have any points you want to mention, go ahead please.

Speaker 2

Yeah, I would like like different shapes like to keep it more entertaining as well in the in the environment. Like if it was just a straight line of like a huge piano. Or, like harp, like sometimes I used one section like an harp and it felt nice.

Speaker 1

Yeah.

Speaker 2

I liked moving my hands and making the music as if I had the real, a real instrument in front of me.

Speaker 1

So like actually making the things look like the instrument itself. Maybe or doesn't have to be, but for example.

Speaker 2

Yeah, maybe. Maybe just the motion, like it felt nicer to move my arms and touch and enable the sound than just clicking the buttons to enable the sound because I had the option to do both.

Speaker 1

Umm.

Speaker 2

And yeah, I liked moving around freely.

Speaker 1

OK. And I mean this kind of goes in a bit nicely. This next question is with the hand controls. Yeah, just like you said. From or from what you just said. It sounds like you much rather use the actual touching with the controls rather than the point and click to activate the sounds.

Speaker 2

Yeah, I like the point and click in the beginning to like figure out what sound is what. Especially if I don't want to get too close and mess things up with the loops.

Speaker 1

Yeah.

Speaker 2

Especially also cause in the beginning when you when you click a loop from far away, it doesn't start the loop. You have to actually put your hand inside.

Speaker 1

Yeah.

Speaker 2

So I like using the button for that.

Speaker 1

It's like a little teaser for it.

Speaker 2

Yeah, yeah, yeah. But then yeah, the controls were finicky.

Speaker 1

Yeah, that's completely fair. Yeah, yeah. One feature for future implementation is the the ability to actually record your own loops and then stack them. Very much in like a music production sense, right?

Speaker 2

OK.

Speaker 1

Like I have the 808. I press it like this, yeah. Do you think this would improve or this feature would improve the usability in this?

Speaker 2

In music production?

Speaker 1

Well in this. So the ability to record and stack your own loops with the sounds that are in there.

Speaker 2

It would help if the loops that are activated or highlighted. And let this stay a specific color so I know what to turn off or what's on, because when something is on, I don't know what it is.

Speaker 1

Hmm. Yeah.

Speaker 2

Feels like aaahhh what do I do? What do I do? yeah.

Speaker 1

Yeah, it feels a bit stressful then there, OK.

Speaker 2

And what you mentioned like having a bar and seeing the loop to stack them that it's also interesting. You have that in the sky or in the air or?

Speaker 1

Honestly, I haven't given him much thought. Yeah, I just kind of used it as an analogy to yeah, say to that you can record and stack your own loops. I didn't necessarily mean physically, but if people would like that, I mean, that's definitely something to consider then, right?

Speaker 2

Like a UI like in front of your vision that tells you like here, like the stacked layers and then maybe if you can have control on that UI then you could move some sounds one bit to the right or one bit to the left.

Speaker 1

Yeah

Speaker 2

Because you have. You have, let's say 4 beats in one bar and then the timing of when the loop starts depends on when you put your hand in. But if you slightly miss the timing and you want it to start on the third bar. And instead of the 2nd and it would be nice to have like a physical control to adjust that like .

Speaker 1

Yeah. So it's kind of like snap and click more so you know, it's like in the rights timing, OK.

Speaker 2

Yeah, exactly, exactly.

Speaker 1

All right. Yeah, that's good feedback actually. Sorry I have to see what else? OK. Can't ask. You're not a music therapist. Actually, I'm also curious. Did you have a preference with the piano or the drum sounds? Or was it the same to you?

Speaker 2

I had a preference. I liked that it was both 'cause I can mix the sounds. But I had a preference towards the piano because then I could play more with the melody and create something rather than with the drums.

Speaker 1

Yeah. Yeah. Then it's strictly rhythm kind of.

