Integration of Virtual Reality within Aggression Regulation treatment in forensic mental health care: a qualitative study

Gamze Tintin

Master thesis: Health Sciences
University of Twente – Transfore

Supervisors
Dr. H. Kip
Drs. M.T.E. Kouijzer
Dr. S.M. Kelders

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Abstract

Introduction: Forensic mental health care (FMHC) aims to protect society and prevent recurring offensive behaviour such as aggression. Risk assessment instruments are used to identify risk factors that trigger FMHC patients' aggressive behaviour and provide them with a personalized toolkit to manage these triggers. The specific risk factors that must be considered are acute dynamic risk factors, also known as triggers. The identification of triggers within current treatment such as 'Aggression Regulation (AR) – customised' consists of conversations between the therapist and the patient. This lacks context which makes it difficult for the patient to reflect on what triggers their aggressive behaviour. 'Triggers & Helpers' is an innovative VR solution that assists in in identifying triggers during therapy to eventually provide patients with a personalized toolkit to manage these triggers in their daily life. However, it is not yet integrated into current treatment and rather used as an add-on. Integration of VR within current treatment process can be achieved by co-creating and tailoring the implementation process to the requirements, skills, and attitudes of FMHC therapists.

Methods: Therapists (n = 10) working in outpatient care within two Dutch FMHC organisations participated in a semi-structured interview to explore their experiences and ideas about the integration process of the VR intervention 'Triggers & Helpers' within 'AR – customised'. The inclusion criteria for this study were therapists actively working in FMHC that extensively use 'AR – customised' and are trained in the usage of VR. In order to recruit therapists, convenience sampling supplemented with snowball sampling was used. Both deductive coding, based on the 11 pre-existing modules of 'AR – customised', and inductive coding was used during the data analysis as well as the method of constant comparison.

Results: The use of the VR intervention 'Triggers & Helpers' could be of added value in all modules of 'AR – customised' to increase interoceptive awareness, enhance coping skills, identify triggers, coping skills, prepare the patient for societal situations, provide a preview of VR, enforce the patients' social participation, or enforce the patients' ability to set boundaries. This VR intervention could be introduced to every patient following 'AR – customised' as long as they have a positive attitude towards VR. Additionally, both the therapist and patient must be able to use the VR. There must be sufficient trust between the patient and therapist in order to ensure a safe environment within the treatment room. In order to guide therapists, they desire a workbook including practical suggestions on how to co-create a VR scenario with the individual patient because the VR scenarios must fit the experiences of the individual patient.

Discussion: The integration of VR within 'AR – customised' is dependent whether it suits the individual patients' treatment process. Further research should focus on collecting the opinions of FMHC patients and, specifically, focus on whether co-creation skills differ between their treatment and characteristics; focus groups whether implementation requirements of therapists differ between their expertise and experiences within FMHC; and, specifically, further research must be careful with the use of the terminology of *protocol* which is seen as a distracting addition to current work structures.

Contents

1. Introduction

Forensic mental health care

Aggressive behaviour is defined as behaviour towards another individual, object, or animal with the intention to harm [1]. This aggressive behaviour has a wide variation as it can result in family conflict, criminality, homicide, rape, and theft which eventually could have a negative impact on society [2]. In some cases, offenders suffer from mental illness that contribute to their aggressive behaviour [3]. Aggressive behaviour in combination with mental illness is treated in specialized care facilities that are part of forensic mental health care [4, 5]. Forensic mental health care (FMHC) aims to prevent recurring aggressive behaviour by enhancing their patients with abilities and insight that assists them in being active participants of society [6].

The provision of these abilities and insights is particularly challenging in FMHC because of the unique characteristics of the patient population [7, 8]. First, patients could often be unmotivated to follow their treatment because their treatment is mandatory in most instances [9]. Mandatory treatment could lead to patients being non-adherent to their treatment, the agreements they made with their therapist eventually resulting in reduced engagement. The therapy procedure would be prolonged and less successful since the therapist would spend more time encouraging the patient or repeating therapies [8, 10]. Second, patients tend to have low literacy skills, could be cognitively impaired, and/or could lack reflection in their own behaviour which is required for current standard treatment [11, 12]. This cognitive impairment could result in their engagement being further decreased by the fact that some aspects of their therapy are difficult for them to understand due to issues with focusing on their problems or is difficult for them to remember due to memory loss [13]. This lack of understanding could also be partly connected to their low literacy skills [7, 12]. However, it could also be connected to externalizing habits some FMHC patients' could have that prevent them from considering their own actions due to these cognitive impairment or lack of self-reflection and blaming others for their aggressive behaviour [9]. Third, the FMHC patient population is heterogeneous [7, 14]. This incorporates differences in demographics and personal preferences [15], but also includes a wide range of offensive behaviour ranging from aggressive behaviour to sexually transgressive behaviour [16]. Additionally, a significant portion of FMHC patients experiences psychiatric co-morbidity [17]. This heterogeneous patient population requires a tailored approach instead of an one-size-fits all approach in which each individual patient is provided with a personalized toolkit with skills that reduces their chances of recidivism [18].

Identifying acute dynamic risk factors (triggers)

These chances of recidivism can be reduced by applying the Risk-Need-Responsivity (RNR) model or the Good Lives Model (GLM) within the assessment and treatment of FMHC patients [19]. The RNR model is an evidence-based treatment intervention that uses the principles of risk, need and responsivity [19, 20]. The risk principle focuses on tailoring the treatment intensity to the patients' risk to engage in offensive behaviour with means of risk assessment instruments. The need principle focuses on the treatment that is tailored to the criminogenic needs and characteristics such as anti-social values, criminal peers and/or low self-control of the patient that could increase the occurrence of offensive behaviour [19, 21]. The responsivity principle focuses on (potential) interventions that must be evidence-based and include features tailored to the to the patients' abilities. The advantage of the RNR model is that it enhances a tailored approach which is seen as effective for the heterogeneous FMHC patient population [7, 18, 22]. The disadvantage of the RNR model is that it mainly focuses on patients' qualities that require improvement which is seen as unmotivating for the already unmotivated FMHC patient population [23]. Therefore, the GLM could be alternatively applied due the fact it involves elements from positive psychology [24, 25]. Positive psychology aims to enhance the traditional treatment methods by switching the focus from a problem-solving approach to a strength-based approach [26]. The GLM applies positive psychology by focusing on patients' criminogenic needs, abilities, and goals in order to provide the individual patient with a personalized toolkit to achieve primary life goals, or *primary goods*, such as a healthy work environment and a social

environment without engaging in offensive behaviour [27]. Despite their different approaches, both models focus on developing a personalized toolkit where risk factors are identified by means of risk assessment instruments [19].

