

Identifying the activities and experiences of therapists in the implementation of Virtual Reality in mental health care organisations

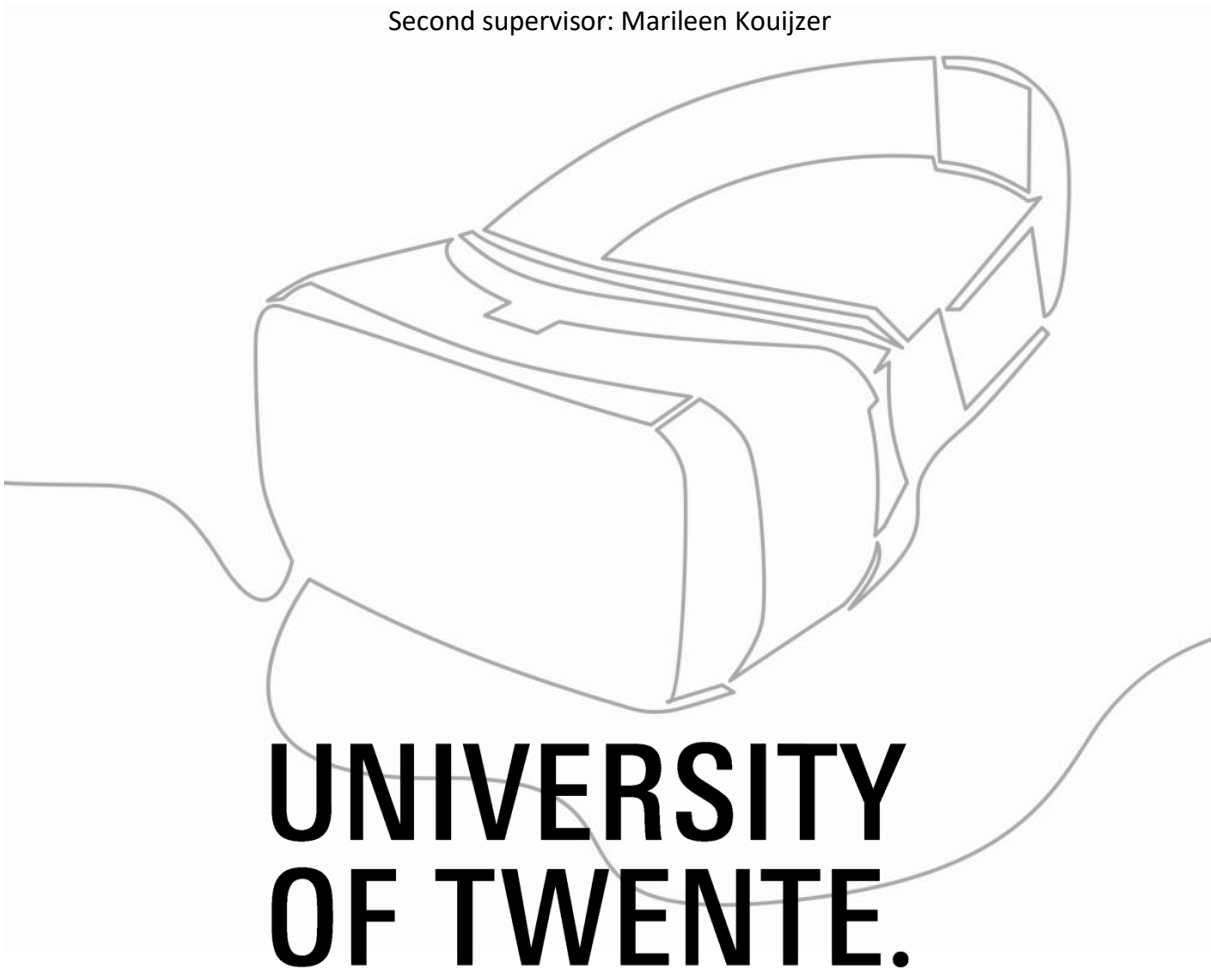
A mixed-method study about the activities of therapists in the implementation of VR in mental health care organisations and their experiences and needs regarding these activities.

Faculty: Science and Technology

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Preface

This thesis is written for the completion of the master Health Sciences at the University of Twente, with a specialisation in Personalised Monitoring and Coaching. This thesis is completed in collaboration with the University of Twente, Dimence Groep and CleVR.

Hereby, I would like to thank my supervisors Hanneke Kip, Marileen Kouijzer and Saskia Kelders for giving me the opportunity to do this interesting research and contribute to this project.

I would also like to thank Kirsten Zwollo and Marianne Ten Brink from Dimence Groep for the possibility to join the VR training provided by CleVR and for the support in recruiting participants for this study.

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Last but not least, I would like to thank all therapists who were willing to participate in this research and who shared their experiences with me during the interviews and by filling in the online survey. Because of the participants, the results of this research can be used to improve the current implementation process of Virtual Reality for not only new VR therapists but also for existing VR therapists.

I hope you will enjoy reading this thesis.

Anouk Jansen
October 2022, Enschede

Abstract

Introduction: Interactive Virtual Reality (VR) technology is used more and more in the field of mental health care. This technology creates a digital, yet realistic environment for patients to interact with, and can be tailored to their situation and needs. Although interactive VR has shown great potential in previous research, the implementation of VR is often still challenging as it is a complex multi-level process. This study aimed to identify the activities and experiences of therapists concerning the implementation of VR in the treatment of patients with mental health disorders in mental health care organisations. It also investigated how therapists could be supported during the implementation process when considering the multi-level perspective of the implementation of VR within a mental health care organisation.

Method: A mixed-method study was conducted, which included desk research, interviews, and an online survey. Desk research was carried out to gain insight into the current implementation process of VR within mental health care organisations, and to make the first draft of a visualised therapist journey. Semi-structured interviews were conducted among 10 VR therapists on the current practice of the implementation of VR. Finally, an online survey was set up which consisted of open-ended and Likert scale questions about the implementation activities.

Results: Desk research showed that the journey of therapists in the implementation of VR consisted of three phases: the introduction of therapists to VR; the time in between the introduction and first VR treatment; and the VR treatment itself. It also identified different types of implementation activities during these phases. The results of the desk study were supplemented with the results of the interviews, which revealed other types of activities such as introduction training, practice moments and intervision sessions with colleagues. The interviews also asked for specific points of attention regarding the implementation of these activities and already identified some possible improvements. The online survey revealed that most activities were important to therapists and included specific advice, for example with respect to content, timing, and organisation. The results of the interviews and online survey served as a basis for the recommendations on the improvement of the implementation process of VR for therapists.

Conclusion: The implementation of VR in mental health care organisations is a complex multi-level process. This study showed that there is room for improvement in the activities that were organised during the implementation of VR and provides recommendations to do so. All in all, this study contributed to the field of VR implementation in mental health care organisations but also showed the importance of further research on the experiences and needs of all stakeholders involved in this complex multi-level implementation process.

Keywords: Virtual Reality, implementation, mental health care, therapist journey, Consolidated Framework for Implementation Research (CFIR)

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Introduction

Mental health care focuses on the prevention and treatment of mental health disorders, such as depression, anxiety, autism, and personality disorders (1). In the Netherlands, there are three types of mental health care: mental health care support offered by general practitioners (GP); basic mental health care; and specialised mental health care. Minor psychological complaints are treated by a GP. In case of light to moderate psychological problems, a patient is referred to a care provider within basic mental health care. For more severe psychological problems, one is referred to specialised mental health care (2). Regardless of the different types of mental health care, the goal of treatment is to reduce psychological problems, make them bearable, and for patients to accept them and therefore feel better, or a combination of these (3). However, the treatment of patients with mental health disorders can be challenging. Reasons for this are that patients all have different characteristics (e.g. personality, age, gender, education) and that they show a variety of disorders (4). This heterogeneity asks for a tailored approach, creating the most optimal fit between treatment methods and the individual patient (5).

In the Netherlands, many different treatment methods are already being practised, taking into account the diverse needs of the patient population (6). In general, the treatment process includes an intake interview and a counselling session where the (provisional) diagnosis and treatment plan are discussed, followed by the actual treatment (7). Patients may be assigned different types of treatment depending on their diagnosis, such as Cognitive Behavioural Therapy (CBT), Eye Movement Desensitization and Processing (EMDR), schematic therapy, and detection plan (6). Patients with diagnoses such as anxiety and panic disorders, depression, stress, ADHD, autism, or impulse problems can often be helped with these treatment possibilities (8–10). Frequently, treatments include different types of exposure to the triggers of their problems (11).

At present, most of these treatments take place inside a treatment room (6). For some mental health issues, however, it can be challenging to create real-life situations in a treatment room (12,13). Transferring the treatment session to the outside world might be preferable. However, this could confront the therapist and patient with certain challenges. One of the challenges is that the therapy session might need to be conducted in public, which could compromise the confidentiality of patients. Another challenge is that some possibilities to recreate the feared scenario (e.g. fear of flying, travelling, anxiety) might be avoided by therapists due to high expenses or practical difficulties (12). Current treatments of mental health disorders and related challenges could therefore profit from innovative, effective treatment options that allow patients to be exposed to their specific triggers in realistic situations.

A technology that offers great possibilities is Virtual Reality (VR) (14–16), as it can overcome difficulties with the transfer of real-world situations to the closed setting of a treatment room (14,17). VR is a tool that creates interactive computer-generated worlds that can be experienced through VR glasses to replace real sensory perceptions with digitally generated ones, providing the perception of actually being in a life-sized new environment (18). VR can have different formats, such as interactive VR and 360° videos. Interactive VR provides the possibility to interact within the virtual environment, as the technique detects and projects the movements and reactions of the user. It provides the user with the opportunity to interact with objects and avatars in the artificial environment, such as walking in a park or talking to a cashier in a supermarket and gives them the feeling of physically being part of the virtual world (19). 360° videos also provide users with a virtual environment but do not contain the interactive aspect as users can often only look around in the artificial world but are not able to walk or interact with people and objects (20). Several studies show that interactive VR is as effective, if not more so than regular exposure treatment (12,21–27). VR shows its potential in the treatment of certain common disorders such as acrophobia, fear of public speaking, panic disorders, posttraumatic stress disorder (PTSD) or autism, where exposure is often needed to expose patients deliberately to their fear in the real world (12,23–27). However, VR treatment can also help in cases of depression, paranoia or addiction, for example by practising how to deal with dealers who are trying to sell drugs, how to

set limits or learn social skills (28). As interactive VR gives the opportunity of bringing a patient into a digital yet realistic environment and gives the patient the feeling of actually being in that environment, it can be of added value in treating patients with the aforementioned difficulties. VR gives the possibility to expose patients to triggering situations where they can practice their behaviour, reactions, social skills and everyday actions in a realistic, virtual environment (5). These benefits of interactive VR could ensure a better fit between the patient and their treatment, as the interactive VR environment can be tailored to the needs and wishes of individual patients. As promising as interactive VR looks for this target group, there is a considerable difference between the potential of VR and the actual use of VR in practice.

As the above benefits highlighted, interactive VR can be of great potential for the treatment of patients with mental health issues. However, in practice, VR is often not used as much as would be desired or not used at all (29). Research showed that the reason for this could be related to many potential obstacles in the use of VR, such as a lack of skills or motivation among users, and lack of insight into the possibilities of VR and an understanding of what works for whom (29). Besides this, practical problems with hardware and software can also be a barrier in the usage of VR, as well as suboptimal implementation strategies where the interdependence between the technology, user characteristics and the environment is often disregarded (30). Implementation is a very complex, multi-level process as it has to deal with issues related to resources, ethical concerns, governance and user skills (31). It focuses on the adoption, dissemination, and integration of innovations in clinical practice. This includes activities such as training and education, changing the infrastructure of an organisation or supporting users in how to use the intervention (32). Although implementation is essential for the success of any intervention (5,30), it is often initiated too late and is frequently underestimated (31). The implementation of VR is more than just the introduction of VR, it also requires the users of VR to change their current way of thinking and working and their attitude towards the technology (29). This all shows that suboptimal implementation strategies can be a key reason for the little use of VR.

It is therefore not surprising that many theoretical implementation frameworks have already been developed to guide professionals and institutions in implementing an intervention, such as VR. One of these frameworks is the Consolidated Framework for Implementation Research (CFIR) (33). It is a commonly used and broad implementation framework, which considers the multi-level perspective that is part of the implementation of any technology (31,34). The CFIR is based on an exhaustive review of literature on multiple existing implementation models and takes the different levels of implementation into account. The CFIR contains factors related to the individuals involved, the intervention, the inner and outer setting, and the implementation process, and can therefore be used to guide informative evaluations and support implementation knowledge on different innovations and technologies within health care settings (33). This model proves to be useful for this study, as it considers the multi-level perspective of VR implementation, and pays attention to the people involved, the characteristics of the intervention, and the context in which the technology is being used (5,35–38). The framework also shows that the end users, often the adopters, recur as important components in multiple domains, and are fully represented in one of these domains.

Therapists play an important role in the implementation of VR as they are the users of VR technology. The success of implementation partly depends on the attitude of therapists toward VR, their individual beliefs about the usefulness of VR and their self-efficacy with VR (39). These characteristics of therapists are often related to the available time they have, their role in the organisation and the extent of changes needed in their routines when implementing VR (39,40). In addition, success is also related to the work that is needed to implement changes and the overall implementation climate within the organisation (39,40). Although therapists play an important role in the implementation of VR, limited research addresses their actual experiences and needs during the implementation process, taking the specific context of the mental health care organisation in which VR is implemented into consideration. Therefore, the overarching goal of this study is to identify the activities and experiences

of therapists concerning the implementation of VR in the treatment of patients with mental health disorders, in the context of their position and work in mental health care organisations. This study also aims to explore how therapists can be supported during the implementation process when considering the multi-level perspective of the implementation of VR within a mental health care organisation. This goal is supported by the following research questions:

- What does the journey of the current implementation of VR in the treatment of patients with mental health disorders in mental health organisations look like from the therapists' perspective?
- What are points of attention in the journey of the current implementation of VR from a multi-level perspective, according to therapists?
- How can the current journey of the implementation of VR be improved to optimise the implementation of VR in mental health care organisations, according to therapists?

Methods

Design

In the current study, a mixed-method research design was used to answer the research questions and gain insight into the activities and experiences of therapists regarding the implementation of VR. The creation of a therapist journey regarding the implementation of VR from the therapists' point of view is central in this research and was created according to the steps described in the 'Customer Journey' by Van 't Veer et al. in *Ontwerpen voor zorg en welzijn* (41). The first two steps focus on defining what the therapist journey should be about and on having a clear picture of the customers (therapists) of the journey. Both steps were completed during the writing of the introduction. Desk research focused on step three of Van 't Veer et al.; creating a list of interaction moments, which are referred to as implementation activities in this study. These activities were used to create the first version of a visual therapist journey about the implementation of VR, which is step six by Van 't Veer et al. The journey focused on the different phases related to the implementation of VR between the start of the implementation for therapists and the end point where therapists believe the implementation was successful and identifies the different implementation activities during these phases. The first version of the therapist journey was used to guide interviews with therapists about the implementation activities and to gain insight into the experiences and issues therapists encounter during the implementation of VR, and their needs regarding support in the implementation process. The interviews provided insight into steps four and five of 'Customer Journey' by Van 't Veer et al.; identifying the experiences during interaction moments and performing follow-up research. Feedback and additions mentioned by therapists were used to complement the therapist journey, which is step seven by Van 't Veer et al. Based on the second version of the therapist journey, an online survey was made on the importance of the different implementation activities and to ask for additional feedback. The online survey was sent to therapists working at different health care organisations. Out of the results of the survey, the final therapist journey was created. The results of the online survey were combined with the results of the interviews to set up recommendations for improvements to the current implementation of VR. In Figure 1, an overview of this mixed-method study is provided.

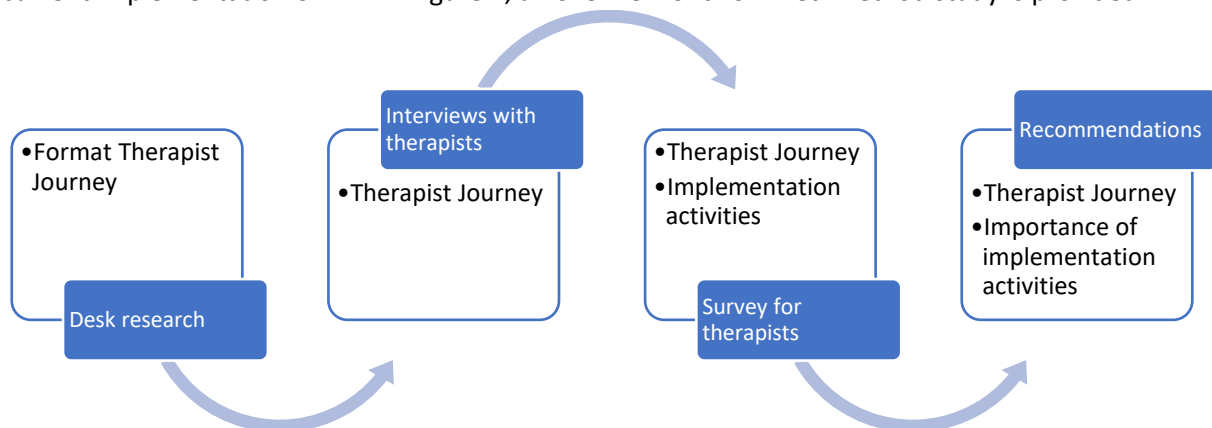


Figure 1. Overview of methods used in this study.

Setting

This paper is part of a larger research project, called 'Vooruit met VR'. In 2016, a multi-disciplinary team started a project to develop a VR treatment for forensic psychiatric patients at Transfore. Transfore is an organisation that specialises in mental health care in the east of the Netherlands (42). The project was based on the CeHRes Roadmap, as shown in Figure 2, which was used as a guideline for the development and implementation of a VR intervention. Different papers were published within this research project (5,43–45). This study focuses on the fourth phase of the CeHRes Roadmap, the

implementation of VR. This research builds on the experiences and information of the project but focuses on a broader target group, namely mental health care organisations throughout the Netherlands. The information and insights gained in this project were used in desk research. The network of CleVR was used to identify companies and therapists working with VR and to gather participants for the interviews and online survey. CleVR is a company that designs and delivers VR software, which is used by multiple mental health care organisations in the Netherlands, including Transfore.

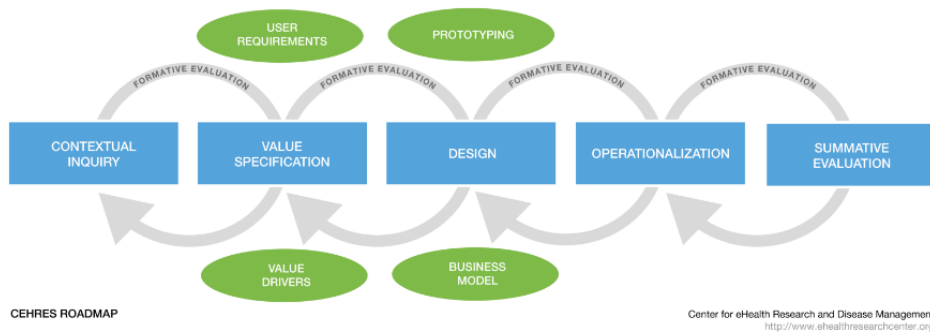


Figure 2. The CeHRes Roadmap (46).