Speaker 2

Yeah. And I didn't have a lot of control on the sound of the drum. So it was these are the options. Select one and if they don't fit you. Yeah, that's so.
Speaker 1
It also kind of sounds like then you would like you would like to have the option to put in your own sounds maybe.
Speaker 2
Yeah. Or maybe there's like 1 drum and then I have a button to change the pitch or like, add some reverb, yeah.
Speaker 1
So actual effects and stuff like that, OK.
Speaker 2
Yeah, yeah. And I would also like maybe some labels.
Speaker 1
No, that's fair. Yeah.
Speaker 2
Or some color coordination or something that says what is what. And maybe some more ambient sounds as well, like to have like a constant rain or constant, because you can really take full advantage of the environment and if part of my therapy in this moment is like to feel the rain on my skin.
Speaker 1
Yes.
Speaker 2
Obviously I won't feel the rain on my skin, but I can.
Speaker 1
Like physically.
Speaker 2
I can feel. I can see maybe the rain falling and like.
Speaker 1
Yeah. So emulate it as much as possible. Kinda OK.
Speaker 2
Yeah, yeah, yeah. You can heighten a lot of senses from it. I enjoyed the moon and the sky. And the lighting.
Speaker 1
OK. I mean, this kind of ties in perfectly to the next question because you just kind of I think named some features that you would like to put in. Are there any other features you think that would be beneficial besides the ones you just mentioned? Or I mean if that's it also that's OK 'cause you know, I think you already named like 3 or 4.
Speaker 2
Yeah. Yeah, I I think I I mentioned all of them like the shape like the environment, the ambience, the sounds and the labels I think are the main 3.
Speaker 1
The main three. Yeah, and also like the, if the loop is on having it stay a different color while it's on.
Speaker 2
Yeah, yeah, yeah.
Speaker 1

OK. And then just for a last question, is there anything else that we haven't discussed that you'd like to maybe just make note of?

Speaker 2

Mm. I would like flying around.

Speaker 1

That's fair, yeah. Like to fly around, OK?

Speaker 2

Yeah, I don't know. You could have multiple layers like you could have. Could use the space in three dimensions. I mean, it is already in three dimensions.

Speaker 1

Yeah, but you mean also like vertically?

Speaker 2

But yeah, and maybe like if there's, if it's like a store or maybe like levels.

Speaker 1

Yeah.

Speaker 2

Or if not levels like themes and there's like a drum pack or like the more, you know have more instruments like violin and saxophone and have like a full orchestra that I can work with.

Speaker 1

OK, so the more variety the better.

Speaker 2

Yeah. Bigger the variety the better and the more control also the better. The more effect I can have on each sound. I think that I would feel even better on that then it's. Yeah, it's amazing.

Speaker 1

All right. OK, awesome. Thank you very much. We will end it there.

Appendix Q

Speaker 1 0:05

OK, perfect. So for the first question. I wanted to kind of ask about your initial feelings with the with the VR environment and kind of your experience with it initially, how you felt about it and yeah.

Speaker 2 0:30

I was curious what you would come up with. And when I saw it at first I was, well, I was actually happy that it was simple, OK. Because.

Speaker 1 0:55

OK.

Speaker 2 0:57

But I'm not so very digital and so it it was very how you say. What's the word? In Dutch its ???.

Speaker 1 1:16

Intuitive by any chance?

Speaker 2 1:19

Oh, it's very easy to see the whole picture.

Speaker 1 1:23

Oh, OK. Yeah. So, like, Ubersicht in in German. Yeah. OK, honestly, I'm glad to hear that because as I was making it in my head, I kept on having the thought of like a simple solution is often better than this, like big over complicated thing, especially if if it can have the the same effect, right?

Speaker 2 1:47

Yeah. It was at at the same time I was immediately thinking how would this be? How could this be integrated in the environment that we have created in with ????

Speaker 1 2:09

There exactly.

Speaker 2 2:10

And I think it that should be possible.