Risk assessment instruments distinguish between static risk factors and dynamic risk factors that can contribute to recidivism [28]. Static risk factors involve fixed information such as the patients' former education or prior offenses and, therefore, cannot be changed [29]. Dynamic risk factors, on the other hand, involve information about the patient that could change throughout their life course and thus could actively influence their risk of engaging in offensive behaviour [29-31]. Therefore, risk assessment instruments should mainly focus on dynamic risk factors to identify the unique criminogenic needs of an individual patient [32]. The dynamic risk factors can be divided into two sub-sections: stable and acute [33]. Stable dynamic risk factors are frequently included in risk assessment tools because they involve information that does not change regularly such as the patients substance abuse or personal skill deficits [34]. Acute dynamic risk factors are more difficult to detect and treat because they occur during a limited time period and in specific environments such as encounters with other individuals engaging in aggressive behaviour or at home where their partner is crossing the patients' boundaries [35-37]. These acute dynamic risk factors are also defined as triggers [33]. Triggers can also act as early warning signs of aggressive behaviour that FMHC patients find difficult to regulate [28]. An example can be a patient with aggression regulation difficulties that is stopped by a police officer while walking towards their job. Another example can be a patient with sensory processing issues and lack of self-control. This patient goes on holiday and encounters a crying baby on board of an airplane which happens to trigger them. In order to develop a personalized toolkit of coping skills known as helpers, this trigger must be identified and researched. Examples of helpers could be relaxation techniques like counting to ten when encountering a police officer or by reading a book when there is a crying baby which is distractive [20]. However, the identification of triggers within current treatment is a complicated process.

Current treatment within FMHC to identify triggers consists mainly of conversations between the therapist and the patient. However, the absence of the context in the treatment room, the lack of realisation and lack of self-reflection makes it difficult for FMHC patients to explain to their therapist which triggers priorly caused an outburst [28]. Examples of current treatment that mainly uses conversations are Cognitive Behavioural Therapy (CBT) or experience-based therapy that aims to gain a better understanding of patients' behaviour and thinking patterns [38]. In order to understand patients' behaviour in real life, therapists must depend on their own imagination skills, patients' motivation, and self-reflection to provide verbal responses to understand their behaviour in real-life [9, 11, 12]. Additionally, these verbal responses are frequently biased due to FMHC patients' dishonesty or fear of consequences. This fear of consequences limits them in learning about their triggers or practice newly gained abilities [28, 39, 40]. Therefore, current treatment requires innovative solutions that could assist in identifying triggers during therapy to eventually provide patients with a personalized toolkit to manage these triggers in their daily life [41].

Integration of Virtual Reality (VR) in current treatment

Virtual Reality (VR) is an innovative solution that could enhance current treatment and assist in identifying triggers [7, 8, 42-44]. VR is an immersive technology that can provide patients with the illusion that they are in a three-dimensional visual environment by using a head-mounted display to replace real sensory experiences with digital ones [45, 46]. This exchange could provide the opportunity to observe and evaluate what triggers the individual patient within a VR environment [7, 47-49]. This is done by means of a *sense of presence* which is the illusion of being in a place while physically located in another [50, 51]. Recent studies within FMHC stated the added value of a sense of presence within VR [41, 52, 53]. First, VR can transfer patients' experiences outside the therapy setting within any therapy room [7]. For example, the aforementioned situation with the police officer for a patient with aggression regulation problems, or the situation with the crying baby for a patient with sensory processing issues. Both situations can be re-created inside a virtual environment to

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practice the necessary behavioural or cognitive skills the patient requires without harming others or themselves [42]. Second, it provides FMHC patients with real-life feelings and actions to detect their triggers in the moment without requiring advanced self-reflection. Patients can get a sense of their own behaviour by re-experiencing real-life societal situations or environments. In addition, therapists acquire insight into the patients' actual reaction to triggers without having to rely on the patients' verbal response or ability to show forced emotion [39]. Third, it facilitates the development of new- or enhancement of existing coping skills which are required for healthy social interactions or emotional control [54]. For example, the aforementioned patients with aggression regulation problems can learn to engage in a healthy social interaction with the police officer or control their negative emotions when the baby is crying and distract themselves by doing relaxation exercises to cope with the triggering situation. These advantages increase the perceived relevance of therapy for FMHC patients [55] which increases motivation and adherence [7, 56]. Despite these various studies on the potential of VR, little attention is given to the set of criteria patients must oblige to before a therapist could indicate treatment with VR. The found indication criteria was seen as the therapists' expertise whether VR would be safe and useful for the individual patient whereas the found exclusion criteria was seen as epilepsy, IQ below 70, and the inability to communicate in the same language as the therapist [41, 48]. This lack of research could be because the need for tailoring treatment to the heterogeneous FMHC patient population would make it challenging to repeatedly study the indication criteria in various treatment processes. This could be connected to the fact that VR is not yet integrated into current treatment but is rather used as an add-on reducing the chances of adoption and usability within current treatment processes [7, 57, 58].

The implementation process

The integration of VR into current treatment processes is seen as a complicated process and a reason for this could be because VR interventions are fairly new within the field of FMHC [47]. A successful integration within current treatment processes is achieved by undergoing an implementation process [59, 60]. However, there is a lack of large randomized controlled trials and implementation studies about current treatment using VR within FMHC resulting in insufficient information to enforce implementation processes for VR interventions [43]. Implementation strategies, or implementation models, such as the Consolidated Framework for Implementation Research (CFIR) [61] and the Non-adoption, Abandonment, Scale-up, Spread, and Sustainability (NASSS) framework [62] could be used to facilitate this implementation process because these models clarify the importance of integrating interventions within the current treatment process. However, there is also a lack of research on how these models can be used to integrate VR interventions into current treatment within FMHC [40, 63]. Therefore, a solution that could be considered is to enforce close involvement from key stakeholders in order to co-create implementation processes tailored to the requirements, skills, and attitudes of FMHC therapists [64-66]. This could prevent negative implementation outcomes such as experiencing low support, low sustainability, and limited information transfer during the implementation process [66] as well as achieve a successful integration of VR within current treatment

Scope

This close involvement from key stakeholders was also seen in the co-creation of the VR intervention 'Triggers & Helpers' for FMHC. However, the implementation process of this VR intervention in current treatment processes is seen as insufficient. Specifically, this VR intervention is not yet sufficiently integrated within current treatment of 'Aggression Regulation (AR) – customised' which consists of eleven modules to detect triggers, understand patients' aggressive behaviour, and treat patients' aggressive behaviour by providing them with coping skills and helpers. This integration process requires standardization, emphasizing the demand for a structured yet flexible enhanced protocol [7, 28]. This enhanced protocol is currently missing and will be developed by following the main research question listed below:

"How can the Virtual Reality (VR) intervention 'Triggers & Helpers' be integrated into the current treatment of 'AR – customised' within forensic mental health care?"

The main research question is supported with three research sub-questions:

1. How can each module of 'AR – customised' benefit from the VR intervention 'Triggers & Helpers'?
2. What are the indication criteria FMHC patients must meet to be eligible to use the VR intervention 'Triggers & Helpers' within 'AR – customised'?
3. Which activities and materials do FMHC therapists require to integrate the VR intervention 'Triggers & Helpers' within 'AR – customised'?

2. Methods

Design

A qualitative research design with semi-structured interviews was used to answer the research sub-questions. The data collection started after ethical approval was given by the Ethics committee of University of Twente under request number 220640. A singular in-depth interview with each participant was performed to explore participants' experiences and ideas about the integration process of the VR intervention 'Triggers & Helpers' within 'AR – customised'.

Setting

This study is part of the larger project *VooRuit met VR* which was started in 2016 by an interdisciplinary team from *Transfore*. *Transfore* is an organisation that specializes in mental health care in the eastern part of the Netherlands [67]. The interdisciplinary team involved 2 patients, a therapist, an occupational therapist, a forensic nurse, 2 researchers, and a policy advisor. This team used the CeHReS roadmap to develop the VR intervention 'Triggers & Helpers'. In 2020, *Transfore* started to implement software services from *CleVR* to apply 'Triggers & Helpers' in practice. *CleVR* is a VR-CGT provider that develops software and training methods together with researchers from various Dutch universities, FMHC clinics, and mental health institutions to improve mental health care [68]. *De Waag* is another FMHC organization located in the western part of the Netherlands that also makes use of the same software and VR intervention. After the implementation of 'Triggers & Helpers', an iterative process of the ongoing development, implementation and evaluation was preserved as multiple studies by the project members [28] as well as published studies from previous students [69-71]. These studies, VR intervention and members of the project group are used as background information in order to iteratively continue the integration of the VR intervention 'Triggers & Helpers'.