VR software

The VR software was developed by CleVR, a company that offers evidence-based VR within mental health care. CleVR developed VR software that gives therapists different treatment possibilities, such as performing role play with a virtual avatar or letting the patient explore and walk in a virtual environment. In both options, therapists can define the environment, customise avatars, modify the number of avatars and make them speak. In Figures 3 and 4, screenshots of two different environments of CleVR are provided with different avatar characteristics as well. Therapists also can add so-called triggers and helpers in the environment of the patient, as can be seen in Figure 5. Examples of this are the sounds of sirens and barking dogs that can trigger a patient’s anxiety, or breathing exercises and the distraction of a phone that can help a patient in a challenging situation. In role-play, therapists are very involved as they must speak in a voice-morphing microphone on behalf of the avatars, make them move and play the before-established scenario. The dashboard that is visible during treatment shows many different buttons to control emotions and movements but also gives the possibility to switch between characters and play triggers. All these actions are performed by the therapists during the VR treatment session of patients.



Figure 3. A screenshot of a garden in which a patient can talk to the virtual characters (© CleVR).



Figure 4. A screenshot of an office interview in which a patient can talk to the virtual characters and practice an interview (© CleVR).

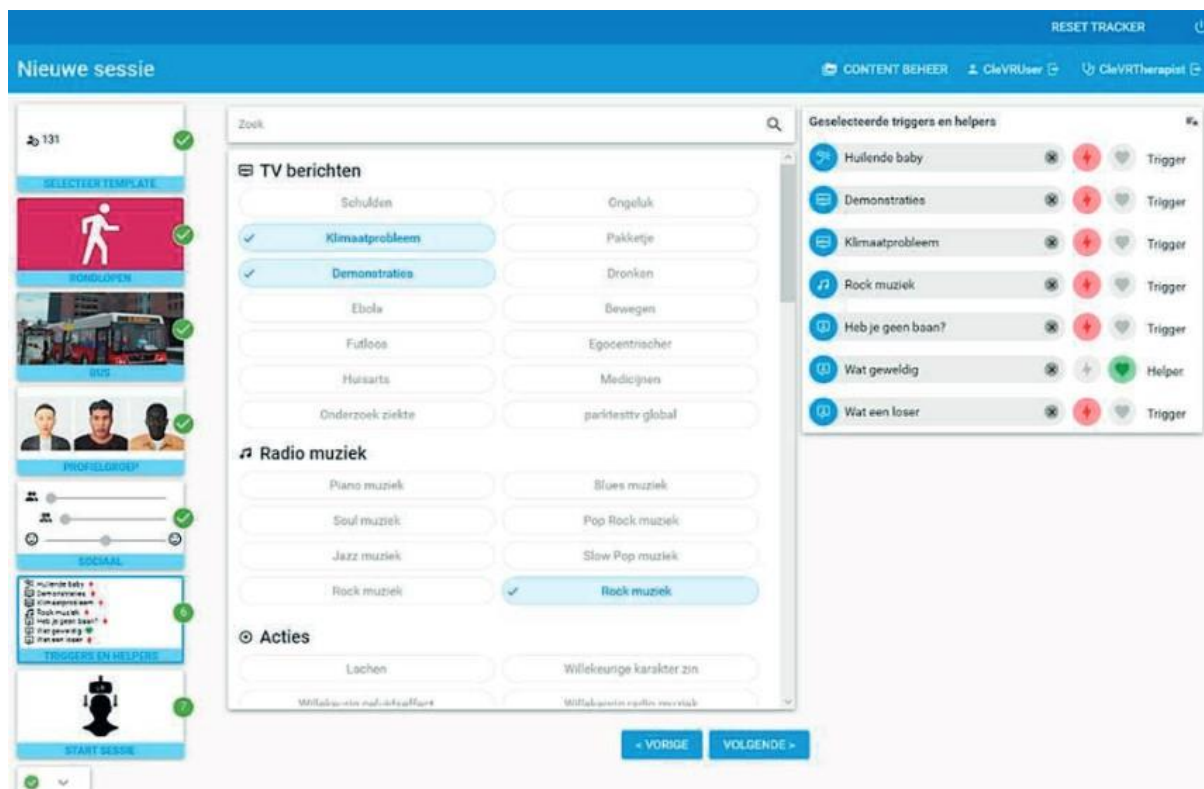


Figure 5. A screenshot of the dashboard in which triggers and helpers can be selected.

Study 1 – Desk research

Participants

To gain insight into the journey of therapists during the implementation of VR, two project coordinators from Dimence Groep were asked to contribute to this study.

Procedures and materials

Desk research was performed to gain insight into the current implementation process of VR within a mental health care setting, and to make the first draft of a visualised therapist journey. This was done by using an existing implementation plan, information gathering in the shared Microsoft Teams VR environment, analysing fragments of previous interviews with therapists who worked at different mental health care organisations and a meeting with project staff to ask questions about the aforementioned documents and to verify the first draft of the therapist journey.

Within Transfore, an implementation plan already existed that is used for the current implementation of VR by therapists and the organisation. This implementation plan was read multiple times to get familiarized with the current implementation activities, strategies, and additional content. The different activities within the implementation process that were mentioned in the plan were written down in a table in Excel, as well as fragments of interviews held in previous research (45). Next, documents in the shared Microsoft Teams folder were listed to get insight into the supportive materials that are provided to therapists. In addition, the previous interviews were used to gain more insight into the implementation activities that exist for therapists. Out of this information, the first draft of the visualised therapist journey was made.

Analysis

For the analysis, fragments of the previously held interviews were divided into two groups, one with fragments that mentioned implementation activities, and the other with fragments that did not mention implementation activities. Fragments that did not mention any implementation activities were deleted from the Excel file, as they were not relevant for the creation of the first visualisation of the therapist journey. The remaining fragments were linked to the different implementation activities that were found in the implementation plan. The activities served as main codes, and inductive coding was used on the remaining data of the interviews to provide the coded fragments with a subcode closer to the meaning of the fragments. This resulted in a list of the different activities, accompanying points of attention and fragments, as can be seen in Appendix C.

Therapist Journey

A therapist journey was created to get insight into the journey that therapists follow when being introduced to VR and its implementation in the organisation they work in, and when therapists start using VR. The implementation activities that were identified in the desk research were used to make the first draft of the visualised therapist journey.

This first draft of the therapist journey was presented to two coordinators of the VR project team from Dimence Groep in an online meeting and feedback was given on the accuracy of the content of the journey. The feedback was implemented in the second draft (first version) of the therapist journey.

Study 2 - Interviews

Participants

To gain more insight into the activities and experiences of therapists regarding the implementation of VR, therapists who had been trained in VR and had treated at least one patient with VR were interviewed. A list of 25 VR therapists was provided by staff from Dimence Groep and CleVR, who all worked at Transfore, Dimence, Mindfit, Amarant Groep, Rivierduinen, GGZ Westelijk Noord-Brabant, GGZ Delfland, Iriszorg, Altrecht, Mentrum or De Waag. A voluntary response sampling was used, so all 25 therapists were approached, where 15 of them either did not respond, were not suitable as they did not yet use VR or were not available. In this study, a total of 10 participants were included, who all worked at one of the above-mentioned mental health care organisations. Table 1 shows an overview of the participant characteristics.

Table 1: Overview of participants

Participant	Function	Work area	Number of patients treated with VR
Participant 1	Psychologist	Personality disorders, addiction, autism	2
Participant 2	Health care psychologist (GZ-psychologist)	Anxiety	11
Participant 3	Health care psychologist (GZ-psychologist)	Anxiety and mood	5
Participant 4	Occupational therapist	Disabled care	10

Participant 5	Health psychologist (GZ-psychologist)	care (GZ-)	Disabled youth care,	5
Participant 6	Health psychologist (GZ-psychologist)	care (GZ-)	Disabled care	12
Participant 7	Health psychologist (GZ-psychologist)	care (GZ-)	Psychomotor disorders, youth	9
Participant 8	Health psychologist (GZ-psychologist)	care (GZ-)	Personality disorders	20
Participant 9	Psychologist		Long-term psychiatry	30
Participant 10	Nurse		Long-term psychiatry	20

Procedures and materials

Therapists were approached by e-mail with the question if they wanted to participate in this research by means of one interview. Appointments for the interviews with therapists who accepted the invitation were made online in Microsoft Teams. A consent form was e-mailed to the participants prior to the interview (Appendix A) and was signed with the use of Qualtrics, a web-based software that allows users to create surveys and generate reports (47). An agreement was also given verbally during the interview. The online meetings were recorded by the recording software of Microsoft Teams. The average duration of the interviews was 43 minutes, ranging from 34 – 53 minutes. The interviews were conducted in Dutch.

The second draft (first version) of the therapist journey served as a structure for the interview scheme that was used to interview therapists on the current practice of the implementation of VR. The goal of the semi-structured interviews with therapists was to gain more knowledge about the different implementation activities and the experiences of therapists regarding these activities. The interviews were constructed as follows: first, some questions about the general characteristics of the participants were asked, about their overall experience with VR. Subsequently, attention was paid to every step of the therapist journey and questions were asked to gain an understanding of the activities and experiences of therapists. Questions such as ‘How did you experience this activity?’, ‘What added value has this activity had for you?’, and ‘What do you think could be improved or changed about this activity?’ were asked. Per step in the therapist journey, questions were asked about what they have done so far, what they would have done differently looking back on it now, what support they got from their organisation and colleagues and what additional support they would have liked to receive. The focus of the interviews was not only on the personal experiences of the therapists but also on their specific needs within the overall implementation setting, as is described as important by the CFIR framework (33). The complete interview scheme can be found in Appendix B, the interview scheme is in Dutch.

Analysis

For the analysis, the application Amberscript was used to transcribe the audio recordings of the interviews. All transcripts were transferred to Microsoft Word and were anonymised and checked manually, errors and inaccuracies were changed. Subsequently, all transcripts were imported into ATLAS.ti (version 9), a software programme used for coding and analysis of qualitative research data.

All transcripts were read through, and fragments related to the different steps of the therapist journey were highlighted. The following part of the analysis consisted of grouping the fragments per phase of the journey. Next, all fragments were inductively coded within the phase and the fragments with the same code were grouped. All phases and codes of the different interviews were compared and aligned with each other which resulted in a list of the different phases of the journey with accompanying codes and fragments.

Therapist Journey

The first version of the therapist journey was supplemented by the insights gained during the interviews. Additional activities of the therapists during all the steps of their journey were mapped in the third draft (second version) of the therapist journey, as well as their experiences and points of improvement.

Study 3 - Online survey

Participants

To validate the activities of the therapist journey, gain insight into the importance of the activities, and receive feedback and additions, therapists who had previously been interviewed in this research were approached to fill in an online survey. In addition, the survey was also sent to therapists who had been interviewed by another researcher who performed research related to this research as well. The online survey was sent to a total of 21 therapists, who all worked at Transfore, Dimence, Mindfit, Amarant Groep, Rivierduinen, GGZ Westelijk Noord-Brabant, GGZ Delfland, Iriszorg, Altrecht, Mentrum or De Waag.

Materials and procedures

All therapists were approached by mail, which consisted of a short introduction and a link to the online survey. Therapists were able to fill in the survey in their own time and had 5 weeks to do so. After two and a half weeks, an e-mail was sent with a reminder in case the participant did not fill in the survey yet and an acknowledgement in case they already filled in the survey.

The online survey was made using Qualtrics and consisted of 13 open-ended questions and 7 Likert scale questions. The survey consisted of an introduction and was followed by multiple pages with on each page a short explanation of the phase and the activities. On each page, a 5-point Likert scale was used for every activity to indicate the importance of the activity, and an open text box for any additions to the specified activity. On every page, the participants were asked if they missed any activities or had any additions to the phase. In addition, on the last page questions were asked about how therapists would like to receive new information and supportive materials related to the implementation of VR.

Analysis

The answers to the open-ended questions were exported to Excel. Answers from all participants were fragmented and grouped together per activity of the different phases of the therapist journey and were inductively coded. This resulted in a list of fragments and codes related to the implementation activities per phase. The results made by Qualtrics showed the choice count of the Likert scale in both numbers as well as percentages based on the total number of inputs on that particular question. These numbers were used to create a table per activity with the importance of it indicated by therapists.

Therapist Journey

The third draft (second version) of the therapist journey was adapted based on the insights gained from the results of the online survey. Additional activities of the therapists during all the steps of their journey were mapped in the fourth draft (third version) of the therapist journey.

Results

Study 1 - Desk research

Desk research was performed to create the first and second drafts of the therapist journey and to answer the first research question of this study: *“What does the journey of the current implementation of VR in the treatment of patients with mental health disorders in mental health organisations look like from the therapist’s perspective?”*. The therapist journey consists of three different phases with, in every phase, accompanying activities as is shown in Figure 6. The first version of the therapist journey is shortly described, a detailed description can be found in Appendix D.

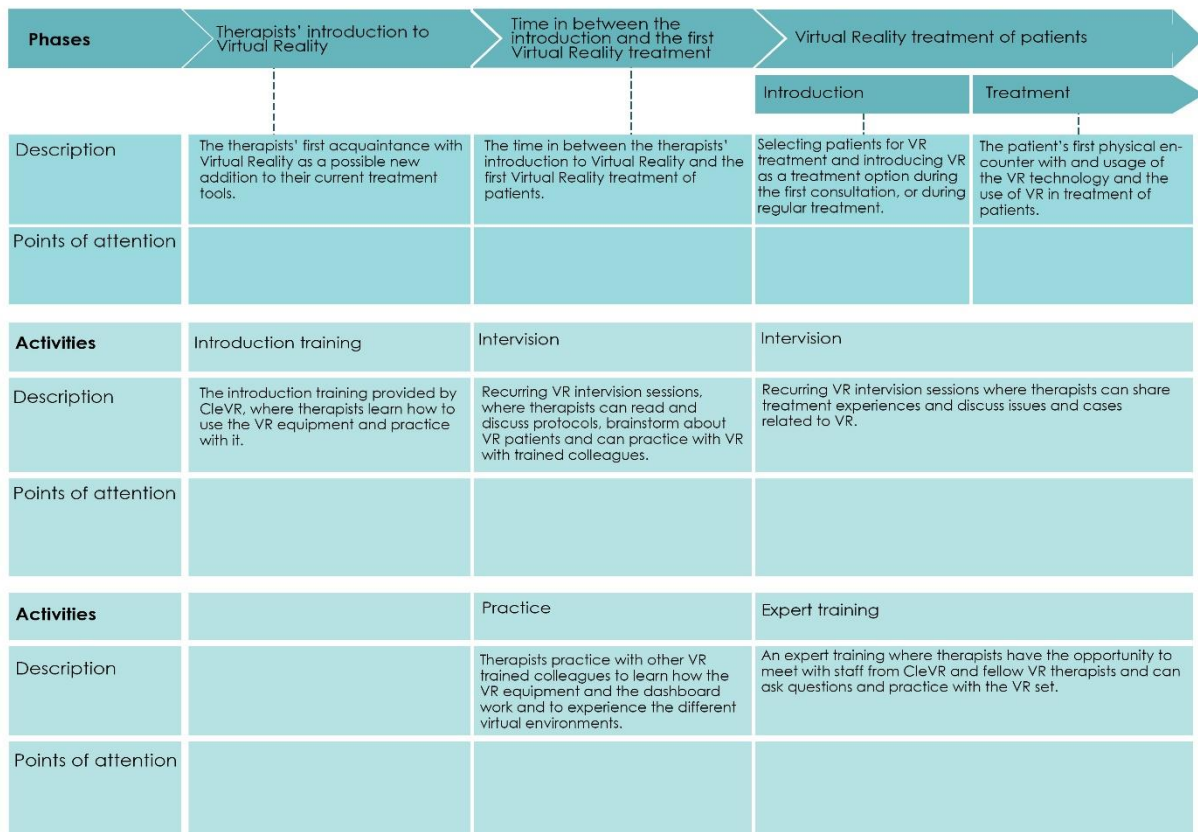


Figure 6: First version of the therapist journey of the implementation of VR

Phase 1: Therapists’ introduction to VR

The first phase of the implementation of VR is the introduction of therapists to VR. This phase refers to the way in which therapists first got acquainted with VR as a possible new addition to their current treatment tools. During this phase, the introduction training provided by CleVR emerged as the main activity in which therapists can participate.

Phase 2: Time between the introduction and the first VR treatment.

The second phase of the implementation of VR is the time between the introduction of therapists to VR and the first VR treatment of patients. During this period, therapists can participate in various activities to prepare themselves for the treatments with VR, such as intervision sessions and practice moments.

Phase 3: VR treatment of patients

The third and last phase of the implementation of VR is the actual treatment of patients with VR. This phase refers to not only the actual treatment of patients, but also to the selection of patients, the introduction of patients to VR, and the activities in which therapists can participate. These activities include intervision sessions and the expert training.

Study 2 - Interviews

In this section, each phase of the therapist journey is reported separately. These results provide answers to the first and second research questions of this study: “*What does the journey of the current implementation of VR in the treatment of patients with mental health disorders in mental health organisations look like from the therapists’ perspective?*” and “*What are points of attention in the journey of the current implementation of VR from a multi-level perspective, according to therapists?*”. The main codes (bold) represent the activities and/or points of attention in that phase. The subcodes address the topics that therapists identify as experiences in the corresponding activity or point of attention and describe the activities in more depth. For every code, a definition is given, and an overview is provided with participants in whose interview this code was identified.

Phase 1: Therapists’ introduction to VR

This phase focuses on the introduction of therapists to VR. The main and subcodes for this phase can be found in Table 2, as well as the definition of the code and the participants in whose interview this code was identified. Explanations of all codes are provided underneath the table.

Table 2: Overview and definitions of the codes related to Phase 1: Therapists’ introduction to VR

Main and sub codes	Definition of code	Ther. ^a
Being introduced to VR	The way in which therapists first got acquainted with VR as a possible new addition to their current treatment tools.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Employees	Therapists have been introduced to VR through other employees from their organisation, such as colleagues, their team leader, or the VR project leader.	1, 2, 3, 4, 5, 6, 7, 9
Demonstrations	Therapists have been introduced to VR through a VR demonstration.	6
Awareness of VR	To integrate VR successfully, there needs to be a widespread awareness of the existence of VR among therapists and management.	1, 2, 3, 4, 5, 6, 7, 8, 9
Content meeting	Organisations provide an in-depth meeting about VR prior to the introduction training by CleVR.	6, 8
Experiences of introduction training	The way in which therapists experienced the introductory training provided by CleVR.	1, 2, 3, 4, 6, 7, 8, 9, 10
Practising with software	Therapists’ experiences with practising with the VR dashboard, and system and experiencing VR themselves.	1, 2, 3, 4, 7, 8, 9, 10
Hardware	Therapists’ experiences with setting up and deconstructing the VR equipment.	1, 2, 3, 8, 10
Content of the training	The opinion of therapists about the content of the introduction training.	1, 2, 3, 8

Note. ^a Participants in whose interview this code was identified.