Speaker 1 2:13

Yeah, I I think so too, because one of the things I.

Speaker 2 2:16

You know, you know the environment that ??? created.

Speaker 1 2:21

Yes, I got to play around with it a little bit and check it out.

Speaker 2 2:24

OK, OK. Yeah.

Speaker 1 2:27

But when I was making it one thing I purposefully left out is like the aesthetics of it. It's purely because then implementing it into there will be easier, especially then to like match its environment and look. More cohesive with what's around it. So for now, yeah, it's just kind of like a blank white space, but.

Speaker 2 2:44

Yeah.

Speaker 1 2:50

Yeah. That should.

Speaker 2 2:51

Yeah, you could. OK, you. You could make it look more fancy, but that doesn't change the the functionality.

Speaker 1 2:56

Yeah, exactly. Exactly. And that's the main thing I wanted to test, so I'm glad to hear that.

Speaker 2 3:01

Yeah, yeah.

Speaker 1 3:08

All right. OK, I didn't get to see you actually play with the the different ones.
But when you used the different sizes of the the, I call them the pads, so the different the blocks. Did you notice any difference when playing with them?

Speaker 2 3:25

The blocks? In terms of functionality, I did not.

Speaker 1 3:37

OK.

Speaker 2 3:39

But I would prefer the big ones.

Speaker 1 3:41

OK. Is there any specific reason for that or just kind of feeling wise or?

Speaker 2 3:49

Yeah, I think feeling wise because in the end it doesn't really matter.

Speaker 1 3:50

Unless. Yeah. OK.

Speaker 2 3:54

No, but. I had some trouble navigating into the into the square. So, but I think the the square with the with the small blocks isn't bigger than the than the one with the big blocks I guess.

Speaker 1 4:17

No, it's it's definitely smaller.

Speaker 2 4:20

Yeah, it's smaller.

Speaker 1 4:21

You can touch wall to wall pretty much in that, but the big one you can't necessarily I think.

Speaker 2 4:27

OK, because I, but that's probably a lack of experience with navigating with with the joysticks. So I had trouble navigating into this square because I wanted to be in the middle. And then so you can touch the blocks from inside.

Speaker 1 4:29

Yeah. Hmm. OK. Hmm. OK. Yeah, that's completely fair. I know some other people also preferred the bigger one because the the smaller one made them feel very claustrophobic, for example, so they went. Nah, I'm playing with this one.

Speaker 2 5:02

It works, it works. Yeah.

Speaker 1 5:05

But. OK. Yeah. So the bigger ones are OK, that's nice and I've also been curious with the the controls because to activate the cubes there's two options, right? There's touching them and then there's the kind of point and shoot, and I was wondering, yeah, if you ended up having a preference on one of those.

Speaker 2 5:34

I like touching them.

Speaker 1 5:36

OK.

Speaker 2 5:37

But it's. Well, to be able to to shoot at them gives the, gives a feeling of power.

Speaker 1 5:52

OK.

Speaker 2 5:53

'Cause you can without any, without much effort, you can shoot at them and to touch them takes more effort and more skill to navigate and to go to the blocks.

Speaker 1 6:10

OK, so so you like the fact that kind of it, it requires more of you to actually activate them by touch?

Speaker 2 6:21

Has some advantages I like to be. I like the the hand work but to to be able to.
You should give us a feeling of power.

Speaker 1 6:35

OK, I haven't heard that before. That's very interesting actually.

Speaker 2 6:41

I think someone with a gun feels powerful and it's the same feeling.

Speaker 1 6:43

Yeah, I'd. I'd be. Yeah. OK.

Speaker 2 6:47

It takes no effort to to shoot at a block.

Speaker 1 6:51

Yeah.

Speaker 2 6:51

Takes more effort to go and touch it.

Speaker 1 6:55

And. I assume kind of maybe with the the touching them then especially with the bigger space that can kind of help with the getting in some physical movement, for example 'cause you have to reach or go down low and then side to side.