Interventions

Current treatment 'AR – customised'

´Aggression Regulation (AR) – customised´ aims to provide patients with a personalized toolkit to manage their dynamic risk factors. The development of a toolkit to ensure patient safety is achieved by using the activities that fall under risk management which are crime analysis, a safety plan and/or an identification plan in addition to the future plan [72]. Each activity is used to identify and assess risks that could lead to recidivism and determine forms of treatment with a focus on the GLM to improve the patients' motivation to achieve their goals. It includes standard modules of in*troduction, network, self-control* and *thinking differently*. Additionally, patients could receive optional modules of *stress reduction, impulse control, perceiving and interpreting, emotion regulation, conflict management, partner in view,* and *self-image*. These modules provide the necessary skills needed to realise these goals such as a better social life or pleasant relationships by receiving specific methodological and therapeutic techniques such as the following which are mentioned in the general instruction manual of 'AR – customised' [73]:

1. Cost-benefit analysis: patients learn to distinguish the positive and negative consequences of their aggressive behaviour and offense in the short- and long term.
2. Experience-based exercises: patients apply role-play or improvisation assignments to experiment with new behaviour, such as applying (social) skills, engaging in conversation, and trying out problem-solving skills. Additionally, they learn to improve their social cognition through perspective switching, to become more aware of their body language, to control and express their aggressive feelings, and/or to control various negative emotions.
3. Mindfulness exercises: patients learn to be focused, purposeful, non-reactive, and less judgmental which are a prerequisite for learning to better apply stress reduction, impulse control, self-control, and strengthening their willpower.
4. CBT: patients practice fictional problem scenarios to identify dysfunctional thinking patterns and replace them with helpful thoughts to increase their problem-solving skills.

5. The model of 5G's: patients use a rational self-analysis focused on the event (G1), which leads to a thought (G2), this determines the feeling (G3), and the thought and the feeling, determine the behaviour (G4), which leads to a consequence (G5). It is used during various learning topics, such as identifying impulsive behaviour and applying self-controlling skills.
6. Transfer treatment: patients learn to show the learned skills and the desired behaviour by practising various realistic situations. The benefits of newly learned behaviour are continuously mentioned to the patient because their behaviour could fade away when positive reinforcement stops.

VR intervention ´Triggers & Helpers´

The VR intervention 'Triggers & Helpers' enables the patient to be in a virtual environment that is controlled by their therapist (figure 1). The patient makes use of a head-mounted display, noise cancelling headphones and joysticks while the therapist uses a voice-morphing headset and a control panel on a tablet to control movements, facial expressions, and body language of the virtual avatars (figure 2). The patient and therapist can select multiple components to design a tailored scenario such as 1) the virtual environment such as an office, shopping street, supermarket, café (at night), home, prison, schoolyard, park, or bus; 2) VR modules, such as walk-around, roleplay, emotion recognition, switching perspectives, distinguishing between emotions, or catwalk; 3) the number of virtual avatars with adjustable appearances in looks and facial expressions; and 4) triggers and helpers. Examples of general triggers are a crowded environment, virtual avatars that interfere with the conversation, virtual avatars that engage in aggressive behaviour including physical movements where they can walk up to the patient or raise their middle finger. Examples of helpers can be putting on soothing music or counting to ten. The therapists can return to the dashboard at any time to apply flexible changes to the scenario when needed. For example by changing the appearance of the virtual character or adding soothing background sounds, in order to make sure the scenario fits the treatment goals of the patient [28].

FIGURE 1. A PICTURE OF A TREATMENT ENVIRONMENT WITH VR. FROM LEFT TO RIGHT: THE PATIENT WITH THE VR SET, THE LAPTOP WITH THE VR ENVIRONMENT, THE TABLET WITH THE CONTROL PANEL, AND THE THERAPIST USING THE CONTROL PANEL AND A VOICE-MORPHING HEADSET (© CLEVR).
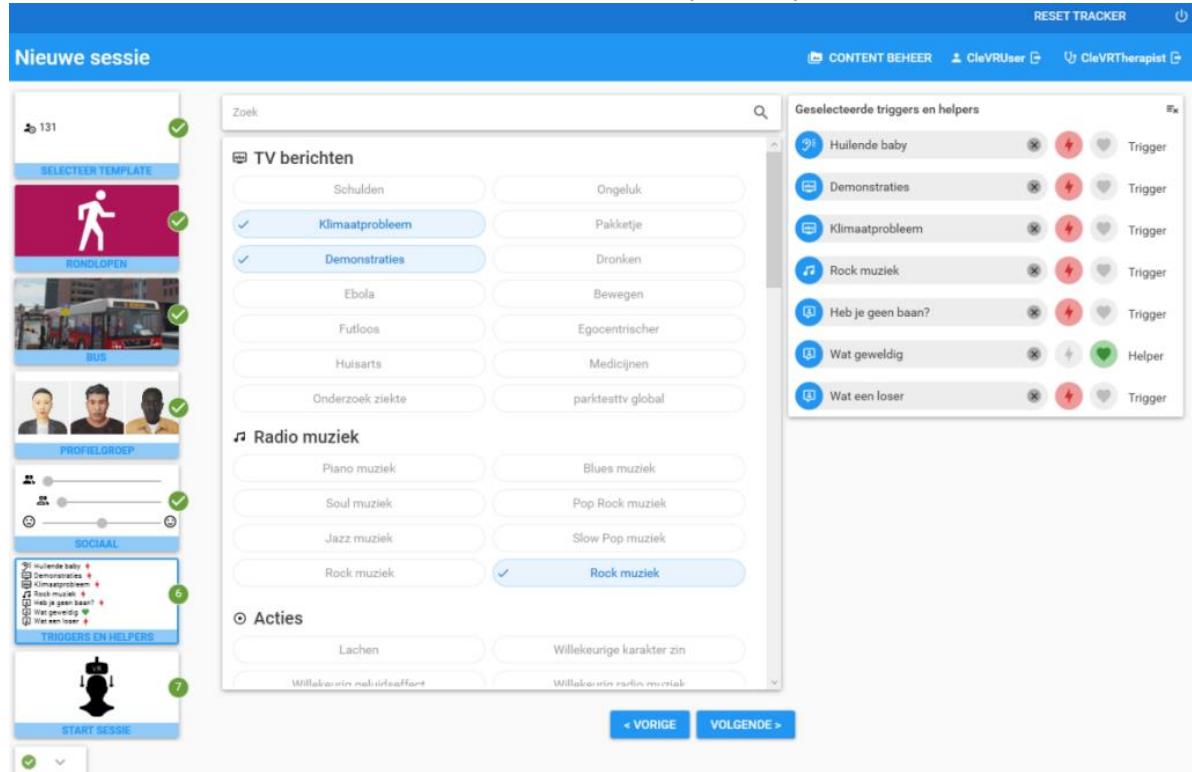
Interviews

Participants

The target population for this study were therapists within FMHC that make use of 'AR – customised' and are interested in integrating VR within their treatment. Therefore, the inclusion criteria for this study were therapists actively working in FMHC that extensively use 'AR – customised' and are trained in the usage of VR. In order to recruit therapists that met the inclusion criteria, convenience sampling supplemented with snowball sampling was used. Convenience sampling started within the network of the project leaders and *CleVR* where 8 therapists were approached, and 5 therapists agreed to participate. Snowball sampling started by asking these therapists about colleagues who also met the inclusion criteria. 6 more therapists were approached, and 5 therapists agreed to participate. This resulted in a total of ten therapists that agreed to participate in this study. The main reason for therapists not to participate in this study was that they did not work with 'AR – customised' and the other reason was that therapists did not reply in time to clarify their interest or to plan an interview moment.