Being introduced to VR

This main code refers to the statements made by therapists about the different ways in which they first got acquainted with VR as a possible new addition to their current treatment tools.

Employees

This subcode refers to the introduction of therapists to VR through employees from their organisation. Therapists mentioned that colleagues, their team leader, or a VR project leader told them about the presence of VR within the organisation, about the possibility of becoming a VR therapist and about the introduction training by CleVR. Therapists also indicated that they would like to see knowledge-sharing moments being organised by team leaders or management so that they can introduce VR to their colleagues during these meetings.

Demonstrations

One therapist mentioned that he/she was introduced to VR by a demonstration of the VR project leader from within the organisation. This demonstration was given to spread the awareness of VR among therapists and motivate them to become VR therapists themselves as well as join the introduction training by CleVR. The quote below highlights this.

Participant 6: "I had a demonstration of [name]. For us that's the project leader and I was manager of the team, and it was offered, so the courses, and some colleagues went to do that."

Awareness of VR

This main code refers to the importance of a broad awareness of VR within an organisation to integrate VR properly. Almost all therapists indicated that the awareness of VR in their organisation as well as among untrained VR therapists is currently too low and that much is being done to increase it, as can be read in the quote underneath. Examples of this are talking to non-trained therapists about the potential of VR and showing them videos of how the VR set is used. Besides this, demonstrations were held by project leaders or VR therapists where untrained therapists can experience VR in real life, and learn about VR and its possibilities. These demonstrations were also held to provide untrained therapists with information and the potential of VR so that they have an impression of which patients might be suitable for VR so they can refer them to VR therapists.

Participant 8: "We also regularly give demos in the departments, so when we do that, people can register individually or in pairs and we show them how it works and what to expect. That's actually mainly for non-VR therapists so that they can make indications and also know what VR does and can experience it themselves."

Content meeting

This main code refers to the statements made by therapists about the content meeting that some therapists participated in. This content meeting is a VR introduction organised by the VR project leader of an organisation. Therapists indicated that they found the meeting very valuable, as they already learned about VR in general, its potential, and how it could be used within their work environment. Besides this, they also discussed real-life cases and how VR could be of use in the treatment of their current patients, as can be read in the quote below. Therapists indicated that this content meeting made it easier for them to understand and work with VR in the introduction training by CleVR, that was given after the content meeting.

Participant 6: "Scientific evidence, how it [VR] is used for different problems, what the background is of VR and the current status. [...] Videos, practising case studies, how would you like to apply VR?"

Experiences with the introduction training

This main code refers to the experiences of therapists with the introduction training provided by CleVR.

Practising with software

This subcode refers to the opportunity for therapists to practice with the software of the VR set during the introduction training. Therapists indicated that they found practising with the software very valuable as they got to know the possibilities of VR and learned about the different environments and modules, as well as being able to experience VR themselves. However, therapists also mentioned that they would prefer to have more free time during the training so they could experiment with the software themselves. They also mentioned that more time should be spent on practising with all the different modules, instead of just two of them as was the case.

Hardware

This subcode refers to the experiences of therapists with setting up and deconstructing the VR equipment. Therapists indicated that too much time was spent on the hardware of the VR set and they would prefer only to watch someone setting up the equipment once and to continue practising with the software instead. This is highlighted in the following quote.

Participant 2: "And looking back, what I think was an important part, I think the whole morning consisted entirely of learning how to set up the equipment with all those cables and cords and stuff, which makes you lose a lot of time."

Content of the training

This subcode refers to the experiences of therapists with the content of the introduction training. Therapists mentioned that the overall experience of the training was very positive, and the enthusiasm of the trainer was very stimulating. They also indicated that they would like to practice with real-life cases, which was not done yet, to gain more insight into how to apply VR in their work environment and with their patients. This is highlighted in the following quote.

Participant 1: "I think so too if you just start practising case studies. Personally, I would like it if, for example, you just had a case that you discussed with all of us, and then just went and looked at it."

Therapists also mentioned that they would prefer to have a two-day training where they would have the chance to practice more with the software, which can be seen in the quote below. In addition, therapists indicated that they would like to have prior knowledge and preparation for the introduction training about VR, the potential of VR within their work environment and how to use VR in treatment, preferably in the format of a content meeting.

Participant 2: "A kind of second day or morning, I think half a day is enough. That you can then [on the second day] just, because you have all been able to fiddle with the system [on the first day], then you want to be able to ask questions and for example go through the difficult parts such as perspective change with each other instead of one afternoon of a lot of practising, and well, just figure it out or something."

Phase 2: Time between the introduction and the first VR treatment.

This phase focuses on the activities that are organised between the introduction of therapists to VR and the first VR treatment given by therapists. The main and subcodes for this phase can be found in Table 3, as well as the definition of the code and the participants in whose interview this code was identified. Explanations of all codes are provided underneath the table.

Table 3: Overview and definitions of the codes related to Phase 2: Time in between the introduction and the first VR treatment

Main and sub codes	Definition of code	Ther. ^a
Intervision	Therapists' experiences with the recurring VR intervission sessions, which are meetings with fellow VR therapists, where they can, for example, read and discuss protocols, and brainstorm about potential VR patients.	1, 2, 3, 4, 5, 6, 7, 8
Setting up an intervission group	Therapists from the first VR training group have set up their own intervission group.	2, 3
Joining an intervission group	Therapists join an existing VR intervission group.	1
Content of intervission sessions	During the intervission sessions, therapists explore the possibilities of VR within their patients and organisation.	2, 3, 4, 5
Practice	Therapists' experience with practice sessions with fellow VR therapists where they learn about the VR equipment, such as the dashboard, and the different virtual environments.	1, 3, 4, 5, 7, 8
Initiating practice moments	Therapists have to set up practice moments with colleagues by themselves.	1, 3, 4, 5, 7, 8
Gain experience	Practice moments help therapists to gain experience with the VR set and discover the possibilities.	1, 3, 4, 5, 7, 8

Note. ^a Participants in whose interviews this code was identified.

Intervision

This main code refers to the experiences of therapists during the VR intervission sessions, which are meetings with therapists where they can, for example, read and discuss protocols, and brainstorm about potential VR patients. The intervission sessions in this phase are different in content compared to the intervission sessions that were held when therapists were already giving VR treatments. Data showed that not all trained therapists can join an intervission group. These differences are explained in the subcodes below.

Setting up an intervission group

Not all therapists have the possibility to join an intervission group and have to set up one themselves, this was mentioned by two therapists. This subcode refers to the experiences of these therapists when setting up an intervission group. Therapists indicated that they need intervission moments after having followed the introduction training, to brainstorm about how to use VR, discuss issues that arise, and explore the opportunities. However, it is often difficult to set up an intervission group as therapists should have the time and motivation to take the initiative and maintain it.

Joining an intervission group

This subcode refers to the experiences of therapists when joining an existing intervission group within their organisation. Therapists indicated that they find it valuable when an intervission group already exists as they can make use of the experiences of the other therapists and the foundation that has already been established.

Content of intervision sessions

This subcode refers to the experiences and opinions about the content of the intervision sessions. Therapists indicated that they find intervision sessions very valuable, as they can discuss issues related to the start of VR, such as how to find patients and how to start giving VR treatments as can be read in the quote below. Besides this, therapists mention that intervision motivates and inspires them to use VR more often. However, it is also mentioned that therapists would like to have more guidance and inspiration for the content of intervision sessions, in the form of providing manuals or supporting documents.

Participant 3: "We still have the intervision sessions with colleagues who are also newly trained, and we try to get together once every six weeks. I think, to exchange ideas and also to think about: well, what can you do with all this? And what do you find?"

Practice

This main code refers to the experiences of therapists about the practice moments with fellow VR therapists or colleagues with the VR set.

Initiating practice moments

After the introduction training, therapists often feel the need to practice more with the VR equipment before starting with the VR treatment of patients. However, these practice moments are not organised by the management of the organisation and almost all therapists indicated that they have to set up these practice moments with colleagues by themselves. They also mentioned that this is often quite easy as it is likely that one or more of their colleagues joined the same introduction training. One therapist mentioned that trained therapists should be encouraged to practice with VR, by for instance making duos during the introduction training and immediately planning a practice moment.

Experience

This subcode refers to the opinions of therapists about practising and gaining experience with VR during practice moments with colleagues. Therapists indicated that practising VR with colleagues helps them to gain more confidence in using VR and helps to tackle their own reluctance to act, as can be read in the quote underneath. Some therapists indicated that they have difficulty learning how to operate the VR equipment, but that practising with more experienced colleagues helps them to understand the system. Therapists also mentioned that they find it very valuable to experience VR for themselves before treating patients, as this gives them an understanding of the intensity of the environments in VR and a better understanding of the possible reactions of patients.

Participant 1: "For the rest, we also remove colleagues' uncertainty about acting by, well, if someone brings in 'yes, I find this very difficult', we immediately set that in motion and just practise it."

Phase 3: VR treatment of patients

This phase focuses on the implementation activities related to the VR treatment of patients given by therapists. The main and subcodes for this phase can be found in Table 4, as well as the definition of the code and the participants in whose interview this code was identified. Explanations of all codes are provided underneath the table.

Table 4: Overview and definitions of the codes related to Phase 3: VR treatment of patients

Main and sub codes	Definition of code	Ther. ^a
Functioning VR set	Therapists mention the importance of a VR being present in their working location and for it to work properly.	1, 3, 4, 5, 6, 7, 8
Application of VR in the treatment of patients	The use of VR in patient treatment requires some preparation in the selection of patients, the introduction of patients to VR and the actual treatment of patients.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Selecting suitable patients	Therapists select patients who want to use VR in their treatment, and who have a diagnosis that can be treated with VR.	1, 2, 3, 4, 5, 6, 7, 8, 9
Discussing VR with patients	Therapists can either introduce VR as a treatment option during the first consultation with the patient or during ongoing regular treatment.	1, 2, 3, 5, 6, 7, 8
Patient's first encounter with VR	The way therapists use VR with patients when it is the patient's first encounter with VR	1, 2, 3, 5, 7, 8, 9
Usage of VR in treatment sessions	Therapists make use of VR as a tool to treat patients with specific problems.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Intervision	Therapists' experiences with the recurring VR intervision sessions that are held when VR treatments are already given. Therapists can share treatment experiences and discuss issues and cases related to VR.	1, 2, 3, 4, 5, 6, 8
Expert training	Therapists' experiences with the expert training that was provided for some therapists while they were already giving VR treatment.	1, 2, 3
Content of the expert training	During the expert training, therapists are given the opportunity to ask specific questions and learn from each other.	1, 3
Time window	Therapists' opinions about the time window in which the expert training was given.	2
Refresher event	Sessions are organised, for instance after a new update, where therapists are given the opportunity to experience and practice with the new possibilities of the VR set.	6, 8

Note. ^a Participants in whose interviews this code was identified.

Functioning VR set

This main code refers to the importance of having a well-functioning VR set at their working location. One therapist indicated that it is important to have a VR set on location and preferably also close to their workplace. Almost all therapists (7/10) mentioned the importance of a well-functioning VR set and the consequences for their treatments and their willingness to use VR when this is not the case. An example of this can be found in the quote below.

Participant 7: "Yes, you cannot continue, you have to stop the treatment then, you cannot solve the issue right away. I think I cannot call in front of my client, they really do not have the patience for that. I do not think they would appreciate it either, because then it just does not work. So, then you just stop using VR in the treatment. And then you go and do something else and then you try to solve it later."

Application of VR in the treatment of patients

This main code refers to the preparation that is needed to use VR in the treatment of patients. This relates to the selection of patients, the introduction of VR to patients, and the actual treatment. These subcodes are clarified below.

Selecting suitable patients

This subcode refers to the experiences of therapists with selecting suitable patients for treatment with VR. Some therapists mentioned that determining whether VR fits a patient is not different from other methods such as EMDR or CGT, as long as they use their experiences and common sense. Therapists also indicated that patients with different kinds of diagnoses can benefit from VR, such as anxiety disorder, aggression disorder or autism, as can be read in the quote below. However, not all therapists find it easy to determine if VR fits a patient, some therapists mentioned that they find it difficult to determine when, with whom and why they should use VR in treatment.

Participant 1: "And it's not that you necessarily need the most severe clients, who haven't gone outside to use VR, you can also use it in other ways."

Introduction of VR to patients.

This subcode refers to how a patient can be introduced to VR. Some therapists indicated that they always tell the patients about the possibilities of VR during the first consultation as can be read in the first quote, whereas other therapists introduce VR during regular treatment as can be read in the second quote. In both cases, therapists first explain how VR works, what the patient can expect and what VR treatment might look like.

Participant 1: "Then it was actually the moment I had the first conversation with the patients about the symptoms, and that we are going to perform treatment with VR."

Participant 2: "No, I have to say that I actually do that [introducing VR to a patient] during the treatment. If I notice that I am thinking about it, or I reflect on how the treatment is going and think oh, yes, maybe VR is something. [...] It's not like I mention it at the start as an option, no I don't actually do that."

Patient's first encounter with VR

This subcode refers to the patient's first encounter with VR. After therapists explained VR to their patients, the next therapy session was often when VR was used for the first time. Therapists mentioned that they first let the patient get familiar with the VR set by showing the environments on the computer or by letting the patient experience a VR environment for a short time, as can be read in the quote underneath. This is all done to let the patient get used to the VR set and get familiar with the idea of virtual environments. Therapists also indicated that it is very important to communicate everything you do with the patient, and why you are doing it as it can be scary for the patient to be in this virtual environment and not have control over what is happening.

Participant 2: "I always do first, I just put him in that waiting room where a client first comes in and I just let him sit in there for a minute and look around and name it and see how it feels to check whether or not this is OK for someone."

After letting the patient get familiar with VR, therapists often start preparing the treatment together with the patient. They compose the virtual environment and triggers and helpers together, to make sure that the exposure matches the patient's needs and challenges as close as possible.

Usage of VR in treatment sessions

This subcode refers to the experiences of therapists regarding the usage of VR in treatment sessions. Therapists indicated they often use VR as a supportive tool within the regular treatment, as is highlighted in this quote.

Participant 2: "Once, I planned VR for someone very spontaneously and reserved the room for a while, and in my own preparation, when I went to see the client, I thought, hey, that's pretty handy. And then I just jumped on them and said, hey, we're going to do something different today, walk with me and explain, and that was fine too."

The caseload of a patient is often so complex that VR alone is not sufficient enough, but it can be used as part of the overall treatment. Something that therapists mentioned as a barrier in the use of VR is that the VR set is sometimes updated or partly changed. Therapists want these updates to be properly communicated as they now sometimes do not know when the set is updated and find out during the treatment of patients. They also indicated that they would prefer to first experience the changes of the update for themselves before they give VR treatments again and to practice with the new tools in the form of a refresher meeting.

Another barrier that therapists mentioned was that they would like to have a better understanding of all the possibilities that the VR set can offer. They often used the most obvious tools within the VR set but indicated that they want more insight into the less obvious ways to use VR so they could get more out of the VR intervention. Therapists mentioned that a small overview of tips and tricks would be nice, as well as some inspiration on how to apply different modules in treatment.

Intervision

This main code refers to the experiences of therapists with the intervision sessions that are held when they are already giving VR treatments. The intervision sessions in this phase are different in content compared to the intervision session before giving treatment. Therapists indicated that during the intervision sessions they often discuss their experiences with VR treatments of patients, help each other with issues that arise during treatment and brainstorm about the potential and the expansion of VR. Therapists found it very valuable to be able to share experiences with other therapists that are already treating patients with VR as well, as they could compare their cases and way of working.

Expert training

This main code refers to the experiences of therapists with the one-time expert training that was provided for some therapists.

Content of the expert training

This subcode refers to the experiences of therapists regarding the content of the expert training. Therapists that had the opportunity to follow this training, found it valuable that they could ask specific questions related to the experiences they had during VR treatment as can be read in the quote below. However, not all therapists agreed with this as some mentioned that the demand-oriented format of the training could also discourage therapists to join when they do not have any questions or struggles. Besides the opportunity to ask questions, therapists also practised with the VR equipment.

Participant 1: "I recently attended that expert training and I also thought: this is nice to come back to this after x-number of months, for example. How did you apply it? Where did you apply it? What did you come up against? And then you start asking more specific questions."

Time window

This subcode refers to the opinion of therapists about the time window in which the expert training was given when considering the moment of the introduction training. Therapists mentioned that they would prefer to have the expert training a few months (e.g., three months) after the introduction training, so they would have enough time to start treating patients while VR is also still new to them. They also indicated that knowing that they would attend the expert training motivated them in starting to treat patients with VR, as can be read in the quote underneath. Some therapists that did not have the option to join the expert training indicated that they felt the need for such training and sometimes still do.

Participant 2: "That also forces you to really practise during those three months [the time between the introduction training and expert training], because then you have a return day where you can ask questions and take another step forward. So, I think it's also stimulating."

Refresher event

This main code refers to the experiences of therapists about the refresher events that were organised in some organisations. Therapists mentioned that they find it very valuable to have recurring refresher events from time to time to learn and practice with new updates and to experience VR by themselves again. However, refresher events were not organised for all therapists. Some therapists indicated that they would like to have refresher sessions organised either by CleVR or from within the organisation. Their main reason was to practice with different modules and learn more difficult possibilities in the VR set.

Therapist Journey

Based on the results of the interviews, the therapist journey was improved and complemented as shown in Figure 7. Activities that were identified in the interviews were added to the therapist journey, as well as a description of the activities and points of attention regarding the implementation activities and phases.