Speaker 2 7:10

Yeah, yeah, I think I think playing because I all the time I had in my head how would it be if you were in this game with two persons. I would like that that's because I work like that with the children. It would be very nice to be in the same room, so you could. You could build a rhythm together, but you could also try to interfere. Someone's rhythm and see his reaction.

Speaker 1 7:44

Oh, OK.

Speaker 2 7:44

For a therapeutic reason, that would be very interesting.

Speaker 1 7:48

OK.

Speaker 2 7:49

If someone builds and builds a rhythm and I interfere it, or even destroy it or change it and see the reaction of the other one.

Speaker 1 8:01

And I assume you seeing this reaction then will be to. How how would I put this? Yeah, being able to help them kind of go through the emotion of that. If you were to destroy the rhythm, for example, depending how they react.

Speaker 2 8:23

Yeah, yeah, yeah. Or from the other side, I could help someone build a rhythm, build something. I could support him, or I could add something to his idea. So, you construct

something together that, that's all kind of interesting therapeutic interventions you could make with this.

Speaker 1 8:49

Hey, very nice.

Speaker 2 8:50

No. So it would be very nice if you could could make this for two persons.

Speaker 1 8:57

Yeah, that definitely is the end goal with it.

Speaker 2 9:03

OK, now.

Speaker 1 9:04

It's just with the yeah, the the initial user testing. I hadn't quite figured out yet how to make it a two player thing. But yeah, if this project were to actually be like, yeah, implemented it into the other environment, for example. The idea definitely is for it to be a collaborative with two people.

Speaker 2 9:24

Yeah.

Speaker 1 9:30

Otherwise, I guess it would be kind of difficult.

Speaker 2 9:35

Yeah, because when you are with two people in such an environment, it's possible if someone else touches this, this thing if he's around.

Speaker 1 9:44

Yeah. Yeah, exactly. And.

Speaker 2 9:50

Yeah.

Speaker 1 9:52

Yeah, it's a bit of a a tangent of what my actual questions were now, but since you're saying you were thinking of how it would be with a multiplayer setting the whole time. I'm. Is that? Hold on I need to think about this for a second. That kind of makes it sound like you think this would be possible as a multiplayer thing like.
That it would actually work. If two people were in it, how you're saying for example?

Speaker 2 10:29

Yeah, I I think I think. Well. It becomes. Therapeutically interesting when it's multiplayer.

Speaker 1 10:48

OK.

Speaker 2 10:49

But like it is now, it's not much use as a therapeutic instrument.

Speaker 1 10:55

Hmm. And then OK, but with the implementation then of two people at least being able to be in it, they will kind of take that to the next level to make it a therapeutic thing, OK.

Speaker 2 11:02

Yeah, sure. Yeah. Yeah, yeah, yeah.

Speaker 1 11:07

That's OK. That's very nice. And then Speaking of bringing it to the next level. There's one feature that I want to, I think would be nice for future implementation, which would be the ability to record and stack your own loops.

Speaker 2 11:28

Yeah.

Speaker 1 11:29

So instead of just the the one loop that you can have, you can make your own. Yeah, spacing with it. So now it's just that constant thing. And yeah, and then having multiple recordings be able to stack them like very much like a music production kind of idea. Do you think this would improve its usability?

Speaker 2 11:48

Yeah, yeah, yeah.

Speaker 1 11:53

Yeah, for. Yeah, making rhythms and such.

Speaker 2 12:00

Yeah, sure, yeah. Well. What I'm wondering is what is the? How you say? Maybe you should look for what is the advantage of doing this in VR instead of doing it in real life? Because you could, you could sit behind a desk with two persons, or even be alone and make a rhythm. I could mail it to you and you could add something and you mail it back to me and so on. I was thinking what ??? I'm thinking of this as a therapist. What is the? What is the addition of doing this in VR.