Materials and procedures

The ten interviews were performed during May and June of 2022. The researcher (GT) approached therapists that met the inclusion criteria through e-mail. Therapists were given the option to perform the interview at their work location or online through Microsoft Teams. The average duration of the interviews was 53 minutes, ranging from 38 minutes to 63 minutes, excluding the introduction and signing of the informed consent. All interviews were audio-recorded with a recorder borrowed from the University of Twente, stored on a secured database of the University of Twente, and transcribed verbatim.

The general instruction manual of 'AR – customised' was analysed by GT to collect information about the practical application and to get acquainted with the separate modules (Appendix A). A semi-structured interview scheme was drafted based on these modules and the research sub-questions (Appendix B). Afterwards, a pilot interview was conducted with another student performing a separate

study in the same project group *VooRuit met VR*. Therapists were first approached through e-mail where they were provided with a brief explanation of the interview, an optional overview of the modules in 'AR - customised' (Appendix A) and the informed consent form they could read (Appendix C). It was clarified in the e-mail that the optional overview would also be present during the interview to structure the process and to prevent any burden therapists may encounter in forming a scenario. Reasons for this could have been that they might lack experience with the module itself or would find it difficult to provide a scenario.

The interview started with an introduction about the study including what was expected from them during the interview, information about what their interviews would be used for, the opportunity for to ask questions and signing the informed consent form. In the first part, therapists were asked about their experience in working with 'AR – customised' and VR separately. In the second part, therapists were asked how they would combine 'AR – customised' and VR in treatment by asking whether VR could be of added value for each module separately. Afterwards, therapists were asked which module(s) would benefit the most and which would benefit the least from VR. In the third part, therapists were asked which indication criteria the patient must meet in order to be eligible to use VR within 'AR – customised' and whether this differs between modules. In the last part, therapists were asked how they would like to be informed about the end-result on the combination of VR and 'AR – customised' but also which activities they would need for the implementation.

Data analysis

The data analysis started after the interviews were transcribed in *Amberscript*. These transcriptions were transferred to *Microsoft Word* and read thoroughly for errors and inaccuracies which were improved accordingly. Transcripts were imported in *ATLAS.ti* which is a software program used for coding and analysis of qualitative research data. Both inductive coding and deductive coding were applied during the analysis.

Deductive coding was partly applied where fragments corresponding with the first research sub-question were categorized according to the existing 'AR – customised' modules resulting in eleven coding groups in *ATLAS.ti* named identically to the modules' names. Inductive coding was applied where fragments corresponding with the second research sub-question were categorized under *Indication criteria* and the fragments corresponding with the third research sub-question were categorized under *Implementation*. This process was performed within one transcript resulting in thirteen separate coding groups. In short, the coding groups were *1) module introduction, 2) module network, 3) module self-control, 4) module thinking differently, 5) module stress reduction, 6) module impulse control, 7) module perceiving and interpreting, 8) module emotion regulation, 9) module conflict management, 10) module partner in view, 11) module self-image, 12) indication criteria,* and *13) implementation.* The inductive coding process was continued within these thirteen coding groups and important fragments were once again detected, coded, and grouped into sub codes. A sub code was added to the coding scheme when it directly answered one of the three research sub-questions. For example, an answer that directly provided a scenario for module conflict management was categorized as a sub code because it answered research sub-question 1. Another example is when an answer how the participants wanted to be informed about the results of this study because this answered research question 3.

Finally, the method of constant comparison was used to first compare two transcripts in similarities [74]. This resulted in thirteen coding schemes that were shared with the supervisors for feedback. Adaptations to the coding schemes were made accordingly before coding the remaining transcripts.

3. Results

Participants

A total of ten participants were interviewed for this study of which 6 participants were from *Transfore* and 4 participants were from *de Waag*. 2 participants were GZ-psychologists, 4 were psychologists and 4 were drama therapists. All ten participants work within outpatient care. The experience on 'AR – customised' and VR of these therapists can be found in Table 1.

TABLE 1 PARTICIPANTS' EXPERIENCES

Participant	Function	Experience AR	Experience VR
1	Psychologist (in training to become GZ-psychologist)	Recently schooled.	Recently trained.
2	GZ psychologist (in training to become clinical psychologist)	Multiple years.	Multiple years. Performs research about VR and AR.
3	Drama therapist	Multiple years.	Multiple years.
4	Drama therapist	Multiple years.	Recently trained.
5	Drama therapist	Recently schooled.	Recently trained.
6	Drama therapist	Multiple years.	Multiple years.
7	GZ psychologist (in training to become clinical psychologist)	Multiple years.	Multiple years. Performs research about VR and AR.
8	Psychologist	Multiple years.	Multiple years.
9	Psychologist	Recently schooled.	Recently trained.
10	Psychologist	Multiple years.	Multiple years.

Integration of VR within 'AR – customised'

Participants reviewed the 'AR – customised' modules to determine how each module of 'AR – customised' could benefit from the VR intervention 'Triggers & Helpers'. Specifically, for each module participants either responded that VR could be of **added value** and provided examples in the form of scenarios. Mainly, scenarios are clustered together under a treatment category which is the sub code whereas in some cases the treatment category involves one scenario which is its own sub code. On the other hand, participants also responded that VR could be of **no added value** with means of arguments where each argument is a sub code. Overall, participants agreed that every module could benefit from the integration of VR, even though some modules could benefit more from VR than others. The identified main, sub, and sub sub codes and their accompanying definitions per module of 'AR – customised' are provided in Appendix D in tables A to K.

Added Value

This main code refers to how VR could be applied within the separate 'AR – customised' modules in order to be valuable for the treatment process. This added value was supplemented with given examples in the form of scenarios that could be recreated in the virtual environment. In the section below the separate scenarios with their explanation of how they could be of added value can be found. The provided scenarios overlap strongly with each other across the 'AR – customised' modules, therefore the sequence of these scenarios is based on alphabetic order instead of the order of the 'AR – customised' modules.

Awareness

The added value of VR could be to enhance the patient's interoceptive awareness in terms of emotions and the effect of these emotions on their body. This could be done with a virtual roleplay session or catwalk session where the patient is placed in an environment they have a negative memory of. Here

they could re-experience their emotions until they can explain why they are feeling those specific emotions and what behaviour of the virtual character triggered those emotions during the VR session towards the virtual character.

Scenario by participant 3: "… most people think "yeah, I never feel anything. I feel nothing." If you then still do something like this, like the catwalk for instance, and take a second to really think, like, "okay, someone is coming towards me and whether they say something or not doesn't matter." What happens physically when you stop and really think about it?"