Phases	Therapists' introduction to VR		Time in between the introduction and the first VR treatment		VR treatment of patients	
					Introduction	Treatment
Description	The therapists' first acquaintance with VR as a possible new addition to their current treatment tools.		The time in between the therapists' introduction to VR and the first VR treatment of patients.		Selecting patients for VR treatment and introducing VR as a treatment option during the first consultation, or during regular treatment.	The patient's first physical encounter with and usage of the VR technology and the use of VR in treatment of patients.
Points of attention	The awareness of VR should be higher to make it easier for untrained therapists to be introduced to VR. They can be introduced by colleagues, team leaders or project leaders.		The time in between the introduction training and the first VR treatment often takes too long because it takes some time before therapists feel confident with the VR equipment.		Therapists have difficulty with determining when, with whom and why they should use VR in treatment.	Therapists would like to have a better understanding of all the 'less obvious' possibilities that the VR set can offer, so they can get more out of VR.
Activities	Introduction training		Intervision		Intervision	
Description	The introduction training provided by CleVR, where therapists learn how to use the VR equipment and practice with it.		Recurring VR intervision sessions, where therapists can e.g., read and discuss protocols, brainstorm about VR patients and can practice with VR with trained colleagues.		Recurring VR intervision sessions where therapists can share treatment experiences and discuss issues and case studies related to VR.	
Points of attention	More time should be spend on practicing with the software and with real-life case studies, and less time should be spend on the hardware. The training should be held over multiple days.		Some therapists have to set up an intervision group by themselves when there is not an existing one already. This is challenging as it takes a lot of time and motivation to take the initiative and maintain it.		Intervision sessions are found very valuable, however not all therapists have the possibility to join an intervision group. They indicated that they would like to have intervision sessions to share experiences and brainstorm with other therapists.	
Activities	Content meeting	Practice		Expert training	Refresher event	
Description	An in-depth meeting about VR provided by organisations prior to the introduction training by CleVR.	Therapists practice with other VR trained colleagues to learn how the VR equipment and the dashboard work and to experience the different virtual environments.		An expert training where therapists have the opportunity to meet with staff from CleVR and fellow VR therapists, can ask questions and practice with the VR set.	Refresher events where therapists are given the opportunity to experience and practice with the new possibilities of the VR set after an update.	
Points of attention	Very valuable as therapists already learn about VR in general, its potential and how it could be used within their work environment.	Practicing with colleagues is very valuable, however therapists have to initiate these moments themselves. They often have enough motivation to do this as they see the importance of it.		Therapists who joined the expert training found it very valuable. Others have need for an expert training, preferably three months after the introduction training.	Therapists have need for refresher events organised either by CleVR or from within the organisation to practice with different modules and new possibilities.	

Figure 7: Second version of the therapist journey of the implementation of VR

Phase 1: Therapists' introduction to VR

The first phase of the implementation of VR is the introduction of VR to therapists. The results of the interviews showed that not only the introduction training provided by CleVR emerged in this phase, but also a content meeting for therapists prior to the introduction training. Besides this, the interviews also gave insight into the added value and points of attention of these activities.

Phase 2: Time between the introduction and the first VR treatment

The second phase of the implementation of VR focuses on the time between the introduction of therapists to VR and the first VR treatment of patients. During this period, therapists could participate in intervision sessions and practice moments, which was already identified in the desk research. The interviews gave insight into the added value and points of attention of these activities.

Phase 3: VR treatment of patients

The third and last phase of the implementation of VR is the actual treatment of patients with VR. The results of the interviews showed that besides the intervision sessions and expert training, therapists could also join refresher events organised from within the organisation. The interviews also gave insight into the added value and points of attention of these activities.

Study 3 - Online survey

An online survey was sent to the participants of the interviews and therapists who had been interviewed by another researcher, to validate the activities found in the desk research and interviews, to gain insight into the importance of the activities, and to ask for any additional feedback. These

results provide answers to the second and third research questions of this study: “What are points of attention in the journey of the current implementation of VR from a multi-level perspective, according to therapists?” and “How can the current journey of the implementation of VR be improved to optimise the implementation of VR in mental health care organisations, according to therapists?”. The results of the survey are described below.

Phase 1: Therapists’ introduction to VR

This phase focuses on the introduction of therapists to VR. The importance of the activities for the implementation indicated by therapists can be found in Table 5. This table shows the number of therapists that indicated the importance of the activity, and the percentage of how many therapists indicated this importance. In Table 6, the main and subcodes regarding the additions to the overall phase and activities mentioned by therapists can be found, as well as the definition of the code and the number of participants who mentioned the code in the survey. Explanations of all codes are provided underneath the tables.

Table 5: Overview of the importance of the activities in Phase 1 of the implementation of VR

Activity		Very important	Important	Neutral	Unimportant	Very unimportant
Content meeting	N (=15)	5	8	2	0	0
	%	33,33%	53,33%	13,33%	0%	0%
Introduction training	N (=15)	12	2	1	0	0
	%	80%	13,33%	6,67%	0%	0%

Table 6: Overview and definitions of the codes related to the suggestions in Phase 1 of the implementation of VR

Main and sub codes	Definition of code	Ther. ^a N (=15)
Content meeting	Therapists’ opinions about an in-depth meeting about VR provided by some organisations, prior to the introduction training by CleVR.	6
Substantive case studies	Therapists’ opinions about the use of content-related case studies during the content meeting.	2
Possibilities of using VR	Therapists’ opinions on the extent to which the possibilities of VR are discussed during the content meeting.	4
Introduction training	Therapists’ opinions about the introductory training provided by CleVR.	6
Recommendations phase 1	Therapists’ opinions about how to improve Phase 1 of the implementation of VR: therapists’ introduction to VR.	6
Training program	Therapists’ opinions about offering a training programme instead of a one-day introduction training.	2
Case study	Therapists’ opinions about the relevance of using case studies during the training.	2
Patient perspective	Therapists’ opinions on the extent to which the patient perspective is discussed.	2

Note. ^a Number of participants who mentioned this code in the survey.

Content meeting

This main code refers to the opinions of therapists on the in-depth content meeting about VR that is sometimes provided by organisations and is held prior to the introduction training by CleVR.

Substantive case studies

Therapists indicated that during the content meeting they would like to see more content related to discussing case studies about real-life situations in their work environment and practice with these cases. They mentioned that in this way as much concrete information as possible can be exchanged about the application of VR in treatments, as is shown in the quote below.

Respondent: "I would use the content meeting to discuss substantive case studies, so that information is exchanged as concretely as possible about the application of VR in treatments. Have colleagues practice with their own patient group and discuss the indications, but also the implementation: what are you going to do in concrete terms? And to what end?"

Possibilities of using VR

Therapists indicated that more time should be spent on providing information about the possibilities of VR, which treatment options are available, how VR can be an addition to the current treatment offer and how and when VR can be used. In addition, therapists mentioned that it would be of added value to also discuss points of action after the content meeting. This is based on the following quote.

Respondent: "This is important so that we can also learn what kind of treatment options are available and how VR is of added value to the current treatment options."

Introduction training

This main code refers to the opinions of therapists on the introduction training that was provided by CleVR. Therapists indicated that the introduction training provided by CleVR should serve as a basis for the implementation of VR, but that only providing the introduction training is not enough. They mentioned that it is needed for therapists to immediately start practising, and that time should be made available for this, as can be read in the quote below.

Respondent: "Due to lack of time, not all VR applications have been practised. This is probably not possible either. So, the practitioner should be given time to practice outside the meetings."

Recommendations phase 1

This main code refers to the recommendations made by therapists on how the first phase of the implementation of VR (therapists' introduction to VR) can be improved.

Training program

Therapists indicated that, as mentioned before, only introduction training is not enough for therapists their introduction to VR. They recommended making it a training program with various meetings such as software training, a content meeting, and a meeting with self-initiated case studies, as can be read in the quote underneath.

Respondent: "I would make it an entire training programme: an introduction training, a content meeting and then a third meeting in which you bring in a case with a real patient (possibly by filming yourself). This immediately challenges colleagues to apply it in practice."

Case study

Therapists indicated that case studies are very important in the introduction of therapists to VR, as highlighted in the quote underneath. They recommended that therapists should practice setting up a VR treatment based on a case study, as they believed this would result in them getting to know the system faster. They also mentioned that practising case studies with a VR colleague are of added value so they can learn more quickly about the ins and outs of the VR system.

Respondent: "Practising with a case together with fellow therapists seems to me to be the most valuable part of the introduction so that one can really start to make progress."

Patient perspective

Therapists recommended that the perspective of the patient who is treated with VR should also be taken into account in the training sessions. They believed it is important to discuss how to give the patient a safe feeling in the treatment with VR and how to start these treatments not from the technical side, but from the treatment point of view. This is based on the following quote.

Respondent: "More fine-tuning on how to use VR in the treatment, how to start up VR in treatment, not so much the technical part, but from a treatment point of view, how to make a patient feel safe in this treatment."

Phase 2: Time between the introduction and the first VR treatment.

This phase focuses on the time between the introduction of therapists to VR and the first VR treatment given by therapists. The importance of the activities for the implementation indicated by therapists can be found in Table 7. This table shows the number of therapists that indicated the importance of the activity, and the percentage of how many therapists indicated this importance. In Table 8, the main and subcodes regarding the additions to the overall phase and activities mentioned by therapists can be found, as well as the definition of the code and the number of participants who mentioned the code in the survey. Explanations of all codes are provided underneath the tables.

Table 7: Overview of the importance of the activities in Phase 2 of the implementation of VR

Activity		Very important	Important	Neutral	Unimportant	Very unimportant
Intervision sessions	N (=14)	5	6	3	0	0
	%	35,71%	42,86%	21,43%	0%	0%
Practice moments	N (=14)	8	5	1	0	0
	%	57,14%	35,71%	7,14%	0%	0%

Table 8: Overview and definitions of the codes related to the suggestions in Phase 2 of the implementation of VR

Main and sub codes	Definition of code	Ther. ^a N (=14)
Intervision sessions	Therapists' opinions about the recurring VR intervention sessions, which are meetings with fellow VR therapists, where they can read and discuss protocols, and brainstorm about potential VR patients.	6
Importance of intervention sessions	Therapists' view on the importance of the intervention sessions.	4

Content of intervision sessions	Therapists' opinions on the implementation of content during the intervision session.	1
Attendance of intervision sessions	Therapists' opinions on the attendance of VR therapists at intervision sessions.	1
Practice moments	Therapists' opinions about the practice sessions with fellow VR therapists where they learn about the VR equipment, the dashboard, and the different virtual environments.	5
Importance of practice moments	Therapists' view on the importance of the practice moments.	4
Planned practice moments	Therapists' opinions on the added value of planned practice moments.	1
Recommendations phase 2	Therapists' opinions about how to improve Phase 2 of the implementation of VR: time in between the introduction and the first VR treatment.	4

Note. ^a Number of participants who mentioned this code in the survey.

Intervision session

This main code refers to the recurring VR intervision sessions that are held in the time between the introduction of therapists to VR and the first VR treatment.

Importance of intervision sessions

Therapists indicated that intervision sessions are important to keep VR alive and to have up-to-date knowledge of VR in general and the VR set, as is highlighted in the quote underneath. Therapists mentioned it also gives the opportunity to discuss issues they encounter and share knowledge and experiences and learn from each other. They recommended that enough time should be scheduled to plan those intervision sessions and this should be done on a structural basis.

Respondent: "That way [intervision sessions] you keep VR lively, but you also ensure that the knowledge is kept up to date. If there are any bottlenecks, you can exchange ideas."

Content of intervision sessions

One therapist mentioned that he/she sometimes struggles to determine what content should be discussed during intervision sessions. He/she mentioned that he/she found it difficult to ensure that therapists got the most out of the sessions, as can be read here:

Respondent: "The intervision moments are valuable. I still sometimes wonder how to interpret them: how do we ensure that colleagues get the most out of them? Sometimes it is also difficult that you work with different patient groups. Sometimes this [working with different patient groups] can be very refreshing and helpful. Despite the intervision, colleagues still find it difficult to actually start working with VR. Apparently, more is needed?"

Attendance of intervision sessions

One therapist indicated that often fewer people attend the intervision sessions. He/she recommended that more emphasis should be placed on the importance of intervision, as can be read in the quote below.

Respondent: "There could be a little more emphasis on the fact that this [interview session] is important so that attendance remains good. Often there are few people present."

Practice moments

This main code refers to the practice sessions with fellow VR therapists that are held in the time between the introduction of therapists to VR and the first VR treatment.

Importance of practice moments

Therapists mentioned the importance of practice moments as they believe this led to more enthusiasm among VR therapists and makes VR treatments less thrilling. Besides this, they mentioned that without practising, VR would not be used in practice.

Planned practice moments

One therapist recommended that practice moments should be planned at fixed times, as this would be the easiest way for therapists to participate in them.

Recommendations phase 2

This main code refers to the recommendations made by therapists on how the second phase of the implementation of VR, the time between the introduction and the first treatment with VR, can be improved. Therapists recommended that follow-up meetings should be planned where they should bring their own case studies, discuss these, and share experiences. They mentioned this should be done approximately 4 weeks after the introduction training. This is highlighted in the following quote.

Respondent: "One session of introduction training with software and content. Then a number of weeks of practice and after four weeks, for example, come back together to discuss how the experiences were."

Phase 3: VR treatment of patients

This phase focuses on the VR treatment of patients given by therapists. The importance of the activities for the implementation indicated by therapists can be found in Table 9. This table shows the number of therapists that indicated the importance of the activity, and the percentage of how many therapists indicated this importance. In Table 10, the main and subcodes regarding the additions to the overall phase and activities mentioned by therapists can be found, as well as the definition of the code and the number of participants who mentioned the code in the survey. Explanations of all codes are provided underneath the tables.

Table 9: Overview of the importance of the activities in Phase 3 of the implementation of VR

Activity		Very important	Important	Neutral	Unimportant	Very unimportant
Intervision sessions	N (=13)	5	5	3	0	0
	%	38,46%	38,46%	23,08%	0%	0%
Expert training	N (=13)	3	6	4	0	0
	%	23,08%	46,15%	30,77%	0%	0%
Refresher event	N (=13)	2	7	4	0	0
	%	15,38%	53,85%	30,77%	0%	0%

Table 10: Overview and definitions of the codes related to the suggestions in Phase 3 of the implementation of VR

Main and sub codes	Definition of code	Ther. ^a N (=13)
Intervision session	Therapists' opinions on the recurring VR intervision sessions that are held when VR treatments are already given. Therapists can share treatment experiences and discuss issues and cases related to VR.	2
Expert training	Therapists' opinions on the expert training that was provided for some therapists while they were already giving VR treatment.	4
Refresher event	Therapists' opinion on the refresher events, which are organised, for instance after a new update, where therapists are given the opportunity to experience and practice with the new possibilities of the VR set.	3

Note. ^a Number of participants who mentioned this code in the survey.

Intervision session

This main code refers to the recurring VR intervision sessions that are held when VR treatments are already given. Therapists indicated that it could be of added value when experienced VR therapists joined the intervision sessions so they could learn from them.

Expert training

This main code refers to the expert training that was given by CleVR for some therapists. Therapists indicated that the level of the expert training was too low for them, they would like to see more depth in the training, as is highlighted in the quote underneath. They recommended discussing the use of VR in complex problems, approaching the therapeutic role, going into the different modules and how to deal with situations that may arise.

Respondent: "I noticed that the previous expert training was not very in-depth, just more practising. They [CleVR] could also have approached the therapeutic role more and/or go into different modules/situations that can occur."

Refresher event

This main code refers to the refresher events that are sometimes organised by some organisations. Therapists recommended that personal case studies should be brought to the refresher events and that new applications of the VR set after an update should be discussed.

Therapist Journey

Based on the results of the online survey, the therapist journey was improved and complemented as shown in Figure 8. Points of attention that were identified in the online survey were added to the points of attention of the second version of therapist journey, which resulted in the third and final version of the therapist journey of the implementation of VR.

Phases	Therapists' introduction to VR		Time in between the introduction and the first VR treatment		VR treatment of patients	
					Introduction	Treatment
Description	The therapists' first acquaintance with VR as a possible new addition to their current treatment tools.		The time in between the therapists' introduction to VR and the first VR treatment of patients.		Selecting patients for VR treatment and introducing VR as a treatment option during the first consultation, or during regular treatment.	The patient's first physical encounter with and usage of the VR technology and the use of VR in treatment of patients.
Points of attention	The awareness of VR should be higher to make it easier for untrained therapists to be introduced to VR. They can be introduced by colleagues, team leaders or project leaders.		The time in between the introduction training and the first VR treatment often takes too long because it takes some time before therapists feel confident with the VR equipment.		Therapists have difficulty with determining when, with whom and why they should use VR in treatment.	Therapists would like to have a better understanding of all the 'less obvious' possibilities that the VR set can offer, so they can get more out of VR.
Activities	Introduction training		Intervision		Intervision	
Description	The introduction training provided by CleVR, where therapists learn how to use the VR equipment and practice with it.		Recurring VR intervision sessions, where therapists can e.g., read and discuss protocols, brainstorm about VR patients and can practice with VR with trained colleagues.		Recurring VR intervision sessions where therapists can share treatment experiences and discuss issues and case studies related to VR.	
Points of attention	More time should be spend on practicing with the software, real-life case studies and on the patient perspective, and less time should be spend on the hardware. The training should be held over multiple days.		Some therapists have to set up an intervision group by themselves when there is not an existing one already. Therapists sometimes struggle with determining what content should be discussed during intervision sessions.		Intervision sessions are found very valuable, however not all therapists have the possibility to join an intervision group. They indicated that they would like to have intervision sessions to share experiences and brainstorm with other therapists.	
Activities	Content meeting	Practice	Expert training	Refresher event		
Description	An in-depth meeting about VR provided by organisations prior to the introduction training by CleVR.	Therapists practice with other VR trained colleagues to learn how the VR equipment and the dashboard work and to experience the different virtual environments.	An expert training where therapists have the opportunity to meet with staff from CleVR and fellow VR therapists, can ask questions and practice with the VR set.	Refresher events where therapists are given the opportunity to experience and practice with the new possibilities of the VR set after an update.		
Points of attention	Very valuable as therapists already learn about VR in general, its potential and how it could be used. However therapists would like learn more about the potential of VR and discuss and practice more with case studies.	Practicing with colleagues is very valuable, however therapists have to initiate these moments themselves. They often have enough motivation to do this as they see the importance of it.	Therapists who joined the training would like to see more depth in it. Others have need for an expert training, preferably 3 months after the introduction training.	Therapists have need for refresher events organised either by CleVR or their organisation to practice with case studies, different modules and new possibilities.		

Figure 8: Third version of the therapist journey of the implementation of VR

Phase 1: Therapists' introduction to VR

The first phase of the implementation of VR is the introduction of VR to therapists. The results of the online survey showed therapists would like to get more information about the patient's perspective during the introduction training and content meeting. Another point of attention was that the content meeting could be improved by the use of case studies and that more time should be spent on discussing the potential of VR.

Phase 2: Time between the introduction and the first VR treatment

The second phase of the implementation of VR focuses on the time between the introduction of therapists to VR and the first VR treatment of patients. During this period, therapists could participate in intervision sessions and practice moments. A new point of attention for the intervision session is that therapists sometimes struggle with determining what content they could discuss during those sessions.

Phase 3: VR treatment of patients

The third and last phase of the implementation of VR is the actual treatment of patients with VR. The results of the online survey showed that therapists would like the expert training to be more in-depth and that an addition to the refresher event would be for therapists to bring their own case studies.

Recommendations

Based on the results of the interviews and the online survey, recommendations could be made on how to improve the implementation process of VR according to therapists. These recommendations provide answers to the third research question of this study, “How can the current journey of the implementation of VR be improved to optimise the implementation of VR in mental health care organisations, according to therapists?”.