Speaker 1 12:58

OK, I know what you mean. Yeah, it's.

Speaker 2 12:59

Know what I mean? So it's the fact that you are in the same room and you are working on, so I could. When someone tries to reach for a block, I could prevent them trying to reach him like in a game, like in a fight. So you could make all kinds of games or.

Speaker 1 13:21

No, that's it.

Speaker 2 13:27

I would say interactions in which you can work on therapeutic goals like taking your space or cooperation or giving a saying no to someone like this and this would make

such.

Speaker 1 13:44

Yeah. OK.

Speaker 2 13:53

This would make it more interesting as a therapeutic instrument.

Speaker 1 13:59

OK, so it it, it sounds kind of like then to, for lack of a better word, maybe gamify certain types of exercises that you would do in these kind of sessions like you said, getting in someone's space or stopping them from doing something. And yeah, I don't know if it's all the way gamify, but yeah, essentially, to make that work in that kind of environment then so you can. Yeah, yeah. Do more with it, I guess.

Speaker 2 14:34

Yeah, that's what I mean.

Speaker 1 14:35

OK. Yeah, it's a very. Yeah. OK. Nice. OK. Oh, I've had some questions for specifically for music therapists, and I can finally actually ask them.

Speaker 2 14:53

OK, shoot.

Speaker 1 14:56

So the first question is, could you see yourself using this in your sessions with your patients? Maybe if we think of it, including the additions that we've talked about, so for example, the the fact that it would be in multiplayer and maybe these kind of gamified options.

Speaker 2 15:16

Yeah, I think that should be a necessity.

Speaker 1 15:19

Yeah.

Speaker 2 15:20

As a 1 player it's not. Because I cant be there at the same time. Well, I I could. I could follow it on a on a screen. But that's not I could. I couldn't do interventions. So as a multiplayer a tool, it would be very interesting. Yeah.

Speaker 1 15:29

Yeah, exactly. Yeah, it's not as immersive then either. OK. I guess you've also already said as to to why a little bit, because then you can actually intervent and collaborate. Yeah. Yeah. So we've talked about what should be added in order for it to actually be useful in the session. And in your opinion, what would it take for this to kind of have added value to your sessions 'cause it could just be a tool that you can use but. I wanted to have the actual value for you and for the the client. Your client for example to

have, yeah.

Speaker 2 16:31

Didn't I already say that that.

Speaker 1 16:34

Yeah.

Speaker 2 16:37

For example. Learning, learning to tell someone your boundaries.

Speaker 1 16:51

OK.

Speaker 2 16:52

Or to, learning to cooperate.

Speaker 1 16:58

OK. So these kind of exercises you think if that can be translated that would be the value in this?

Speaker 2 17:01

Yeah. Yeah, sure, yeah.

Speaker 1 17:10

Very nice. I was also wondering. If there are any features that you could think of that you think would be beneficial in this, like or any other features that you think would be beneficial.

Speaker 2 17:47

Maybe to add? Melody to it.

Speaker 1 17:52

Melody OK so.

Speaker 2 17:55

So you could for example, you could make a simple baseline.

Speaker 1 17:55

Do you mean Melody in terms of like instruments or like melody loops for example? Or both even I'm sure.

Speaker 2 18:11

Yeah, yeah, I well. If only you had a, you could add a base. You could make it then you already have a drum and bass basics, for example for rapping. That's what a lot of kids love to do.

Speaker 1 18:25

Hmm. OK, very true. Yeah. So it kind of sounds like having that further instrumentation regardless of what. If it's drum for drum and bass or another instrument for more melodic types thing to make a more complete sound kind of.

Speaker 2 18:44

Yeah, that. Yeah, because it it doesn't really. Basically, change the the intervention or or the the tool you've made, it becomes more colourful.

Speaker 1 18:56

Yeah, it just adds on top of it to have even more, OK.