Changing perspectives

The added value of VR could be to provide patients the opportunity to look at their aggressive behaviour from a distance. This could be done by changing perspectives where the patient, 1) could learn to gain insight into the pros and cons of their behaviour by taking the perspective from their younger or older self, or the patient could take the perspective from a valuable acquaintance such as a family member; or 2) could learn to prevent rigid thinking in their interpretation by taking different perspectives and reflect on their helping and non-helping thoughts.

1) *Scenario by participant 2: "Imagine you have a father and a mother who keep getting into fights. The father says "you! filthy bitch" to the mother, and the child is just stood there, watching. The patient in this case would be the father. You can then switch roles in VR, so the patient can see the same situation from the child's perspective. The patient will then be looking up and seeing the father being aggressive towards the mother."*

2) *Scenario by participant 4:"Imagine someone who feels upset because of children. Because they are always annoying, or they have a neighbour whose child always yells and screams. They see children and they also find them very annoying. You could then add a child in VR and ask "Hey, how do you feel about this one? How could you think differently about a child? So, you could incorporate those thoughts."*

Coping skills

The added value of VR could be to provide patients the opportunity to apply their coping skills to learn to reduce their anger. This could be done with a virtual roleplay session or walk-through session where the patient, 1) could learn to ignore the trigger by focusing on neutral elements in the situation in VR where they describe the neutral element or detect elements with the same colour to remove their thoughts from the trigger; 2) could learn to exclude themselves from a provoking situation by walking away; or 3) could learn to calm themselves during a provoking situation by thinking of a positive memory (their *happy place)* or by applying breathing techniques.

1) *Scenario by participant 8: "For instance, someone jumps the queue at the cash register. This makes the patient incredibly stressed or angry. You could then start practising focusing their attention. So, you could say "well, grab that shopping trolley to your right, and try describing it. Focus your attention on the thing that is neutral and that does not make you feel angry." And then you get them to focus on the person jumping the queue again. Then ask them "hey, is it possible for you to focus your attention on something else, so the anger subsides a bit?"."*

2) *Scenario by participant 1: Imagine there is a situation, and you get into an argument with your partner. How can you then say "Hey, I am noticing I am getting very emotional right now. I will be going for a walk, and then we can continue talking about it." … For instance, a woman who says something like "Have you still not gotten groceries?!" or something. You do really have to adjust that to the specific circumstance the patient is in."*

3) *Scenario by participant 4: "For instance, when it is very busy in an alleyway.. You could really apply such things, because it causes stress and you can practice with the patient by going "I'm going to put you in this alleyway, there are more people coming, focus on your breathing."."*

Identification

The added value of VR could be to provide both the therapist and the patient the opportunity to gain more information about the individual patient that could be used to expand the patient's treatment

plan. This could be done with a virtual roleplay session, catwalk session, or walk-through session where they 1) identify the patient's triggers and/or 2) explore coping skills.

1) *Scenario by participant 7: "You try the situations patients were signed up for: What situations causes the patient to tense up? What are they struggling with? What are their actual triggers? And how do I understand the problem the patient is dealing with? Those are assets you can use during the entire treatment."*

2) *Scenario by participant 9: "I think it could be a good addition to use to get a view on the conflict itself by the patient. As in, we can practice a certain conflict and practice with learning new conflict styles and fitting conflict styles."*

Preparation

The added value of VR could be to provide patients the opportunity to experience and practice multiple outcomes of a conflict to understand the consequences of their behaviour and to increase their confidence. This could be done with a virtual roleplay session or walk-through session where the patient, 1) could be placed in an environment the situation will be taking place in to identify the best way to approach the situation; 2) could learn to understand how each behaviour on the scale of assertive, sub-assertive and aggressive contributes to a conflict with, for example, a criticising supervisor or police officer; or 3) could be placed in an environment they have a positive memory of to practice a situation they have difficulties with, in small steps that become gradually more difficult, in order to develop success stories which could provide the patient with the necessary positive reassurance that there is progress in their treatment and will keep the patient motivated to continue their treatment.

1) *Scenario by participant 5: "You go to your neighbour's house and would like to notify them they are being too noisy. You could then imagine the neighbour could say something like "No way, I am not going to be any quieter than I already am! You are overreacting!" What do you do then? You did not get the desired answer. There is a conflict, how do you resolve it?*

2) *Scenario by participant 10: "For example a hearing in court that a patient had been very anxious about and was very afraid they would not be able to control themselves. You cannot then simulate a court in VR. But we did then simulate an office, with a few people in suits. It gave a similar feeling.. Eventually the hearing went very well! "*

3) *Scenario by participant 9: "It is important for the patients to have successful experiences. So that they feel that they can manage tension three and they can successfully lower the tension. They can also see that they can manage tension six. If they can successfully lower that tension, then we go to tension nine, instead of going to nine immediately. That would make the patient think "shit, I can't do that at all."*

Preview of VR

The added value of VR could be to provide patients the opportunity to make an informed decision on whether they would want to use VR within their treatment plan. This could be done with a walk-through session where the patient's treatment motivation could be increased by experiencing the potential a VR session could have on a triggering situation.

Scenario by participant 7: "The only goal is that the patient gets an idea of how VR works and what the possibilities are. I can then explain a bit about it and show the room. That can give the patient the motivation to go "Oh, I find this interesting. I think this could be a good addition to my situation." I could use it to get them motivated. "

Setting boundaries

The added value of VR is seen as providing patients the opportunity to learn to say "no" by becoming more resilient to negative influences. This could be done with a virtual roleplay session where the patient is placed in a triggering environment to the extent they get irritated or tempted to engage in aggressive behaviour.

Scenario by participant 5: "Someone who keeps trying to make you deal drugs, for instance. How do you make sure they do not get into your network even more? How do you get some more distance from them and say, "I do not want to do this for you", "You should leave" or "I am leaving"?"

Social participation

The added value of VR is seen as to provide patients the opportunity to enhance their own communication skills in a social setting. This could be done with a virtual roleplay session or walk-through session where the patient, 1) could learn to expand their social circle by verbally approaching virtual characters and enforce constructive communication to maintain a healthy social relationship; 2) could learn to confront virtual characters that enforce an angry impression towards the patient or ignore the patient during a conversation; 3) could enhance their attention skills during a conversation while multiple triggering background sounds such as music and barking dogs are applied; or 4) could learn to listen and formulate their own opinions towards various virtual avatars during a group discussion about a moral dilemma.

1) *Scenario by participant 1: "I can imagine that if the patient has to invite the virtual character themselves, they have to ask things such as "Hey, would you like to do something this afternoon?" And vice versa; if the virtual character keeps having to ask the patient "Would you like to go do something fun sometime?" and the patient keeps saying "Oh no, never mind" or something like that due to fear, the virtual character could say something along the lines of "Hey, would you like to go to the park this afternoon? Or would you like to have a cup of coffee together today?" That way the patient gets invited directly."*

2) *Scenario by participant 5: "You are talking about the nice weather and your virtual character starts looking angry or starts ignoring the patient. The patient will probably say something along the lines of "Yeah, but the character isn't looking at me at all, so they clearly aren't interested in me whatsoever." So, then you can reply with "Okay, how about you go and check: is that truly the case or is something else happening? Is the character maybe seeing someone they know and are they looking at them instead of you? "*

3) *Scenario by participant 4: "Sometimes you hear things such as "You are allowed to hit a man, but not a woman.", standard thoughts like those. You could then use roleplay to start a conversation. That way you can hold a dialogue and ask them things such as "Why? I am a woman, why would you not hit me?" or "I am a man, why would you hit me?" I could imagine something like that."*

4) *Scenario by participant 6: "The therapist tells a short story, uses exaggerated body language, and then stops. What does that do to you? Or you imagine: "Oh, when is it difficult for me to listen" and that you include that in the VR. Suppose that someone says, "When my child cries I'm unable to listen to anything else", "if the dog keeps barking" or "when something else is disturbing me", then you can use VR to help the patient learn how to handle these sounds."*

No added value

This main code refers to the various arguments provided by participants of why VR could not be applied within the separate 'AR – customised' modules. In the section below the separate arguments can be found. There is some overlap between the 'AR – customised' modules in the arguments provided, therefore the sequence of these arguments is based on alphabetic order instead of the order of the 'AR – customised' modules. The identified main and sub codes with their accompanying definitions per module of 'AR – customised' are provided in Appendix D.