Phase 1: Therapists’ introduction to VR

Several recommendations apply to the first phase of the implementation of VR: therapists’ introduction to VR. These recommendations refer to how therapists are introduced to VR, the content introduction, and the introduction training and are based on the results of the interviews and online survey. In table 11, the main (bold) and subcodes from the interviews and online survey are shown on which the recommendations are based.

Table 11: Recommendations on phase 1 with the codes from the interviews and online survey

Recommendations	Codes – Interviews	Codes – Online survey
Increasing the awareness of VR	Awareness of VR	
Offering a content meeting	Content meeting	Content meeting Substantive case studies Possibilities of using VR
Changing the introduction training	Experiences of introduction training Practising with software Hardware Content of the training	Introduction training Recommendations phase 1 Training program Case study

Increasing the awareness of VR

It is recommended that the management of an organisation sets up a VR project and designates a VR project leader whose task it is to ensure that VR is widely known throughout the organisation and that non-trained therapists are encouraged to join the VR project and follow the introduction training provided by CleVR. Raising awareness of VR in an organisation can be done by organising demonstrations where non-trained therapists can experience VR, or by giving lunch lectures to teams within the organisation. Increasing the awareness of VR should be done from the beginning of the implementation of VR until the project leader and therapists believe that VR is sufficiently known throughout the organisation.

Offering a Content meeting

It is recommended to offer a content meeting before the introduction training by CleVR. This content meeting should provide information about the scientific evidence of VR, its potential within mental health care and how it could be used in the treatment of patients. In addition, content-related case studies should be used during the content meeting and information should be given about the possibilities of VR.

Changes in the introduction training

For the introduction training provided by CleVR, it is preferable to spend more time and freedom practising with the VR equipment and less on practising with the hardware, such as setting up and deconstructing the set. It is also recommended to provide therapists with real-life cases to practice with, to let them gain more insight into how to apply VR in the treatment of patients. Besides this, all

modules of the VR intervention should be properly discussed during the training. As the introduction training provides a lot of important information and time should be taken to go through all important aspects, it would be better to expand the introduction training to two days or even a whole training program.

Phase 2: Time between the introduction and the first VR treatment.

Recommendations for phase 2 refer to the initiation of activities for therapists as preparation for VR treatment. These activities are the intervision sessions and practice moments for VR therapists. In table 12, the main (bold) and subcodes from the interviews and online survey are shown on which the recommendations are based.

Table 12: Recommendations on phase 2 with the codes from the interviews and online survey

Recommendations	Codes – Interviews	Codes – Online survey
Organising intervision sessions	Intervision Setting up an intervision group Joining an intervision group Content of intervision sessions	Intervision sessions Importance of intervision sessions Content of intervision sessions Attendance of intervision sessions
Stimulating practice moments	Practice Initiating practice moments	Practice moments Planned practice moments

Organising intervision sessions

It is recommended that intervision sessions are organised on a regular basis by the management or a VR project leader. These moments allow therapists to discuss issues related to the starting of VR, such as how to find suitable patients and how to set up VR treatments. The project leader should also give some guidance during these intervision sessions when needed and provide topics and ideas for content, such as protocols, common issues, or related research. In addition, the importance of intervision sessions should be highlighted more to raise the attendance of VR therapists during the sessions.

Stimulating practice moments

It is recommended that therapists are stimulated to practice with the VR equipment with colleagues. It shows that therapists usually initiate practice moments themselves and do not need help with this, but a project leader should ensure that all therapists who would like to practice also have the opportunity to practice with other VR therapists. It is also recommended to plan practice moments at set times, as this makes it easier for therapists to participate in the practice moments.

Phase 3: VR treatment of patients

Several recommendations apply to the VR treatment of patients. These recommendations are related to the treatment of patients with VR and the activities that should be organised in this phase. In table 13, the main (bold) and subcodes from the interviews and online survey are shown on which the recommendations are based.

Table 13: Recommendations on phase 3 with the codes from the interviews and online survey

Recommendations	Codes – Interviews	Codes – Online survey
Providing information on updates and possibilities of VR	Usage of VR in treatment sessions	
Organising expert training	Expert training	Expert training

	Content of the expert training	
	Time window	
Organising refresher events	Refresher event	Refresher event

Providing information on updates and possibilities of VR

It is recommended that updates in the VR set are properly communicated to all therapists either directly by CleVR or through the project leader. Besides this, an overview should be provided to therapists with ‘tips and tricks’ in less obvious possibilities that the VR set can offer with inspiration on how to apply the different modules in treatment as well.

Organising expert training

It is recommended that expert training should be organised for every group of therapists who joined the introduction training, approximately 3 months after the introduction training. In this expert training, therapists should have the opportunity to ask questions related to their experiences and practice with the more difficult possibilities of the VR set. It is recommended that the content of the expert training is more in-depth and that topics such as complex problems, approaching the therapeutic role, going into the different modules and how to deal with situations that may arise are discussed.

Organising refresher events

It is recommended that refresher events should be organised by the project leader or management after new updates of the VR set, so therapists can practice with these before using them in treatment. In addition, it would be of added value if therapists brought their own personal case studies to these events to practice with the cases on different modules and discover more possibilities in the VR set.

Discussion

This study aimed to identify the activities and experiences of therapists concerning the implementation of VR in the treatment of patients with mental health disorders in mental health care organisations. Additionally, the study also intended to identify how therapists could be supported during the implementation process, taking the multi-level perspective of the implementation of VR within mental health care organisations into consideration. The first research question focussed on what the journey of the current implementation of VR in the treatment of patients with mental health disorders looks like from the therapists' perspective. The study revealed that there are three phases in the implementation of VR: the introduction of therapists to VR; the time between the introduction and first VR treatment; and the VR treatment itself. During these phases, therapists can participate in different activities such as an introduction training, practice moments and intervision sessions with colleagues.

The second research question focussed on identifying points of attention regarding the implementation activities in the different phases of the current implementation of VR from a multi-level perspective, experienced by therapists. The study showed that therapists face needs with respect to organisational support, such as raising awareness on the possibilities of VR in the treatment of patients, the availability of a VR set, time for practicing with VR and the availability of VR treatment rooms. It was also found that therapists do not always have the opportunity to join important activities such as intervision sessions, refresher moments and expert training on VR.

The third and last research question focussed on how the current journey could be improved to optimize the implementation of VR. As was already highlighted in the answers to the second research question, the implementation process could be improved by giving therapists the support they need and by expanding VR more widely within the organisations in terms of raising awareness, providing VR sets, and giving VR therapists more time to practice with VR. In addition, communication between different stakeholders on VR proved to be very important in the different phases of the implementation process. Communication on the opportunities of VR between therapist and patients is important to make patients feel comfortable with VR treatments. Besides this, communication between VR therapists and team leaders, project leaders and the management of the mental health care organisation is important to keep the objectives of the implementation of VR clear and to keep each other informed on the implementation process. Last but not least, communication between therapists and staff from CleVR is important, with respect to updates or technical issues regarding the implementation of VR.

CFIR in the implementation of VR

The results of this study on important factors for therapists regarding the implementation of VR show a lot of similarities with the factors that are described in the CFIR. The CFIR is a commonly used and broad implementation framework, which considers the multi-level perspective that is part of the implementation of any technology and takes the different levels of implementation into account (31,34). The CFIR provides different factors across five domains that are associated with effective implementation, namely the inner setting, outer setting, characteristics of individuals, intervention characteristics and process. These five domains were all reflected in the results of the interviews and online survey. However, some domains emerged more than others, suggesting that they were more important or more relevant to the participants. The discussion points below elaborate on the most prominent results of this study: (1) tailoring the implementation process of VR; (2) organisational support; (3) the importance of functioning VR technology. These aspects relate to three of the five domains of the CFIR framework: characteristics of individuals; inner setting; and intervention characteristics.

Tailoring the implementation process of VR

This study showed that there were different experiences, needs, and opinions among therapists regarding the implementation of VR. Examples of this are differences with respect to the availability and handling of the VR equipment, needs for additional training, and opinions on when and with whom to use VR. Therapists who, for instance, have a lot of experience with technology and computers might need fewer practice sessions with the VR software than therapists who are not that comfortable with technology. Therapists all have different ways of working and therefore also different ways of using VR in treatments. This implies that there is no 'one size fits all' implementation process: as therapists' experiences, ways of working and needs vary, the implementation process should be tailored to these differences. This finding is in line with other studies that also researched the needs and experiences of therapists. These studies showed that implementation strategies and associated activities that are tailored to individually experienced barriers and possible solutions in the implementation processes, are more likely to improve the implementation (48–51).

The differences between therapists shown by this study corresponds with the content of the CFIR. This framework also revealed the importance of the users, the therapists. They are represented in one of the five domains of the CFIR: the characteristics of individuals. According to Damschroder (33), factors related to the characteristics of individuals include knowledge and beliefs about the intervention, self-efficacy, and individual stages of change. Results of this study showed the importance of knowledge and affinity of individual therapists with VR for the ease of the implementation and usage of VR, which is also related to the self-efficacy of individual therapists. This indicates that the findings of this study regarding the importance of a tailored implementation intervention for therapists corresponds with the factors that are proven to be important according to the CFIR framework (33). By considering the needs of these individuals, specific barriers can be identified and implementation strategies can be used to address these barriers. This would result in a tailored implementation for all stakeholders in the context of an organisation. This was done in this study by studying the journey of therapists in the implementation of VR and by identifying common barriers experienced by therapists. In addition, current implementation activities and strategies associated with the barriers were identified, and recommendations were made based on these findings on how to improve the implementation process of VR for therapists.

Organisational support

This study showed that there is a difference in the support that organisations provide for therapists during the implementation process of VR. The study also indicated that therapists need support from within the organisation concerning practical matters, such as arranging VR equipment and organising different types of activities. Besides this, therapists also need personal support in encouraging the use of VR (awareness raising), connecting VR therapists, and providing them space and time to explore VR and share experiences. The importance and role of an organisation to implement VR are also shown in the CFIR, as the organisation is represented in one of the five domains: the inner setting. According to Damschroder (33), factors related to the inner setting, and therefore the organisation, include the readiness for implementation (leadership engagement, available resources), the implementation climate (relative priority, goals and feedback, compatibility) and the networks and communication in an organisation. In this study, the readiness for implementation is associated with the involvement of management and the presence or absence of a project group. This is related to the implementation climate of the organisation. Therapists mentioned the importance of available time to spend on VR, the accessibility of the VR set and to what extent the use of VR is encouraged by the organisation. It also addressed the importance of communication between therapists and the management of the organisation about the availability of resources and the potential dissemination of the opportunities

of VR within the organisation. This shows that the findings of this study regarding the need of therapists for organisational support in the implementation of VR correspond with the factors that are proven to be important according to the CFIR framework (33). In addition, this study gave a more in-depth insight into the importance of the organisational (inner) setting in the implementation of VR by therapists, the individual needs of therapists regarding organisational support, and recommendations on how this interaction could be improved. It can be said that the insights of this study do not only correspond with the content of the CFIR framework but that they also complement this content with specific experiences and needs of therapists in the implementation of VR in mental health care.

Importance of functioning VR technology

This study showed the importance of properly working VR technology in the implementation of VR. The extent to which therapists use VR depends on whether the VR technology works well, and on how easy it is for therapists to operate and use the technology, especially in the case of 'interactive VR', when therapists are the main operators. With respect to the VR treatment of patients (which is the final phase of the therapist journey), therapists mentioned that 'difficult-to-use' VR software or a malfunctioning system affects them to use VR less or not at all. Therefore, the adequate functioning of VR technology is key in the implementation of VR. The importance of the technology is also shown in the CFIR framework, as one of the five domains represents the intervention characteristics. According to Damschroder (33), factors related to the intervention characteristics include the complexity of the software, the adaptability, the relative advantage, and the evidence strength and design quality. In this study, the complexity and adaptability of the software are related to the extent to which therapists are involved in the operation of the interactive VR software, and how quickly they can learn to operate the software. This shows that the findings of this study regarding the importance of well-working VR technology in the implementation of VR mentioned by therapists correspond with the factors that are proven to be important according to the CFIR framework (33). In addition, this study also gave an in-depth insight into the specific needs and wishes of therapists regarding VR technology and its usage, complementing the content of the CFIR framework in relation to the implementation of VR in mental health.

Strengths and limitations

The main strength of this study is the use of different research methods, including a desk research, in-depth semi-structured interviews, and an online survey. These were complemented with a therapist journey to identify and visualise the implementation process of VR and the experiences and needs of therapists regarding this process. Although therapists play a crucial role in the implementation process, no other case studies were found that focus on the experiences and needs of therapists in the implementation of VR, taking the multi-level perspective of the organisation in which VR is implemented into consideration. The findings of this study therefore add to the field of the implementation of VR. This study made use of a visualisation of the implementation journey of therapists, which made the complex process of implementing VR very transparent and accessible. The benefits of the creation and use of such a visualisation were that the understanding of and communication with participants about the implementation process and activities was more in-depth and comprehensive, compared to when one for instance only talks about the process. The visualisation also made the complex process of implementation that was discussed during the interviews more accessible and approachable for the participants. As a result, more qualitative input could be gathered about the experiences and needs of therapists. The combination of methods used in this study together with visualisations could be used as an example for further research regarding implementation processes from the perspective of different stakeholders. It is recommended that

more studies will use the visualisation of processes in their qualitative data collection, as it provides a more accessible and understandable way of communication.

This study has its limitations as well. The main limitation is that the data analysis has been conducted by one researcher. Although the results were discussed with two supervisors, data analysis by one researcher could be too narrow and therefore influence the accuracy and reliability of this study. Furthermore, the study was conducted with therapists who all made use of the VR set from CleVR and may therefore not be fully representative of VR therapists in mental health care organisations who make use of other VR sets. Besides this, this study only focussed on the experiences and needs of one stakeholder, the VR therapists. Although the needs of VR therapists concerning the multi-level perspective including organisation, management and patients were considered, the experiences of these other stakeholders should also be studied for a more complete picture. Finally, among the participants, self-selection may be a bias. The included therapists all participated in this research as a result of their enthusiasm, interest, or curiosity in VR, and status as active VR users. If therapists who are less active with VR, or who have dropped out in the implementation of VR could have been included, a broader and more complete view could have been established. As a first step in the research on the implementation of VR, however, including the perspective of only active therapists in the research would be sufficient to get a general overview.

Implications for further research

Besides the potential follow-up with respect to the recommendations made on the basis of this study, there is a lot of potential for further research following the findings of the study. A logical next step would be to conduct research into how the support materials and additional activities for therapists in the implementation of VR should be realized, as well as research into how to establish co-creation between the researchers, therapists, patients, and other stakeholders to develop these materials. As part of this co-creation, a multi-level perspective systematic implementation intervention could be established, substantiated by a theoretical implementation framework, with the involvement of all stakeholders, in which the barriers of the different stakeholders would be identified, and solutions and strategies would be generated accordingly.

In case the specific recommendations of this study would be implemented, an evaluation study could be carried out to assess the effects of these improvements. A study could be conducted among therapists who experienced both the barriers of the implementation of VR, as well as the provided solutions on the basis of the recommendations, to assess how these have worked out in practice, and if necessary, modify them.

Implementation of VR is a very complex area with many elements intertwined, and different stakeholders involved. This study only focussed on the needs of therapists, but for a successful implementation of VR the whole multi-level perspective should be considered. Identifying the needs of other stakeholders, such as managers, employers, and non-VR employees, should also be explored. Mixed-method research, such as used for this study, in combination with the CFIR framework, could be conducted with respect to all stakeholders involved in the implementation process of VR to identify their roles, experiences, and needs regarding this process.

Finally, this study showed that the integration process of VR is similar for different areas of health care. It would be an interesting addition to examine this further by comparing the implementation of VR in general in different health care organisations, to gain insight into possible differences and optimal approaches.

Conclusion

This research identified the activities and experiences of therapists concerning the implementation of VR in the treatment of patients with mental health disorders in mental health care organisations. Additionally, this study also revealed how therapists can be supported during the implementation process when considering the multi-level perspective of the implementation of VR within mental health care organisations. This study showed that the implementation of VR consists of three phases, the introduction of therapists to VR, the time in between the introduction of therapists to VR and VR treatments, and the VR treatment of patients. Multiple implementation activities were identified that were organised throughout the phases of the implementation of VR. However, this study also showed that there is room for improvement in the activities that were organised in terms of the establishment of activities, the contentment that is discussed during activities and the attendance of therapists in activities. This study also indicates that widespread dissemination of VR throughout an organisation is not only important for the overall implementation of VR but also for the motivation and accessibility of VR for therapists. Further research should focus on the development of a comprehensive implementation program for both the organisation and therapists who want to implement VR, as well as on the experiences and needs of all stakeholders involved in this complex multi-level implementation process.

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Appendices

Appendix A – Informed Consent Form

Informatieblad voor onderzoek “Identifying the experiences and behaviour of therapists in the implementation of VR in a forensic psychiatric setting”

Doel van het onderzoek

Het doel van dit onderzoek is om meer inzicht te krijgen in het implementatietraject van VR dat u als behandelaar heeft doorlopen, of nog doorloopt en wat uw ervaringen hierin zijn. Ik heb aan de hand van de documenten die in Microsoft Teams beschikbaar zijn, een gesprek met medewerkers van Dimence Groep en eerder gehouden interviews een zogeheten ‘therapist journey’ opgesteld. Dit is een visuele weergave van het implementatietraject dat u als behandelaar doorloopt, waarin niet alleen wordt beschreven welke verschillende fases en stappen er zijn, maar ook wat voor materialen jullie ter beschikking krijgen. Ik wil in dit interview graag deze therapist journey met u doorlopen om per stap dieper in te gaan op uw ervaringen en handelingen tijdens het implementatieproces, en uw ideeën om het implementatieproces verder te verbeteren. Het gaat om uw ervaring, er zijn dus geen goede of foute antwoorden. Dit interview duurt ongeveer 60 minuten.

Dit onderzoek wordt geleid door Anouk Jansen, student aan de Universiteit Twente, onder begeleiding van Hanneke Kip en Marileen Kouijzer.

Hoe gaan we te werk?

U neemt deel aan een onderzoek waarbij we informatie zullen vergaren door u te interviewen en uw antwoorden te noteren en op te nemen via een audio-opname. Er zal ook een transcript worden uitgewerkt van het interview. Deze transcripten zullen volledig geanonimiseerd worden en worden anoniem opgeslagen.

Potentiële risico's en ongemakken

Er zijn geen fysieke, juridische of economische risico's verbonden aan uw deelname aan deze studie. U hoeft geen vragen te beantwoorden die u niet wilt beantwoorden. Uw deelname is vrijwillig en u kunt uw deelname op elk gewenst moment stoppen.

Vertrouwelijkheid van gegevens

Wij doen er alles aan uw privacy zo goed mogelijk te beschermen. Er wordt op geen enkele wijze vertrouwelijke informatie of persoonsgegevens van of over u naar buiten gebracht, waardoor iemand u zal kunnen herkennen. Wel wordt in het onderzoek informatie meegenomen over uw functie, uw ervaring met VR en het aantal patiënten dat u heeft behandeld. Voordat onze onderzoeksgegevens naar buiten gebracht worden, worden uw gegevens zoveel mogelijk geanonimiseerd.