Speaker 2 18:58

Yeah, yeah, yeah. No, I think that the, the main thing is that the multiplayer thing.

Speaker 1 19:06

Hmm.

Speaker 2 19:12

No, I couldn't think of something else so quickly. Yeah. Would you say to be able to to record it? Yeah, to save it for next session maybe.

Speaker 1 19:24

Oh, I hadn't even thought of that. Yeah, that would be quite nice. So you can kind of pick up where you left off rather than having to start fresh.

Speaker 2 19:29

Yeah, I don't know. Now everything's gone when you start again, I guess.

Speaker 1 19:33

Yeah, exactly. OK. Yeah, that would be quite nice then. I know some people said, for example like a metronome or a BPM would be quite nice as well.

Speaker 2 19:51

Yeah, you can't change them. You can't change them. The velocity, right?

Speaker 1 19:58

Currently no.

Speaker 2 19:59

OK. Because that's, I think that would add something because you. To. Well, speed is something very personal.

Speaker 1 20:12

Yeah, definitely.

Speaker 2 20:14

And if you, if you turn up the speed a rhythm can change emotionally. Like from relax to be in a hurry. That's a different speed.

Speaker 1 20:31

Yeah, yeah. So it it kinda sounds like all these. I'm also kinda thinking of my other interviews now like all these little like tweaks to be able to customise the sound even more. It seems like is what people really want in this kind of thing so they can have, either more control over the sound or be able to make a more fuller thing.

Speaker 2 20:58

Yeah, but I think to add another drum or another bass or whatever that only changes the

colour, but it doesn't change the really the character. I guess. I think changing the speed will be a huge difference.

Speaker 1 21:12

OK. Yeah. And then I guess in that kind of vein, would you also like to see things such as like being able to add effects onto the sound? So for example, like reverbs or echoes or things like that?

Speaker 2 21:13

Yeah. Yeah, but. I think that's it, that's less interesting for me, I guess.

Speaker 1 21:34

OK.

Speaker 2 21:35

It's changing the the colour a bit, but that's not for what the purpose I would use it for that wouldn't be much different I guess.

Speaker 1 21:50

OK, OK. That's good to know. And then I only have one more question. Which is, is there anything else that we haven't discussed yet that you would like to at least make note of whether it's feelings or experience or suggestions or anything?

Speaker 2 22:15

No, not at the moment. No, I'm just curious. How it will evolve.

Speaker 1 22:24

Yeah, me too, honestly.

Speaker 2 22:25

No. And what's your, what's your final goal with this?

Speaker 1 22:32

This is gonna sound like a very student thing of me, but I hadn't really thought far ahead, or more ahead of completing my paper right?

Speaker 2 22:45

OK.

Speaker 1 22:45

But that being said. I think as an end goal it would be very cool to be able to have it be implemented into the other environments as like a thing that can be used by the different therapists. I think that would be a very good end goal for it. That is in my head then that would kind of mean like there's a complete version of it that can actually be used by real people.

Speaker 2 23:12

I think it definitely, definitely has this potential. I can imagine it being a part of the of the VR health experience from the ???. I don't know if you recall it there, there's now there's almost no music in it. There is a piano which you can play by your hand, but it's very. It's

very simple. I think this.

Speaker 1 23:41

Yeah, I think there was also like a listening thing where you can kind of meditate.

Speaker 2 23:45

Yeah, but I think people are more. It's not for constructing something, and this is more you can. You can build something and I think people are more into rhythm. It's a more, it's a very basic thing in people, rhythm. So I think it would be it gives a lot of opportunities to do interventions.

Speaker 1 24:11

Yeah.

Speaker 2 24:11

I think it's very interesting.

Speaker 1 24:13

I'm glad you think that way about it. And yeah, I noticed as well with the rhythm as you said. Even people, I did user testing with, who say they have like 0 musical knowledge or anything like that. Sure. Even if they didn't build anything necessarily, they still seem to quite enjoy messing around with it and playing with it. And I guess then if they had a therapist with them. Then you could actually I guess, guide them into whatever the the actual goal is, at least and.