Impractical for therapists

Therapists described that they could practice similar exercises quicker with conventional treatment such as the therapist who throws a ball gradually annoying to practice the patients' impulse control. The patient could experience the same effect of the therapy without the therapist losing valuable treatment time to set up a VR session.

Argument by participant 5: "Sometimes I see certain exercises and I think "oh, yeah, I would do that. And that one too!" but then I think "Wait a second, that is with materials. For example, throwing a ball back and forth. Roll the ball very low or throw it really hard. That way the patient has to react with something along the lines of "I don't like this"."

Insufficient information

Therapists described that the integration of VR would be unsuccessful, and the patient could not benefit from any VR function yet because there is insufficient information to design a VR scenario.

Specifically, 1) the patient should provide background information on their social network that could be of use in designing a VR scenario in the future; or 2) the patient should provide insight into why a certain coping skill did not help them in real-life before designing a new VR scenario.

Argument by participant 8: "... as in: "what makes it unsuccessful? Because we prepared, we imagined it, we looked at how you were going to handle the situation." I would definitely have a talk about it to figure out what makes it not work. Is it a bit of motivation that is missing? That could be the case too. Do you maybe just not feel like it? Maybe we should do something with that then. I would first want to know where it comes from, and what we need to do for it to work out."

No experience
Therapists described insufficient experience with some modules to provide specific scenarios or argumentation if the module could or could not benefit from VR.

Real-life
Therapists described that patients would benefit more from real-life experiences instead of experiences in VR. The patient could enhance their empathy for another by understanding the physical reactions, emotions, and effect of these emotions better if they see this happening on another real person or with another real person.

Argument by participant 6: "Communication, aye.. You cannot exchange everything with VR because emotions are difficult to depict on an avatar. It looks kind of broad in some sense."

Too early
Therapists described that patients are just at the beginning of their treatment process and might be unable to apply necessary behavioural and practical skills that would be desired of them during a VR scenario.

Review of the modules
During the first part of the interview where the separate 'AR – customised' modules were discussed. All ten therapists occasionally mentioned that the content of the modules 'AR – customised' overlap with each other. Specifically, some therapists argued that components of multiple modules could be practiced within one VR session, such as described by participant 5:

"Yes, there is so much overlap in the modules. Yes, if you do a nice role play, for example on the street and then someone comes and immediately starts to attack and get angry. Then you have the module perceiving and interpreting, module impulse control, module stress reduction, module self-control and maybe even the module conflict management. Yes, I think that you can put almost everything within one scenario."

This overlap between the modules is also seen in the general instruction manual of 'AR – customised' according to participant 1:

"You also have it in the 'AR – customised' very often of, 'you already have this in another module' so there is a lot of overlap."

In short, because these modules overlap with each other this means that the determined sub codes also overlap with each other. This means that one sub code can be applied to multiple modules. This is both the case for the sub codes under the main code **added value** as well as the sub codes under the main code **no added value**. Therefore, an overview of sub codes as scenarios if it is seen as an added value versus sub codes as arguments if it is not seen as an added value can be found in table 2 and 3, respectively.

TABLE 2 AN OVERVIEW OF THE COMMON SCENARIOS ACROSS THE MODULES IN 'AR – CUSTOMISED' ACCORDING TO THE PARTICIPANTS (N = 10)

Modules / Scenarios	Introduction	Network	Stress reduction	Impulse control	Self-control	Thinking differently	Perceiving and interpreting	Emotion regulation	Conflict manage-ment	Partner in view	Self-image
Awareness	X		X	X		X		X			
Changing perspectives	X				X	X	X	X	X	X	X
Coping skills			X	X	X					X	
Identification	X		X	X	X			X	X		
Preparation			X	X	X			X	X	X	X
Preview of VR	X										
Setting boundaries		X	X					X	X		X
Social participation		X			X	X	X				X

TABLE 3 AN OVERVIEW OF THE COMMON ARGUMENTS ACROSS THE MODULES IN 'AR – CUSTOMISED' ACCORDING TO THE PARTICIPANTS (N = 10)

Modules / Arguments	Introduction	Network	Stress reduction	Impulse control	Self-control	Thinking differently	Perceiving and interpreting	Emotion regulation	Conflict manage-ment	Partner in view	Self-image
Impractical for therapist				X				X			X
Insufficient information		X									
No experience										X	
Real-life		X	X			X		X		X	X
Too early	X										

An overview of the modules that would benefit the most from VR and modules that benefit the least from VR can be found in table 4. The added value of VR was mostly seen in the middle part of one therapy session. Both in the first part as well as the final part of the session, attention should be given to face-to-face conversations with the patient. Additionally, the modules that would benefit the least from VR should pay even more attention to face-to-face conversations.

TABLE 4 AN OVERVIEW OF THE TOTAL NUMBER OF TIMES IT WAS PER MODULE OF 'AR – CUSTOMISED' MENTIONED WHETHER THE MODULE WOULD BENEFIT THE MOST OR BENEFIT THE LEAST FROM VR ACCORDING TO PARTICIPANTS (N = 10)

'AR – customised' Modules	Would benefit most from VR	Would benefit least from VR
Introduction		7
Network		3
Self-control	9	
Thinking differently	4	
Stress reduction	4	
Impulse control	3	
Perceiving and interpreting	2	
Emotion regulation		1
Conflict management	8	
Partner in view		7
Self-image		4

Indication criteria

After reviewing the modules of 'AR – customised' could benefit from VR, participants were asked about the indication criteria. The indication criteria participants were asked about are criteria FMHC patients must meet before the therapist would consider indicating VR within their treatment of 'AR – customised'. The identified main codes and sub codes, and their accompanying definitions are provided in table 5.