In een publicatie zullen anonieme gegevens worden gebruikt. De audio-opnamen, formulieren en andere documenten die in het kader van deze studie worden gemaakt of verzameld, worden opgeslagen op een beveiligde locatie bij de Universiteit Twente en op de beveiligde (versleutelde) gegevensdragers van de onderzoekers.

De onderzoeksgegevens worden bewaard voor een periode van 10 jaar. Uiterlijk na het verstrijken van deze termijn zullen de gegevens worden verwijderd of worden geanonimiseerd zodat ze niet meer te herleiden zijn tot een persoon.

De onderzoeksgegevens worden indien nodig (bijvoorbeeld voor een controle op wetenschappelijke integriteit) en alleen in anonieme vorm ter beschikking gesteld aan personen buiten de onderzoeksgroep.

Tot slot is dit onderzoek beoordeeld en goedgekeurd door de ethische commissie van de faculteit BMS.

Vrijwilligheid

Deelname aan dit onderzoek is geheel vrijwillig. U kunt als deelnemer uw medewerking aan het onderzoek te allen tijde stoppen, of weigeren dat uw gegevens voor het onderzoek mogen worden gebruikt, zonder opgave van redenen.

Als u tijdens het onderzoek besluit om uw medewerking te staken, zullen de gegevens die u reeds hebt verstrekt tot het moment van intrekking van de toestemming in het onderzoek gebruikt worden.

Wilt u stoppen met het onderzoek, of heeft u vragen en/of klachten? Neem dan contact op met de onderzoeksleider.

Mail: a.c.j.jansen@student.utwente.nl

Telefoon: 

U kunt ook contact opnemen met de eindverantwoordelijken van dit onderzoek: Hanneke Kip & Marileen Kouijzer.

Mail: h.kip@transfore.nl
m.t.e.kouijzer@utwente.nl

Voor bezwaren met betrekking tot de opzet en of uitvoering van het onderzoek kunt u zich ook wenden tot de Secretaris van de Ethische Commissie van de faculteit Behavioural, Management and Social Sciences op de Universiteit Twente via ethicscommittee-hss@utwente.nl. Dit onderzoek wordt uitgevoerd vanuit de Universiteit Twente, faculteit Behavioural, Management and Social Sciences. Indien u specifieke vragen hebt over de omgang met persoonsgegevens kun u deze ook richten aan de Functionaris Gegevensbescherming van de UT door een mail te sturen naar dpo@utwente.nl. Tot slot heeft u het recht een verzoek tot inzage, wijziging, verwijdering of aanpassing van uw gegevens te doen bij de Onderzoeksleider.

Door dit toestemmingsformulier te ondertekenen erken ik het volgende:

1. Ik ben voldoende geïnformeerd over het onderzoek door middel van een informatieblad. Ik heb het informatieblad gelezen en heb daarna de mogelijkheid gehad vragen te kunnen stellen. Deze vragen zijn voldoende beantwoord.
2. Ik neem vrijwillig deel aan dit onderzoek. Er is geen expliciete of impliciete dwang voor mij om aan dit onderzoek deel te nemen. Het is mij duidelijk dat ik deelname aan het onderzoek op elk moment, zonder opgave van reden, kan beëindigen. Ik hoef een vraag niet te beantwoorden als ik dat niet wil.

3. Ik geef toestemming om de gegevens die gedurende het onderzoek bij mij worden verzameld te verwerken zoals is opgenomen in het bijgevoegde informatieblad.
4. Ik geef toestemming om tijdens het interview audio-opnames te maken en mijn antwoorden geanonimiseerd uit te werken in een transcript.
5. Ik geef toestemming om mijn antwoorden te gebruiken voor quotes in de onderzoekspublicaties.

Naam Deelnemer:

Naam Onderzoeker:

Handtekening:

Handtekening:

Datum:

Datum:

Appendix B – Interview Scheme Therapists

Voorstellen

Achtergrondinformatie

Voor mijn afstudeer thesis van de studie Gezondheidswetenschappen aan de Universiteit Twente doe ik onderzoek naar de integratie van VR in geestelijke gezondheidszorg. Het doel van dit interview is om meer inzicht te krijgen in uw ervaringen vanaf de introductie van VR tot en met uw huidige gebruik van VR, zodat we meer inzicht krijgen in hoe behandelaars beter ondersteunt kunnen worden tijdens dit hele proces. Ik heb aan de hand van bestaande documentatie en data een zogeheten ‘therapist journey’ opgesteld. Dit is een visuele weergave van het traject dat u als behandelaar doorloopt, waarin niet alleen wordt beschreven welke verschillende fases en stappen er zijn, maar ook wat voor materialen jullie ter beschikking hebben om te werken met VR. Ik wil in dit interview graag deze therapist journey met u doorlopen om te kijken of deze klopt en om per stap dieper in te gaan op uw ervaringen en handelingen.

Op basis van dit interview, en interviews met andere behandelaars, ga ik deze therapist journey verbeteren en verder uitbreiden en ga ik verbeterpunten opstellen voor het implementatieproces zodat het beter aansluit op de behoeften van u als behandelaar, zodat toekomstige behandelaars zo snel en goed mogelijk aan de slag kunnen gaan met VR. Ik zou dan ook graag, naast dit interview, nog een online vragenlijst met u willen delen wanneer de therapist journey is verbeterd en aangevuld om te kijken of deze dan helemaal compleet is, of u zich in de aanbevelingen kan vinden en of u nog aanvullingen heeft. Dit zou dan over een aantal weken zijn wanneer alle interviews zijn gehouden en geanalyseerd. Zou u hiervoor open staan? Heeft u verder nog vragen over dit onderzoek?

Consent

Voor we met het interview beginnen wil ik u graag eerst nog een aantal vragen stellen:

- Uw deelname aan dit onderzoek is volledig anoniem en vrijwillig, u kunt zich op elk gewenst moment onttrekken van dit onderzoek, en alle gegevens zullen dan verwijderd worden. U hoeft voor onttrekking van het onderzoek geen reden op te geven. Begrijpt u dit?
- Begrijpt u het doel van dit onderzoek en heeft u de mogelijkheid gehad om vragen te stellen?
 - Zo ja, zijn deze vragen voldoende beantwoord?

Wanneer deelnemer akkoord gaat en informed consent heeft getekend, opname starten.

Onderwerpen	Vragen
Achtergrondinformatie	Bij welke organisatie/ organisatieonderdeel bent u werkzaam?
	Wat is uw functie binnen deze organisatie?
	Hoe lang bent u al werkzaam als behandelaar?
	Wat voor type patiënten behandelt u?
	Hoe lang gebruikt u al VR?
	Hoe veel patiënten heeft u met VR behandeld en behandelt u nu met VR?
	Hoe zou u, tot nu toe, uw algehele ervaring met VR beschrijven?
Fase 1. Kennismaking met VR	Uitleg fase 1: Deze fase focust zich op uw eerste kennismaking met VR. Daarmee bedoel ik wanneer u voor het eerst over de mogelijkheid van VR binnen uw beroep hoorde, en de VR interventie van CleVR die u nu gebruikt.
	Hoe bent u voor het eerst in aanraking gekomen met VR?

	Hoe heeft u dit ervaren?
	Wat vond u hier goed aan?
	Wat zou hier volgens u nog verbeterd of veranderd aan kunnen worden?
Fase 2. Introductietraining door CleVR	Uitleg fase 2: Deze fase focust zich op de introductietraining die u heeft gekregen van CleVR.
	Hoe heeft u de introductie training ervaren? (Vorm van de training, informatie, duur, onderwerpen, etc.)
	Wat voor toegevoegde waarde heeft de training voor u gehad, als u hier nu op terugkijkt?
	Wat zou er volgens u nog verbeterd of veranderd kunnen worden aan deze training?
Fase 3. Tussenperiode	Uitleg fase 3: Deze fase focust zich op de tijd tussen de introductietraining en de eerste behandeling.
	Wat heeft u in de periode tussen de introductietraining en de eerste behandeling gedaan om u op de behandelingen met VR voor te bereiden?
	Aanvullende activiteiten:
	<i>Doorvragen naar intervisiemomenten/ expert training/ oefenen als activiteiten als er in eerste instantie niks uitkomt.</i>
	<ul style="list-style-type: none"> • Hoe zag deze activiteit eruit?
	<ul style="list-style-type: none"> • Hoe heeft u deze activiteit ervaren?
	<ul style="list-style-type: none"> • Wat voor toegevoegde waarde heeft deze activiteit voor u gehad?
	<ul style="list-style-type: none"> • Wat zou er volgens u nog verbeterd of veranderd kunnen worden aan deze activiteit?
	Geen aanvullende activiteit:
	<ul style="list-style-type: none"> • Heeft u in deze fase behoefte gehad aan aanvullende/verdiepende activiteiten? (Zoals intervisiemomenten, oefenmomenten, extra training, etc.)
	Ja: <ul style="list-style-type: none"> • Hoe zou(den) deze activiteit(en) eruit moeten zien? • Waar zou(den) deze activiteit(en) over moeten gaan? • Wat zou u in deze activiteit(en) willen leren?
Fase 4. Behandeling	Uitleg fase 4: Deze fase focust zich op de behandelingen met VR die u aan uw patiënten geeft. Hierin kijken we naar eerst naar de introductie en kennismaking van VR aan de patiënt, en daarna naar de daadwerkelijke behandeling van patiënten met VR.
	Heeft u het gevoel dat u voldoende kennis en vaardigheden heeft om VR te gebruiken in de behandeling van patiënten?
	Hoe lang na de introductietraining heeft u voor het eerst VR gebruikt met een patiënt?
4a. Introductie van VR aan de patiënt.	Deze vragen gaan over de introductie van VR aan de patiënt en hoe u de patiënt laat wennen aan VR.
	Kunt u beschrijven hoe u VR introduceert aan de patiënt als behandelbaarheid?
	Kunt u beschrijven hoe u de patiënt kennis leert maken met VR? (Dus voor het eerst VR gebruiken)
	Wat gaat er volgens u goed aan deze introductie behandelingen voor patiënten?

	Wat kan er volgens u verbeterd of veranderd worden aan deze introductie behandelingen?
	Heeft u het idee dat u voldoende ondersteuning krijgt als behandelaar om VR te introduceren aan patiënten?
4b. De patiënt behandelen met VR.	Deze vragen gaan over de behandeling van patiënten waarbij u VR gebruikt.
	Hoe gaat u, nadat de patiënt is gewend aan VR, verder met de behandeling van de patiënt?
	Wat gaat er volgens u goed tijdens de behandelingen van patiënten met VR?
	Wat vindt u dat er nog verbeterd of veranderd kan worden in de VR behandelingen die u nu geeft? <ul style="list-style-type: none"> • Wat heeft u nodig om deze verbeteringen waar te kunnen maken?
	Heeft u het idee dat u voldoende ondersteuning krijgt als behandelaar om patiënten met VR te behandelen?
Afronding	Heeft u nog afsluitende opmerkingen of iets wat u nog graag wil delen?

Afsluiting

Dankwoord.

Aan de hand van dit interview, en andere interviews zal ik de zojuist voorgelegde therapist journey verbeteren en aanvullen. Aan de hand van deze journey zal ik aanbevelingen gaan opstellen voor het huidige implementatieproces om de beter aan te laten sluiten bij de behandelaren. Deze aanbevelingen en de verbeterde therapist journey zou ik graag weer willen voorleggen aan behandelaren, waaronder u, in de vorm van een online vragenlijst. Zou u hiervoor open staan?

Hierbij beëindig ik de opname en dit interview.

Appendix C – Codes previous interviews DH

Code	Subcode	Quote	I
Introductietraining	Aanbeveling	Ja, dat is maar één dag. Ik ik vond het heel ontzettend doorheen raasde.[...] Dus ik vond het wel een beetje veel in één, één dag en dan miste. Dus misschien kun je het beter twee dagen van maken .	1
		Ik vond dat eigenlijk een hele leuke dag. Ik vond het ook dat ik was maar goed kon vertellen. Duidelijk had wel een hoog tempo, dus ik weet niet of het voor iedereen ook wel eens als. Ik kreeg veel informatie en ik had wel het idee van zijn echt wel getraind in die dag. Maar eigenlijk zou je nog een een dag daarna willen hebben, of een halve dag waarin je meer gaat oefenen , waarin je nog meer omdat ik het niet gaat krijgen, want het was nu in één dag met er doorheen. Dus ik denk wel wat meer te laten landen. [...] Ja, dat dat wel fijn zou zijn, er misschien niet eens per se met hem erbij, maar wel binnen onszelf dat we dat al direct een hele ochtend weer mee kon oefenen .	3
		Dus het is nu een beetje, misschien ook wel door die tijd die tussen heeft gezeten dat ik zelf nog heel erg aan te ontdekken bent, terwijl dat misschien sneller is als je dat ze misschien meer inderdaad in de tweede cursusdag samen gaan doen.	2
		Nee, het is, is het misschien inderdaad, fijn om het iets rustiger te doen, dat je het niet in één dag, per die training, anderhalve dag en dan die andere dag of zeg maar een middag nog zou nemen als extra oefeningen en dan vooral mee. Hoe zet ik nou een rollenspel op? Hoe doe ik het nou echt in de praktijk met een patiënt, want daar zijn wij later ook vast komen te zitten van: oké, nu weet hoe een beetje hoe het systeem werkt. Je voelt je meer bekwaam, maar oke leuk, maar hoe ze. Hoe pak je nou een rollenspel opbouw aanbod, hoe je daar dan dat je daarover?	3
		Plus dat je gewoon inderdaad nog niet naar zon dag onder de knie hebt. Dus je moet gewoon eerst denken, o ja, hoe zit het ook weer met helemaal nog echt vaardig, dus dat helpt om daar gewoon mee te nemen. Maar ook gewoon echt praktisch, want dat is echt de drempel die wij met zn allen aan het begin voelde. Het is leuk en dan kunnen we het systeem maar nu, hoe, hoe concreet zijn. Ik ben de patiënt. Wat gaan we zeggen? Wat ga je doen? Hoe ga je uitwerken wat moet je al doen? Dat ter voorbereiding of niet, dat die dag ook wat mee aan de hand genomen wordt. Dus ik kan me voorstellen het eigenlijk twee daagse trainingsdag dit dan ook een onderdeel van is, in een dagdeel wel heel mooi zou zijn.	3

		Eh, nee dus dus ik zou inderdaad het. Dus ik heb nu zo,4 dat is mijn eerste gedachtegang die erover na van. Ik zou het inderdaad in een soort van opleidingstraject te zetten waar intervisie onderdeel van de eerste terugkom dagen onderdeel is, en dat je dus met patiënten oefent.	
		En en misschien is het ook wel een beetje met hoe het6 gelopen is, hè, stel dat je wel dat dat het zo was geweest dat we gingen oefenen. We hadden die training gehad en we hadden vervolgens een een, een, een maand lang vol, een dagdeel in de week, gewoon met dat groepje weer de set. En wij gingen van allerlei scènes met met elkaar oefenen. En vervolgens wisten we al naar iedereen, die heeft zes mensen die gaat zien per week, noem maar wat, hè, en dan was er misschien nog wel veel meer zonnig bad waar wij zo ingelopen wat voor soort door was gegaan.	
	Inhoudelijk	De tas inpakken dat je het allemaal netjes deden was,1 ging ook heel veel tijd naartoe. Ze mag dat mag wel wat minder meer op: hoe gebruik je het? [tijdens de training]	
		Ik vond het heel erg leuk [de training], het maakt me4 enthousiast. Ik vond het ook de manier van hè gewoon gelijk oefenen. Stapsgewijze vond ik ook prettig, dus eigenlijk vond ik het een hele hele goeie dag en eigenlijk maar na die dag, dat dacht ik echt op gegeven moment, oke wel even kijken of ik dat dan ook zelfstandig kan. Dus je hebt ergens aan gesnuffeld een beetje aangezetten maar het is nog aan, het bleef wel een beetje vraagtekens, dag nog.	
		Want alleen die knoppendag , dat, ja, dat dat dat is, dat4 eigenlijk gewoon de snuffelen tenminste ik weet niet wat jij die toen hebben we waren.	
		Nou, daar ontbrak het, hem ontbreekt het nog steeds bij5 mij wel aan staat ervaringen wel als een ja, op dit moment nog wel eens een een minpunt dat ik zeg maar ook op basis van de training die we hebben gehad. Toen was het eerste kennismaking en vooral met materialen en de mogelijkheden , maar een echte. Daar had ik wel behoefte aan. Een soort vervolg. De training ook van ja, hoe pak je het nou toe? En dan moet je technisch vaardig.	
		Ja, ik denk van, wij hebben nu in de eerste dag. Nou ja,5 het hebben geen tijd, wij gaan gaan gewoon algemene informatie . Of ie eh toen ging het over het aansluiten van allerlei snoertjes daar dus ook. En dan ook nog moest het allemaal weer netjes opgeruimd worden volgens een bepaald systeem . Nou, daar hebben we ook nog wel wat in die wereld rondgekeken maar ja, dan ben je zo nog aan het zoeken, dus eigenlijk zo en dan meer vanuit de therapie denken. Zo van nou, ik wil die deze therapie gaat doen, dan moet ik dan weet.	