Speaker 2 24:45

Yeah, yeah, exactly. Yeah. I think you maybe. You're maybe I should get you in touch with the developers of our VR health environment.

Speaker 1 25:02

I think I was able to talk to one of them.

Speaker 2 25:06

OK.

Speaker 1 25:08

A little, I think before the Christmas holidays, I was able to talk to one of them.

Speaker 2 25:12

You know his name.

Speaker 1 25:15

It's slipping my mind right now, but I can check.

Speaker 2 25:18

Yeah, mine as well. He was there was one developer. He was with some of our sessions. But I can't remember his name.

Speaker 1 25:31

See if I can find it real quick. Pepijn, Pepijn. All right. OK. Yeah, that's the one I was able to talk to. There was meant to be a second one apparently, but that they couldn't make

it that time.

Speaker 2 25:39

That's him. That's him. Right. OK. OK.

Speaker 1 25:50

Yeah.

Speaker 2 25:54

But I I already mentioned it to Joup the one who who helped us out on Friday.
And he's thought he thought as well that he's always interested in things like this. He wants to, he wants to move on and to implement new things. So it's always interesting. So I think that you, I think there should be something in it for you, such a cooperation.

Speaker 1 26:11

OK. OK. Well, definitely I would definitely like to. Yeah, kinda see where it goes with this. I'm very curious.

Speaker 2 26:21

Yeah. Yeah, I will mention it to you. I think it's. I mean, I don't know about, I don't know anything about developing these things and what the costs are to implement something like you created into a bigger environment. I don't know.

Speaker 1 26:48

I have no idea with that kind of stuff either. I'm not gonna lie.

Speaker 2 26:52

No. So. But it's always interesting to connect people who are working on the same ideas.

Speaker 1 27:03

Definitely.

Speaker 2 27:04

OK. But it's good that you have already met him.

Speaker 1 27:09

Yeah, yeah, definitely. Only once, but.

Speaker 2 27:10

Because I think it's the same. It's the same guy.

Speaker 1 27:13

Alright. Yeah, maybe at least with the developer 'cause, I think he might not have seen it. Then I can maybe send a short video or something and show it to him or something. All right. That is all of my questions.

Speaker 2 27:31

OK.

Speaker 1 27:32

I was also just curious now 'cause you said you were thinking of maybe showing it to

your son or some of the kids in your sessions or something.

Speaker 2 27:40

Yeah, but I I haven't had sessions up to now. Tomorrow is my first opportunity, but I will let you know.

Speaker 1 27:43

OK, that's that's fair. Yeah, I'm very curious to see. I don't know if I have the time to add that in my paper or anything for now, I don't think I could actually. But I'm very curious to hear how it's kind of in a field test for. I feel like it would be, I'm very curious.

Speaker 2 27:52

Yeah. Yeah. OK. I think because my son is a drummer, so he will be interested, but I this weekend there I haven't had the opportunity to catch him. But then I will let you know.

Speaker 1 28:14

OK, that's fair. Yeah, please do. I'm very curious to see what.

Speaker 2 28:18

And you, you keep me posted about your progress.

Speaker 1 28:22

I can do that too. Yeah, of course.

Speaker 2 28:23

OK, nice.

Speaker 1 28:26

Right. And then yeah, thank you very much for the interview and for the feedback. It was nice to hear from experts or like an actual music therapist on how they think of it.

Speaker 2 28:29

Yeah, no problem. Actually, music. OK. Yeah, nice. Nice to work with you. OK, let me know when you've, when you found something new and I will let you know about the kids.

Speaker 1 28:47

Alright, will do.

Speaker 2 28:48

OK, bye.

Speaker 1 28:50

OK, bye.