TABLE 5: INDICATION CRITERIA FOR FMHC PATIENTS TO USE VR WITHIN 'AR – CUSTOMISED' ACCORDING TO PARTICIPANTS (N = 10)

Codes	Definition of code	Quotes	Par. [x]
Main code: No restriction	**Every patient receiving 'AR – Customised' is eligible to receive VR treatment**	Q: *"I think every patient receiving aggression regulation treatment can participate in VR."*	1, 7, 9
Main code: Attitude towards VR	**Patients must be actively involved and provide the therapist sufficient background information about their experiences in order to co-create scenarios.**		
Enthusiasm	Patients that are interested in using VR within their treatment.	Q: *"I think the most important thing is for the patient to be open to it themselves, otherwise they will not put on the headset. The most important thing to me is to hear the patient say, "I would like to practice that."*	1, 7, 8, 10
Motivation	Patients that have the intention to provide and co-design scenarios with the therapist.	Q: *"The patient has to be able to provide specific scenarios. As we have discussed before; it is a very personal thing. So, someone has to be able to give a proper example of what others would say or do. That way you can design the scenario properly."*	1, 2, 3, 4, 6, 7, 8, 9, 10

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Main code: Adherence to VR	Patients must be able to use and endure the technical components of the VR as developers intend it.		
Technological skills	Patients that obtain necessary technological skills to use VR.	Q: "The patient needs to have a bit of a feel for digital things. Not necessarily something like gaming, but if they can barely understand how to use WhatsApp I would not use VR with them. "	10
Cyber sickness	Patients that can endure the VR motions to the extent they do not suffer from cybersickness	Q: "It is important for the patient to be mobile. That would be useful. They really need to be able to take steps and hold things. So, they can't have other things going on as well. Basically: you need patients who are physically competent."	2, 8, 10
Main code: Self-reflection	**Patients that would benefit from re-experiencing situations to enhance their self-reflective skills.**		
Lack interoceptive awareness	Patients that do not understand how their body reacts to the movements or emotions they experience.	Q: "Patients who have issues realising their own responses to triggering situations. So basically, they experience physical signs or start rationalising things too much, and thus rationalise things away. Meaning that they are unable to resurface the feelings they have felt before in regular therapy, and through VR they would be able to re-experience them to then be able to accurately address them."	3
Lack self-expression	Patients that do not know how to express the emotions or desired behaviour they experience.	Q: "Sometimes there's therapies where a lot happens. Someone really has to be cognitively skilled to be able to understand the therapy, make sure it actually sticks, and be able to integrate it into your daily life. But I think that it is not necessarily needed with VR, because you are very specific experientially."	5, 6
Main code: Self-management	**Patients who have made sufficient progress to the extent that the patient can guarantee safety for themselves, the therapist, and the VR set.**	Q: "I think they need to have a base and needs to know what they should be doing. So, they can kind of guarantee the safety of the set, themselves, and the therapist when they get very angry whilst wearing the headset. Obviously, that will never be 100 percent. So, It is important to have worked on that, or that they at least know when to stop and take off the headset. People with aggression related issues, who are easily angered, want to react quickly, and do not really know to solve issues… That could be a problem."	1, 3, 4, 5, 7, 10
Main code: Diagnosis	**Patients' diagnosis must be identified to determine underlying disorders that potentially could be unsafe for themselves, the therapist, and the VR set.**		
No Trauma	Patients that do not have an underlying traumatic experience that is yet undetected.	Q: "I think trauma sensitivity is an important point. I do not think there is a specific criterion that is like "this is okay, and this isn't" but I will definitely take note of how often people get aggressive or triggered. It is possible to use VR on someone with trauma, but as a therapist it is important to keep a close eye on the situation. "	4
No Autism	Patients that are not autistic.	Q: "I do not think diagnosis necessarily makes a difference. I think, but that is based on theory rather than in practice, that people with autism are less capable of immersing themselves into situations. So maybe it is a little less applicable there."	1
No PTSD	Patients that do trust the environment or the therapist sufficiently.	Q: "Patients who feel unsafe. We have a lot of patients with post-traumatic stress disorder who feel incredibly unsafe. I do not think VR would work with them."	10
No Psychoses	Patients that are not prone to experiencing psychoses.	Q: "Maybe if someone is incredibly psychotic it will not be a good idea to use VR. But I do not necessarily see that as an exclusion criterion."	1

ˣ The participants that mentioned the code.

No restrictions

This main code refers to the diagnoses of patients that must be considered before introducing the option of VR to the patients. Specifically, three participants mentioned that every patient receiving 'AR – customised' is eligible to use VR within their treatment and that there are *no specific restrictions* in the first place. However, they still mentioned certain criteria that could be considered but that it still depends on the individual patient following ´AR – customised'.

Attitude towards VR

This main code refers to the positive attitude that is expected from patients. In order to guarantee a successful usage of VR, patients must be *enthusiastic* to use the VR set within their treatment. The patients could show this enthusiasm by stating their interest in trying out VR. Furthermore, they could show their positive attitude by being *motivated* to co-create a tailored scenario based on experiences from their daily life and be motivated to practice this provided scenario within VR.

Adherence to VR

This main code refers to preliminary components that are in line with whether a patient could adhere to the VR intervention. In order to use the VR intervention as intended, patients should have the *technological skills* to use the technological components of VR such as the hand controllers but also should be able to move along and endure the three-dimensional motions of VR without experiencing *cyber sickness,* which consists of symptoms that occur due to an absence of physical motion.

Lack self-reflection

This main code refers to reflective ability's patients lack. Patients that *lack interoceptive awareness* could learn to understand their emotions they experience within their body better. Also, patients who *lack the ability to express themselves* could learn to explain these emotions better by enhancing their communication skills and expanding their vocabulary during conversations with virtual characters.

Self-management

This main code refers to the progress patients already must have completed during their treatment process before using VR. In order to ensure the safety within the treatment room, patients must be able to *manage themselves* to the extent that they can listen, understand, and react to the directions of the therapist when this is required.

Diagnosis

This main code refers to the diagnosis of patients that must be researched closely to determine underlying disorders. In order to ensure the safety within the treatment room, patients' *traumas* should be identified because this sudden overstimulation of triggers could create a potentially dangerous outburst. This was also indicated for patients who are prone to experiencing *psychosis*. Also, patients with *PTSD* who try to cope with feeling unsafe could become worse within the VR environment because of the isolation from the outside world. Lastly, it was mentioned that according to the theory, patients with *autism* may have difficulties in recognizing the reactions of virtual characters because of the pixilated quality of the VR intervention.

Implementation

Finally, participants provided information on which activities and materials should be considered before integrating VR within 'AR – customised". The identified main codes and sub codes, and their accompanying definitions are provided in table 6.

TABLE 6: IMPLEMENTATION REQUIREMENTS ACCORDING TO PARTICIPANTS (N = 10)