		<p>Aan de andere kant, ik geloof ik wel dat dat kan, maar ik geloof wel dat het meer tijd kost om zeg maar zo'n via CleVR omdat, zeg maar: ja, je hebt me zelf meegemaakt, dat zit zo in het hoofd, zeg maar hoe alles werkt. Ja, dat is natuurlijk veel. Voor ons is het allemaal nog zoeken naar zichzelf. Nog zoeken is en je gaat naar andere, daar, ook in trainen denkt best ingewikkeld. Een training is, denk ik, er dan een vereiste om in ieder geval gewoon wegwijs te worden met met de apparatuur</p>	6
		<p>Ja, ik was erbij op de achtergrond, zeg, maar ik ben niet in de ruimte zelf, ja, af en toe geweest, er ging heel goed, was, heel leuk, ik hoorde heel veel gelach, het was heel grappig en we hebben naast die training die clever verzorgt, günter heeft dat gedaan en die is graag knoppen aan het uitleggen hoe dat systeem werkt</p>	7
Oefenen	Oefenen met collega's	<p>Ja, ik heb wel heel veel geoefend. Dat is heel, heel belangrijk, want dat merkte ik gister ook. Dat we dat rollenspel deden en ik had van die bril op Erik die is dan de tegenspeler en die was dan, ik speelde een man die moesten, die uit met een meisje durfde te dienen, normaal niet die dat deed en die moeten dan dingen zeggen. Maar die virtuele mevrouw, die had geen enkele uitdrukking op haar gezicht, al gezegd dat hij speelde, niet met die emoties en en en ja dan wat je dan heel, dus dus als behandelaar moet je heel bewust zijn van je, moet dat poppetje dus emoties geven, die moet je iets laten doen.</p>	1
		<p>Ja ik heb dat mensen met Rianne al een paar keer gedaan. Spraken Gewoon af en nou, dan gingen we oefenen als de één patiënten en andere therapeut. En en dat is toch handig om met zn tweeën! Want dan kun je echt wat doen, dus je hebt, want we hebben het ook wel eens met vier gedaan in het begin. Dat was echt geen doen. Want dan wil je elkaar de ruimte geven of één. Je neemt juist heel veel ruimte in, een andere die niet aan de beurt. Je kunt, je bent of de therapeut of je bent de patiënt. Dit is van ik, ik vond het beste. Twee oefenende heeft mij het meest opgelegd. Dan kun je op een gegeven moment Rianne en ik ook gezegd van: nou, het is corona, niet goed als je met z'n vieren en het was.</p>	2
		<p>Maar ook als therapeut daadwerkelijk gaan oefenen en denken oh ja, dat heb ik dus gemist is wel handig om eerst van een collega te horen en niet bij een patient al fout te doen, zeg maar.</p>	2
		<p>Ja, vond ik wel hoor, want op het moment dat je die bril op hebt, zeg maar dan dan merk je ook wat als therapeut ook handig is om te zeggen: zeg maar, en dan weet je dat. Ik was bijvoorbeeld geneigd om echt daadwerkelijk vooruit gaan lopen of niet te lopen, maar dat is dan ook heel verwarrend. Zeg maar dus dat dat soort instructies gewoon wel belangrijk zijn om te geven en helpen mee,</p>	2

		dus het ondervindt ondergaan, zeg maar, helpt allemaal mee.	
		daarvoor heb vooral met collegas veel geoefend. Hadden we een intervisie groepje en gewoon dingen wat uitproberen en oefenen , zeg maar. Eigenlijk de ene collegas is nu weg maar de andere collega, die er is nog, hadden we een soort intervisiegroep je inderdaad, voordat die tweede lockdown aankwam en gingen we gewoon elke week gingen er oefenen bouwen, maar die zetten. Op weg gingen we casus uitwerken dus dat was dat hielp ook wel, dat, dat was leuk.	2
		En nu hebben we ook afgesproken om weer een oefening moment met zn allen in te plannen . Op een ochtend gaan we met zn allen weer trainen en zeg maar, in elkaar ondersteunen, want dat helpt dan ook wel.	3
		Nou, ik heb eigenlijk mijn ervaringen zijn nog niet met patiënten en dat ik heb geoefend met de collega's met de apparatuur en het oefenen met patiënten is toch niet gelukt, omdat we hier in Zwolle nog niet zo'n apparaat hebben. Dus de de, de setup staat hier niet en dan ga ik gewoon geen patiënten vinden die het wilde, naar Deventer wilde rijden om de sessie te doen.	4
		Een aantal keren met annemarieke afgesproken om te oefenen. daar op locatie en dan in de eerste paar keer. Oefening was heel erg van eh op het gewoon alles eruit halen. Hoe zet je dat ding op? Daar hebben we gewoon, denk ik, twee tot drie keer, in ieder geval twee keer wel mee geoefend, om het ding gewoon staan te krijgen, aan te zetten en de juiste programmas voor voor je te krijgen . En dan: ja, hoe ging dat? We waren een keer een snoertje kwijt. De blijkt dan vervolgens na tien minuten zoeken uiteindelijk onder een tafel dus te liggen. Per ongeluk weet je wel. Wel ook een keer dat je denkt van nou ja, het het, hij doet het nog niet en dat we dan een stekkertje niet goed hadden aangedrukt dus daar zitten en dan ga je bellen met clever want de microfoon deed het niet en dus daar, daar gaat dat heel veel tijd in zitten en sommige dingen zijn echt gewoon superdom. Laat ik maar zeggen: ja, dat gebeurt gewoon en andere dingen wel, dat je denkt oh dat ze zeggen: ja, maar dan moet je net even anders instellen	4
		Ja, het was echt ik, wij zeiden echt tegen elkaar van. Nou, we hebben alle boekjes bij ons en we gaan het stap voor stap doen . Op ons gemak hadden twee uur de tijd als doel, alleen maar als we alles maar aangesloten krijgen . Dus low level, maar goed na, en dat was wel oké. Dat was wel goed. Het is goed om met iemand samen te doen, met z'n tweeën, weet je meer dan één, ja, en dan ook weer goed afbreken na een en en naar de de tweede of derde keer. Dat hadden we binnen tien minuten staan. Toen had je nou, toen was de tijd om het gewoon dan	4

		<p>even het programma te te te lopen en met elkaar te oefenen, met de bril op en wat opdrachtjes en met dat met die tekst, en je hebt handbewegingen en zo. Dus toen hebben we daar nou mee gaan doen en daarna hebben we hebben gekeken van hoe kun je nagaan samen, we hebben rollenspellen gedaan, dus hoe kun je nou samen met de patiënten soort scenario opbouwen die je uit wil spelen binnen die omgeving?</p>	
		<p>Dus ja, ik denk dat dat merk ik. Ik had in de training wel behoefte aan hele gericht training, niet alleen qua apparatuur bedienen mee te maken. Je nou die behandeling wil gaan doen en ik wil een rollenspel doen. Dat we dat? Uiteindelijk je die knopjes in ieder geval te vinden. Ik heb één keer met Marieke geoefend, Marieke, dus ook drama, therapeut, let heel sterk op op op, zeg maar die die aspect en die had, die maakt echt heel het veelvuldig gebruik van ook alle bewegingen die die avatar en toen dacht ik van oh, ja, als ik dit nou zo zie, dan wordt het ook wel veel, veel dan dan zo statisch. Maar wat ik af en toe op die knopjes en zo en zo is die ook beter te zitten, ze blindelings steeds altijd van: nou, wat is dit nou! [beweging erbij].</p>	5
	Oefenen met patiënten	<p>Mijn voorkeur gaat heel erg naar oefenen met patiënten. Dat is mijn eigen ervaring en dat je moet een zoekt dan wel open in communiceren, dat het dat je zelf hè, dat de nieuwe behandelvorm is. Dus hè dat het, dat het ook met mekaar nog een beetje uit figureren is, een beetje puzzelen is van ja, hoe doen we dat precies?</p>	6
		<p>Ik denk dat ik denk dat je dat onbewust doet en dat is ook oké, want het is en dat is dat zo kun je oefenen en dat is denk ik ook belangrijk om in trainingssituatie te doen. Maar ik, ik ben van mening dat het daarna eigenlijk de voorkeur heeft om zo snel mogelijk gewoon met patiënten te gaan oefenen. En dan kun je nog wel ook met collegas daarnaast wel eens oefenen. Maar ik zou ik zal bijvoorbeeld niet wat je je ook wel eens hoord dat men zegt van nou, ik moet dat eerst helemaal vinden vingers krijgen met collegas en hè, zoveel maanden en dan voel ik me zeker en dan ga ik met patiënten oefenen merk ik dat ik meer hebt van nou, laat maar gewoon uitproberen met patiënten. Er dan kom ik er ook achter, zeg maar ja, wat nog lastig is en wat iemand nodig heeft.</p>	6
Behandeling	Inhoudelijk	<p>Maar ik ben blij dat ik inmiddels gestart ben, ik weer met één patient gestart, met VR en in eerste gestart met gewoon maar eens rondlopen in de omgeving. Inmiddels heb overgaan naar het rollenspel en dat gaat eigenlijk heel leuk, wat heel enthousiast.</p>	2
		<p>En nou ja, wat ik net zei, het is handig om op de plek mee te stappen, want anders kun je bijvoorbeeld ga je een beetje vreemd voelen, zeg maar, en dat soort instructies</p>	2

		moet een beetje eigen worden. En dan moet je wel gaan geven en die miste ik in het begin is, dan vergat ik niet te zeggen.	
		maar nu heb ik nog steeds dingen. Zn. Als hoe heet het ook weer die perspectief, wissel zeg, maar dat wiel ik nog gaan uit te vinden, zeggen, nou ja, ik weet niet of ik moet uitvinden maar dat heb ik nog niet helder in zit.	2
		Ja, dat is echt toevallig. Nu pas geleden is een man, ik heb wel twee sessies gedaan. We beide keren was die heel erg sceptisch , vooral de eerste keer van joh, maar ik weet gewoon dat jullie dat zijn en uiteindelijk was dat dan vergeten tijdens tijdens het rollenspel zelf en toen zag ik een voor de tweede keer zijn die ook dat het heel erg had doorgeloeid in zijn dagelijks leven, dat wat die had geleerd, dat dat veel meer generaliseren naar de andere dingen. Dat is echt leuk, dat hij nog niet zo ervaren. En de tweede keer was weer sceptisch van ja, maar ik weet dat jij, die toch loopt te schreeuwen naar mij en toen zei die achteraf nog wat ik was weer vergeten, dus dat hij werd zelf ook helemaal verbaasd . Daardoor, dus dat wel heel erg leuk. En dat zelfvertrouwen weer flink is opgebouwd, dat ja, dat vond ik echt wel heel waardevol om weer te maken, dus in die zin geloof ik echt wel dat het versnellend werkt in een behandeld traject als inzet.	3
		Ook wel goed, deze heb ik bijvoorbeeld samen gedaan met zijn behandelaar die niet getraind is. We hebben het samen gedaan [met de behandelaar van de patient]. Dat vond ik eigenlijk heel erg fijn, want je moet heel veel als VR behandelaar, dan moet je heel veel doen. Je moet het stelsel met de knoppen, behandeling moeten, die microfoon, je moeten zien in de rol speelt het, je moet de patiënt observeren, terwijl als iemand observeert wat gebeurt er, het scherm moet kijken en kijken wat hij zelf ziet op zijn scherm, onze en je moet opletten of die zelf gaat lopen tegen de muur . Dus het is heel veel dat het heel fijn dat zij hebben als want zij bijvoorbeeld nu de stem. Ik deed het systeem en kon een beetje in de gaten houden, waardoor je veel meer. We zagen veel meer gebeuren en je kan daar veel meer op inspelen en dat was echt heel fijn. Dus dat heb ik wel heel prettig ervaren en dat hebben we toen ook van die die. Roos pot Kolder. Die noemde dat ook dat dat aan het begin heel fijn werkt. Dat klopt echt.	3
		of je hebt het gevaar dat je alleen met de stem werkt en dat doet ook al heel veel, maar toch weer ondersteuning met die non, verbale of die gezichtsuitdrukking ja, dat geeft ook echt wel extra kracht.	3
		Ja, dat is die extra triggers of zeg maar, die helpen heel erg om met kracht bij te zetten , maar die die laat je snel achterwege, als je zelf tenminste ik dan nog en dat is misschien niet zo heel erg hoor ook best wel veel opwekt,	3

		alleen met een rollenspel maar eigenlijk zonde, want je hebt, je hebt zoveel tools die je extra controles en juist in die VR de interactieve voor jou.	
	Bijkomstigheden	Maar jij zit voor de eerste keer met met alleen al zon ding in mekaar zetten . Terwijl het eigenlijk dat ging, eigenlijk veel te veel tijd naar toe. Wij zijn we nog dat alleen maar bezig geweest met hoe zet je sluit je alles aan? Ja, weet je, dit is gewoon ook in de stekertjes dat en N1 N3, en dan zoek je gewoon ja.	1
		Interviewer: Dit is dit de VR kamer? Ja, officieel niet. Officieel zit gewoon de spreekkamer , maar in principe is de bedoeling dat ik straks gewoon deze kamer kan gebruiken als ik hier mee aan het werk gaan. Maar nu moet ik met collegas ruilen enzo . Interviewer: Oh ja precies, want ik wil zeggen, want dan eigenlijk zou je hem dan standaard op hebben staan. Ja, dat zou het allermooiste zijn, maar nu moet je gewoon elke keer even snel ophouden afbouwen .	2
		Bij wijze van wat er gezegd wordt, inderdaad, dan weet je, als je die training gaat doen, dan is het zeker zinvol dat je en twee uur in de week ik noem maar wat of drie uur in de week vaste blok heb je VR gaan doen. Dan is het handig dat je op een kamer zit waar je VR kan gaan doen . Zeg maar dat je die tijd in je agenda hebben om dat te gaan doen. Dan laten we gaan zitten, daar we dit gaan regelen, zeg maar, en de ondergang je eigenlijk, die hele rompslomp waar ik nu nog steeds een beetje mee worstel, zegmaar ja, ehm, ik denk dat dat wel heel waardevol gaat zijn.	2
		En ik moet die kamer dus vooraf reserveren , want die daar zit in principe gewoon iemand anders is. Maar van tevoren ik laatst zag dat ik in één keer, die avond voor shit, dat heb ik niet, dat je allemaal, dat soort dingetjes, dat ze van die praktische en dat is niet per se dat dat de drempel is. Maar er zijn wel, ja, het maakt het wel iets last of jij, je gaat gewoon minder snel, pak je dat een stukje uit de kast, al dat je denkt o ja, ik heb deze behandeling nog te doen, we doen dit al snel.	3
		Ja, omdat het gewoon best wel tijdrovend is, die VR, dat je natuurlijk zelf wat meer kwamen in het systeem wil worden, maar ook het opbouwen van en die ruimte vooraf moet je zon reserveren . Je gaat dus VR sessie, duurt wat lang , want je laat eerst eens patiënten meer binnen en het afbouwen het kost allemaal gewoon meer tijd.	3
		En ik moet zeggen: als ik nu dus een sessie inplannen dan ga ik ook echt bewust . Minimaal een half uur van	3

		tevorens liefst drie kwartier, wel beginnen met opbouwen en ook weer even als het ware de alles op de sessie alweer klaarzetten ook de microfoon testen en haast ook alvast voorspelen dat je weet dat alles werken.	
		Ja, en dat kost natuurlijk heel veel tijd, hè, je bent twee4 uur reistijd dus mijn eigenlijk voor één patient drie uur kwijt, eigenlijk nog wel meer, vier uur als je ook voor en na een tijd met opstellen en afbreken bij rekt. Nou ja, dat dat ja, dat is vaak gewoon dat alles bij mekaar maakte, dat ze dat niet, dat het niet is gelukt, helaas.	
		: Dus we hebben maar ik vind het ook wel. Nou ja, zeg5 maar eh dat het veel tijd kost in de zin van ja, ik probeer het nu allemaal zo te plannen dat ik het op één dag doe dus dat ik s ochtends Opzetten en dat dan de hele dag die zeg maar voor mij is en dan kan ik gewoon met de patiënt naar boven toe de staat, ie al klaar .	
		Hij staat wel standaard daarboven, maar je moet er wel5 naar weer inpakken dus hij kan niet Zeg maar opgesteld blijven staan, omdat ook andere gebruik maken van die ruimte.	
		En nou doe ik dat zo, daar dagdelen of zo maar te5 plannen, keer opbouwen en afbreken laten staan boven die ruimte gereserveerd is voor mij .	
		Doordat dat dat ze gewoon nog midner oefensituaties6 hadden. Kijk, ik denk dat je de instapt en [stel] je weet gelijk van ik vanaf eh over twee weken ga ik iedere maandagmiddag de VR doen en zie ik vier, de vier mensen . Is het anders denk ik dan dat het daarna nog zoeken is? Wie ga ik het eigenlijk inzetten? En wanneer ga ik het eigenlijk doen? En dan heb je dan trek je denk ik ook veel sneller naar je collega 's hè, hoe zit jij de in de verkoop begonnen? Wat vind jij nog lastig? Ja, ik ook aan hoe we dat dan ook niet, eerst zelf nog eventjes snap je dus dan.	
		er is zoveel mogelijk met die set, ik wordt ook horendol6 als ik die set zie.. Dan denk ik: Jezus, ik weet het echt niet en nu denk ik heb al vier, vijf maanden niet meer geoefend, überhaupt ik echt maar dat die. Dan moet die handleiding gewoon bij gaan pakken. En we zien, hoe zit het ook allemaal weer precies. Maar ja, ik denk, maar dat is zoals in mekaar dat ik denk van wanneer ze het goed genoeg, wanneer weet ik het dan wel? Volgens mij blijven continu vragen houden of denken, doe ik snel genoeg of.	
		misschien moet je iets doen, omdat je natuurlijk ook6 terug moet kunnen verdienen in in de tijd die je hebt, zeg maar of wanneer die dan beschikbaar is, dat je niet kunt zeggen waar iedereen maandagmiddag mochten weinig gebruik van maken, wel moet moet inloggen of zo en je	

		moet reserveren. Dat vind ik. Dat is ook een drempel, maar ik kan me wel voorstellen dat dat totdat zal moeten staan. [...]	
	Indicatie	omdat we uitwerken op een bepaald probleem of een folder of van welke mensen die zij geschikt . Ik denk, dat wordt vanuit de teams ook al gevraagd. Dus dat vind ik altijd wel een beetje lastig om daar antwoord op geven. Ja, wat is dan een indicatie? [...] Maar ja, dat is best wel dat, ja, dat vind ik nog wel een zoektocht, als je weet weet dus dus dus wanneer gaat, komt iemand bij VR en niet bij mij of die niet bij cognitieve gedragstherapie niet in een groep, dan gaat ie juist VR doen.	1
		En natuurlijk is dat niet hebben dat blad helemaal op te leggen, maar die die leidraad heb je hier gewoon ook echt veel minder. En omdat er veel as-4 problematiek doorheen speelt, heb je ook vaak dat je nog het ondertussen met brandjes blussen bent, dingen die spelen in omstandigheden, waardoor je ook gewoon wat geeft veel ruis in de behandel indicatie is , dat maakt het gewoon van wat minder goed in die ja, want dat in die trechter te gieten van.	3
		Ja, dat maakt het lastiger. Wanneer zet je het wel in? en wanneer niet en bij sommige mensen kun je er best wel heel duidelijk wat je zegt. Nou, je zit nu in die fase. We gaan er nu echt gewoon doen, of je gaat er meer doen om het maken van een signaleringsplan of zo. Dat je het ter indicatie niet zozeer dat iemand een verandering bewerkstelligen in de coping maar meer van. Joh, welke signalen merk je nou überhaupt bij jezelf op? Dan kun je daar wel inzetten. Maar dat dat die stap zet ik tot nu toe eigenlijk nog niet.	3
		Ja, dat is vanuit de intake wat eigenlijk ergens van? Nou, wat zijn nou de doelen voor behandeling? En dat kan zijn agressieregulatie emotie, regulatie trauma, therapie en vanuit daarvan en tijdens een mdo zou dan eigenlijk geïndiceerd moeten worden van VR behandeling bijvoorbeeld of een je of of we zeggen: we doen AR op maat voor agressie. In het lopende jaar Maas loop, komen we erachter dat VR wel een mooie toevoeging zou kunnen zijn.	4
		Maar de realiteit was eigenlijk dat ze de training kregen, dat vervolgens eigenlijk een beetje zoeken van oké, bij wie kunnen we dit gaan aanbieden? En heeft een losse nog van praktische bezwaren? Wie kunnen gaan aanbieden en wanneer gaan we dat dan doen? En willen we eigenlijk? Is het eigenlijk een exposure behandeling of willen? Is het meer diagnostiek of dus je zit nog met zoveel vragen of zo dat je op een gegeven wat misschien en daar hebben we heel veel met mekaar over gehad , zonder denken echt heel veel bezig zijn, met met het de	6

		VR set zelfs maar heel veel over nadenken, dat je daar misschien ook elkaar wel steeds meer gaan denken.	
		ik denk dat je vooral ik denk dat je dan meer vanuit de degene die het dan ondergaat inderdaad, wat is eigenlijk het doel? En als het doel? Ik heb bijvoorbeeld keer ingezet bij, omdat heel lastig uit gesprekken was te halen. Wat is nou precies aan de hand is? Er is sprake van wat er stroom uit angstklachten heel anders gaan. Komt dat voort zeg maar vanuit dat ze heeft meegemaakt? Sneller ervaringen hebben ze ook autistisch dus of zit het meer? Z	6
Support	Aanspreekpunt	Nou, ik vind het wel goed dat er één aanspreekpunt hè, Gillian, die doet dat goed. Dat is gewoon fijn, die heeft een overzicht , dus ik denk ook dat je dat het beste bij één persoon kan laten. Dus daar heb ik eigenlijk geen, die organiseert ook die bijeenkomsten , vraagt ook mensen om input dus die is ook verantwoordelijk dan voor die bijeenkomst , ja, dat vind ik wel.	1
		En daar hebben we zagen we hebben bedacht dat de mensen die dus nu al betrokken zijn, dat een soort van aanspreekpunt worden en dat we een nieuwe getrainde mensen aan gekoppeld worden aan één van die aanspreekpunten en dan eigenlijk gebonden op welke locatie je werkt . Dus de mensen die in Almelo extra worden getraind, kunnen bij mij is eigenlijk aankloppen en dat we met hem bijvoorbeeld één keer in de maand een overleg plannen waarin we ook zouden kunnen oefenen op elkaar , maar ook hun praktische vragen en als wij daar een soort van ondersteunen .	3
		Ja, ik ja eigenlijk, ik vind dat projecten, projectleider van voortdurend, ervoor hebben gezorgd dat dat, dat dat dat dingen ze waren, heel erg faciliterend ga ik regelen of wat heb je nodig? En wat ik ook wel prettig vonden ze dat ze dus ook wel begrip tonen voor de dingen waar je tegen aanliep, van, dat het dan niet lukt met het snoertje of microfoon die het niet doet en dat je daar moet bellen met CleVR of of dat er bepaalde met de reserveren weet. Heel praktisch dingen was er niet van. Hé, oké, we kijken en daarna, we pakken het. Het was heel erg handelingsgericht en niet zozeer van: wat doe jij dan verkeerd of of zoek het even bij jezelf. Wel vaak met digitaal ook wel eens van goh wat kun JIJ nou doen om dit?	4
		Ja, ik vond het heel erg van erkenning van dat iets soms lastig is en dan zag gezamenlijk kijken naar oplossing , dat je niet het gevoel hebt dat het heel erg bij jou ligt. Zeg maar dat dat het lastig is, maar dat het ook goed is om dan samen te kijken van wat kunnen we willen gaan doen om dat probleem voor je werd of die drempel weg te halen of dat problemen op te lossen, wij al heel van de. Ik vond dat er dat betreft gewoon een hele mooie	4

		<p>gezamenlijk grondhouding was van ja, dit gaan we doen en dan gaan we tegen allerlei dingen aanlopen maar gaan gewoon elke keer verder. En daarin waren zijn vooral heel structuur, structurerend en faciliterend en dat de dit ligt ook een beetje aan hoe je in mekaar zit, maar mij hielp dat wel heel erg.</p>	
		<p>Ik weet niet precies hoe wie dat noemen. Dat vind ik wel goed staan, zeg, maar de ondersteuning ook wel. Nou ja, ook ook ja, Gillian en Hanneke en daar nou, die zijn er wel actief mee aan de slag, denk ik,</p>	5
		<p>Je krijgt niet zo goed, dus het belang, maar van dat je het gewoon structurele, heel terugkomen in je, in je week of in je twee weken. En ik denk toch ergens dat de mensen wel, hè vanuit Gillian wel heel veel moeite voor gedaan om mensen ook weer mee te krijgen en dat wordt ook wel gezegd van van hoger. Inderdaad, dat vinden het belangrijk en dan wel tijd beschikbaar voor gesteld</p>	6
		<p>toen heb ik verteld, ik gewoon doorgenomen van nou, en we hadden nagedacht over het is goed als de de eerste lichting gekoppeld wordt, nu aan de tweede lichting dus dat ze een soort aanspreekpunt hebben. Dat is ook met elkaar gaan plannen. Dan hadden we ook al met de eerste lichting afgesproken die en die behandelaren gaan die en die een nieuwe mensen begeleiden, zeg maar.</p>	7
	Intervisiemomenten	<p>In één keer in de twee weken, een uurtje, een overleg over hoe het gaat en waar we tegenaan lopen. Verder moet.</p>	1
		<p>Jawel ja. Twee uur zou mooi zijn, want je hebt ook nog één keer in de twee weten natuurlijk een uur intervisie heb je die die groep en iemand wat lezen? Ik denk dat je met je moet wel twee uur in de week hebben hoor.</p>	1
		<p>De eerste tijd is is vooral veel overleg met de projectgroep geweest en met de cursus geweest. Nou, dat vond ik op zich heel prettig en hielp, maar ook wel een beetje inzicht te krijgen in wat moet we nou daadwerkelijk gaan doen.</p>	2
		<p>Terwijl de projectgroep overleggen, ben ik eigenlijk wel standaard bij. Die staat gewoon vast mijn agenda en die is gewoon, zeg maar.</p> <p>Interviewer: Ja, precies ja, dat dat helpt ook dat het vaststaat.</p> <p>Ja, dat je gewoon dat ingecalculeerd en dat is vooral, denk ik, inderdaad nu ingecalculeerd en de rest eromheen ben ik nog een beetje aan te proppen, zeg maar.</p>	2
		<p>Wat we in de zon overleg precies besproken wordt, zeg maar ja, we hebben de laatste tijd wat protocollen</p>	2

		<p>doorgenomen we ook wel. Inderdaad is een internet module gemaakt en die nemen we dan door en moeten daar nog dingen veranderd worden. [...] Ja, dat doen we eigenlijk, vooral killian en en de andere die praten bij over: wat zijn de, wat is de voortgang van de overige dingen? Zorgverzekeringen en dat soort dingen, zeg maar daar heeft de laatste iemand een keer wat vertelt over en hoe we je ook die dat promotie ook onderzoek gedaan heeft. [...] Zeker, ja, en [Roos Pot-Kolders] heeft laatst, wat vertelt inderdaad, zo het elke keer gedachten en wat kan nu het meeste helpen? Inderdaad, er wordt ook daar moet ik wel eerlijk bekennen in mijn voorbereiding daarin en wat ze ook via teams ik TROUWENS helemaal niet handig wat we ook altijd documentje gestuurd die je kan voorbereiden, daar kom ik eigenlijk nooit daartoe. Dat is nee, dat dat dat en dat mis ik wel eens zeg maar dat ik, want dat is wel waardevol, denk ik, en dat kan zeker bijdragen aan de ontwikkeling. Maar daar kom ik er gewoon niet goed aan toe.</p>	
		<p>We bespreken wat casussen van mensen die al wat geoefend hebben met VR.</p>	2
		<p>Nou ja, voor mij blijft in ieder geval die projectgroep elke keer wel staan, maar dat merk je dat ik wat nou ja, wat onvoorbereider ingaan zeg maar en dus ook wat minder actieve inbreng hebt. En dat is wel jammer, want soms ben ik meer stil dan dat, denk ik, wenselijk is. Zeg maar dus het waardevoller als ik ook al in gelezen heb en dingen ergens van vindt.</p>	2
		<p>Ik denk het wel, hadden we het laatste in de projectgroep toevallig wel even over en toen was een beetje het idee en dan kan ik wel achter staan dat dat je op een locatie zeg maar een soort intervisiegroep je gaat vormen, waarbij de mensen die het is wel echt een intervisie met de mensen die als iets langer bezig zijn zeg maar dus de mensen die net dat er wat meer op weg kunnen helpen, met elkaar mee kunnen denken, maar waarin wat ondersteuning kan zijn.</p>	2
		<p>Ja, ik denk ik wel dat het echt intervisie blijft, zeg, maar ik denk niet dat het een expert of supervisor rol gaat zijn, zeg maar maar wel die misschien daarin net wat meer kunnen vertellen. Maar ik denk ook voor diegenen die dr wat langer in zit en misschien ik dan in dat geval, dat het ook zeker wel heel waardevol is om ook dan nog te hebben: zeg, maar het is wel een relatief nieuwe manieren om iets te doen, zeg, maar waar geen nog veel te ontdekken is. Dus ik denk niet dat we klaar zijn straks, zeg maar.</p>	2
		<p>Hebben we dat dan gedaan. En dat was heel fijn om gewoon iets meer de techniek onder de knie te krijgen van hoe werkt dat dit ook weer? De stand van de</p>	3

		microfoon nou wel of geen omgevingsgeluiden allemaal, dat soort dingen uitproberen dat helpt wel.	
		Ja, het is echt veel doen om er soepel in te worden, zeg 3 maar, en we hebben ook veel in dat intervisiegroepje wel, de eerste weken waarin dat nog komen. Met gewoon hebben we echt wel veel geoefend met elkaar . Op een gegeven moment is dat helemaal stilgevallen dus dat was heel helpend, omdat je echt met elkaar gewoon. Volgens mij deden we toen bijna wekelijks een uur .	
		Nou, ik denk dat dat wel wat misschien wel wat breder 3 gedragen kan worden, dat dat dat inderdaad. stel je zou dit gaan doen dit gaan doen en dan wordt van je verwacht dat je zoveel tijd in geïnvesteerd dat die uren over meegegeven dat je productie anders worden berekend, dan schrijf ik dan weer overige uren dus ik heb nu al, ja, om de week, dat VR overleg is natuurlijk al een uur overleg, tijd waarop je ook om patiënten had kunnen zien. Als jij die voorbereidingstijd schrijf ik nu dan wel op de patiënt weg met een patient doen, maar eerst die interviews wekelijks, een uur ook niet allemaal extra en is natuurlijk het eigenlijk best wel veel.	
		Hebben ze, spreken we ook wel dit soort dingetjes maar 3 echt interview waarin je gaat oefenen op elkaar , maar die ligt helemaal stil sinds de tweede lockdown.	
		dus best wel heel veel al bekend protocollen die hebben 4 we allemaal met de projectgroep allemaal doorlopen , die liggen op de plank en het is wel een soort van pionieren mij ergens d'r is ook al heel veel bekend.	
		Nou, ik denk dan toch die deelname aan de projectgroep 4 dat je toch elke twee weken dat heb je daar afgelopen week gedaan je moest verdiepen in een protocol . Daar had ik gewoon vaak helemaal geen tijd voor. Is dat geen altijd in de avonduren dus al die voorbereiding voor die sessies!	
		Ja, we hebben wel nu, zeg maar een soort interview van 5 per locatie. Ik denk dat makkelijker werk dan van buitenaf en dat je dan zeg maar verder dan samen aan te gaan , maar geen houden die casussen of zo kunt bespreken hoe pak je dat aan? Wat doe je dan? Misschien ook wel samen gaan oefenen?	
	Duikmeeting	En dat helpt dan misschien toch ook wel ja, en dan is het 7 ook wel leuk, hoor dat er behapbare doelen zijn gesteld , die dan ook nog gehaald worden. En dat hebben we dan ook weer gezegd van joh, als we terugkijken eigenlijk hebben jullie allemaal gedaan wat je wat je wilde doen .	
		Maar weet je heeft jullie als projectleider ook weer in de 8 gedaan hebben in die tijd een duik meetings heb je ook wel gevraagd. Wat is jouw korte termijn doen , weet je wel overgemaakt waardoor je dan staan? En dan ben je al een beetje getrokken ok ja, ik wil hem liefst patiënt	

		gaan beginnen op het world die behandeling hebben gedaan of zo. Ik denk ik dat wel mee gebeurd en je ziet andere wel beginnen. Hè, dan denk ik: ja, ik moet ook eigenlijk wel.	
	Helpdesk	Een helpdesk is wel heel fijn . Interviewer: Wel gebruik van gemaakt?. Ja, heel vaak, ik weet je wel, ik gelijk en dan krijg je op dit een telefonisch weten ze altijd een antwoord, dus je krijgt ook direct een antwoord. Zijn ook vriendelijk en dus dat gaat heel goed.	1
	Materialen	Nou, we hadden een presentatie gemaakt met waar vind je informatie? We hebben een teams omgeving ingericht, dat die nieuwe mensen meteen in teams komen, met daar eh heel goed geordend . Als je aan de slag wil, klik, dan heb je deze documenten nodig. Als je protocollen wil, dan klik hier en hij is heel heel gefilterde informatie dat je niet een bak aan allemaal zit, over je heen krijgt, maar dat je echt gericht aan de slag kan. Dus dat hebben we vertelt aan ze,	6

Appendix D – First version of the therapist journey

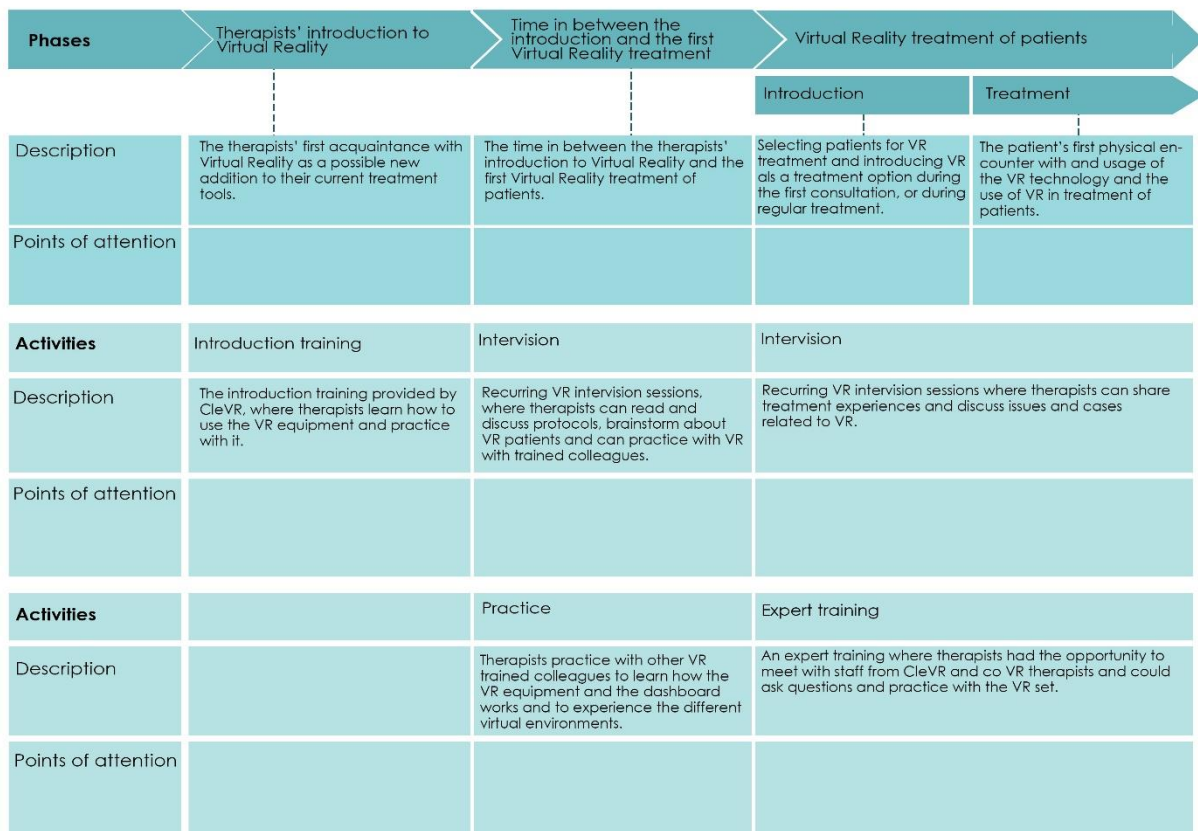


Figure 6: First version of the therapist journey of the implementation of VR

Phase 1: Therapists' introduction to VR

The first phase of the implementation of VR is the introduction of therapists to VR. This phase refers to how therapists first got acquainted with VR as a possible new addition to their current treatment tools. During this phase, the introduction training provided by CleVR emerged as the main activity in which therapists can participate.

Data showed that the following topics were addressed during the training: packing and unpacking the VR set, step-by-step practising how to set up the VR set, how to log in and how to start the treatment. In addition, all buttons and the interface of the application are explained. In short, during the training therapists get to know the possibilities of the VR software and the equipment itself, and briefly experience what it is like to walk around in this virtual environment.

Phase 2: Time between the introduction and the first VR treatment.

The second phase of the implementation of VR is the time between the introduction and the first VR treatment of patients. During this period, therapists can participate in various activities to prepare themselves for the treatments with VR.

Intervision is one of the activities that therapists can participate in. These are recurring sessions where therapists can talk about VR, read and discuss protocols, brainstorm about potential patients suitable for VR treatment and can practice with VR with trained colleagues. Data showed that the following

topics are addressed during the intervision: the progress, protocols, modules, health insurance, research and case studies of therapists who have already practised with VR.

Another activity is practising with VR, therapists can either practice with VR during the intervision, or they can plan moments with VR-trained colleagues to learn how the VR equipment and the dashboard work and to experience the different virtual environments. Data showed that during the practice moments, the following topics are addressed: packing and unpacking the VR set, setting up the right treatment programme and practising role play and cases. In addition, therapists also practice setting up the microphone, giving sufficient instructions and getting familiar with the possible emotions and movements of virtual characters.

Phase 3: VR treatment of patients

The third and last phase of the implementation of VR is the actual treatment of patients with VR. This phase refers to not only the actual treatment of patients but also to the selection of suitable patients for VR, the introduction of patients to VR and the activities in which therapists can participate. These activities include intervision sessions and expert training.

The intervision sessions that are held when therapists are already giving VR treatments are different from the intervision moments during phase 2. Data showed that during the intervision sessions in this phase, more attention is paid to issues therapists encounter during VR treatment and the potential of VR.

The final activity is the expert training, some therapists had the opportunity to participate in a physical meeting with staff from CleVR and fellow VR therapists, where they could ask questions and practice with the VR set. Topics that are addressed during the expert training are specific questions about cases that therapists encounter when giving VR treatment. The training provides the opportunity to practice with these cases. The expert training was given once and the therapists who participated in it had a different amount of experience with VR. Some therapists had already been treating patients for a while, whereas others had yet to start. Therefore, this activity fits both this phase and phase 2.