Codes	Definition of code	Quotes	Par. [x]
Main code: Individual treatment	**Personalised treatment is possible if treatment takes place personally with the individual patient.**	Q: *"I have to say I see this as an option individually rather than in a group. I find it difficult to imagine how we would apply it in a group. So, I would really think it is going to be an addition provided you use it one-on-one."*	1, 3, 4
Main code: Skills of therapists before using VR	**Therapists must master crucial components developed during their career before they could provide VR within 'AR – customised'.**		
Trained in VR	Therapists must be skilled in the technical components of VR to the extent they will not accidentally neglect the patient during treatment with VR.	Q: *"It is a combination of technique and the patient in the space. If you have not figured out the technique fully, you will be inclined to be sucked into the whole situation with two displays, a mouse, a microphone, and there is so much you need to do that you may end up forgetting that there is a patient in the room too. Their safety is important. It should not impact the treatment because you simply do not know what to do."*	2, 3, 4, 5, 7, 8, 10
Experienced in 'AR – customised'	Therapists must be skilled in providing treatment with 'AR – customised' to the extent they can provide the patient with a realistic treatment experience.	Q: *"I do not think every therapist feels equally capable and comfortable with offering roleplays. You have to be able to make a scenario that is realistic. However realistic the VR may be; as a therapist you are your own instrument that you have to use when doing roleplay. It is important you do not just randomly start doing something."*	2, 3, 4, 5, 6, 7
Shared Decision Making	Therapists must be skilled in co-creating scenarios with the individual patient.	Q: *"I would first sit down with the client and have a talk like: "Hey, this is the list of what we have on the VR-tablet, and we can add this and this." So, I would really incorporate the patient in the decision making, so it becomes an investigation we do together. Otherwise, I will be doing a lot, while the patient knows a lot about themselves that I do not know yet. Afterwards we plan, we decide what we start with, and we go down the list and see what happens."*	1, 2, 3, 4, 5, 6, 7, 8, 9
Clinical thinking	Therapist must be skilled in their decision-making when VR could be of added value for the individual patient and if the added value of VR outweighs the added value of conventional treatment.	Q: *"I only want to use VR if I really think it has an added value.. I think you should look at what happens in treatment sessions, and you should do something with that. So that you do not just start using a protocol, but that you actually look at who is in front of you and what they specifically need."*	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Main code: Points of attention for therapists during the usage of VR	Therapist must consider additional tasks associated with the use of VR that might be new to them in order to provide VR within 'AR – customised'.		
Physical signals	Therapists must observe alternative reactions of the body such as hand gestures and wiggling of the body because facial expressions would be restricted.	Q: "Of course there's body language, but you have to pay extra attention. You cannot see the face, which is a disadvantage, but you can still see what someone does with their hands. Maybe they are clenching their fists, or they start rocking back and forth a bit. Or they can even become very upset, fidgety, or just generally uneasy. "	3, 4, 6
Verbal agreements	Therapists must ensure the safety of the patient by establishing a stop word and frequently checking in with the patients' endurance.	Q: "… As a therapist you also have to pay attention to things such as "hey, can they still handle this? Is this still okay? Or do we need to take a break?" … I find it very important that the communication stays intact."	3, 4, 5
Supportive	Therapists must guide the patient during moments of hesitation or inaccurate decisions in the VR setting.	Q: "… So if you turn off the voice modulator and say: "I'm the therapist, can you explain to me how you're feeling right now? What kind of emotion are you feeling? Are you feeling something in your body?" If they then reply with "It didn't do much to me" you can increase the intensity. This way you do not have to take off the headset and talk to each other, because that will also take them out of the emotion you are trying to trigger."	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Evaluation	Therapists must reflect on the VR session with the patient in real-life where the model of 5G's could be used.	Q: "I would really like to work with the patient as a therapist. You will be elaborating on the 5G-scheme, and I would prefer to do that with the patient in the here and now. So yes, I would definitely get out of it for a bit."	1, 4, 5, 6, 7, 8, 9
Main code: Preferences workbook	Therapists described components that must be visible in the appearance of the workbook.		
Flexible	Therapists do not prefer a protocol because they could experience limitations within their work process.	Q: "I think it is risky to make it into a proper protocol. A protocol sounds like "oh, we've spelled it out for you from A to Z, and this is how you have to do it." So, I would think out the idea of calling it a protocol. I have noticed it triggers things in therapists, I do not know if that is really what you want. "	2, 7
Suggestions	Therapists prefer points of attentions that should be considered before and during the VR session.	Q: "… maybe a header that says "hey, you can practice this in VR" or "Pay attention: talk to the patient and figure out what their triggers are and what can infuriate them." and "talk about which skills you would like to practice." That would be enough for me."	2, 3, 6, 7, 8, 9, 10
Examples	(Unexperienced) therapists could benefit from concrete scenarios in moments of hesitation that focus on recurring themes FMHC patients experience.	Q: "… Maybe some examples so you do not get thrown into the deep end as a therapist. That way you can still rely on a written example. Something like that, so your creativity gets stimulated. " Q: "That feeling of rejection, for instance. Or you say something that impacts someone's confidence. Or for example the power position where it is like: "Nobody should try to be above me because I will fight them!" or "You should not touch my children or my wife. Other than that, I do not care. But do not touch people or I will end	1, 2, 5, 9, 10

		you!" Authority, for example, that really is a trigger many people have.… Or feeling offended. "	
Build-up within module	The scenario's per module should start easy with covering the theoretical part and gradually become difficult to assess whether the patient could finish the module.	Q: *"… as in: "hey, what is the first step, the second, the third and the fourth? I am not going to start with the fourth or third step. I want to start with the first step and see how I will react to it." because that can also be very unpredictable. So, I would be able to imagine you do this gradually in every module. "*	1, 4, 6, 7, 8, 10
Build-up between modules	The sequence of the modules within the workbook should be identical to the sequence within the instruction manual of 'AR – customised'.	Q: *"… That is why that is the order they put the book in. Someone needs first mastery skills and needs to be able to control their own behaviour before they can properly act differently during conflicts. It would not work if they would immediately be inclined to resort to physical violence."*	1, 4, 7, 8, 9, 10
Main code: Delivery method of the workbook	**Therapists described how they would like to be informed about the workbook.**		
e-mail	The workbook should be provided through the e-mail.	Q: *"I tend to prefer through e-mail."*	2, 3, 5, 8, 9
Infographic	Important results of the study and results workbook should be provided in a short infographic.	Q: *"On an A4 piece of paper, something like an infographic. Preferably the findings and what we can do with it. So, we can easily see what the results were and what we can find back in the workbook."*	8
Main code: Additional activities desired before using the workbook	**Therapists described supplementary actions they would like to receive before integrating the workbook within their organisation.**		
Intervision	A face-to-face feedback moment with colleagues and researcher of the study to discuss the workbook and points of improvement.	Q: *"A moment of sharing information and just having some time and space to ask and answer questions. I personally would prefer that, as I think it is nicer and faster when it is face-to-face."*	1, 4, 5, 6, 7, 9, 10
Integration	The workbook must be merged within the instruction manual of 'AR – customised' instead of a separate document.	Q: *"What I like about AR-customised is that there are different categories and headers to inform you what you can do in minddistrict. It would be useful to have an extra header, something such as "You can do this through VR now." so that it will really be visible in the modules. "*	2, 8

[x] The participants that mentioned the code

Individual treatment

This main code refers to the preference of participants to integrate VR during *individual treatment* only. In order to develop a personalized treatment, the therapist could focus on the needs, desires, and experiences of the individual patient.

Skills of therapists before using VR

This main code refers to the important skills therapists must have developed during their career before they could provide treatment with VR and efficiently integrate this within ´AR – customised'. Before a therapist could use the treatment combination, they must be *trained in VR* to the extent they feel competent with technological functionalities and must be *experienced with 'AR – customised'* to the extent they can help the patient achieve their treatment goals. Assisting patients in achieving their treatment goals can be done if therapists have developed *clinical thinking skills* to determine at which moment a patient could benefit from VR within 'AR – customised'. However, in order to determine how VR should be applied, therapists must be able to perform *shared decision making* with the patient to co-create personalized scenarios.

Points of attention for therapists during the usage of VR

This main code refers to additional tasks that should be considered during the integration and implementation of VR. These tasks might either be new to the therapists´ work structure or are known to the work structure but requires additional attention. During the usage of VR, therapists must consider other *physical signals* such as hand gestures and trembling of the body compared to regular treatment with 'AR – customised' that focuses on facial expressions. These facial expressions are limited because the patient will be isolated from the outside world, therefore *verbal agreements,* such as establishing a stop word, must be set to enforce constant communications between the therapist and the patient. Furthermore, therapists can undertake a *supportive role* where they assist the patient to achieve their treatment goals in modules requiring self-controlling skills from the patient. After the usage of VR, therapists can undertake an *evaluating role* where they reflect on the scenarios in modules requiring behavioural skills from the patient.

Preferences workbook

This main code refers to the material that could assist therapists in the usage of VR within 'AR – customised'. A few participants clearly state that therapists must remain *flexible* in providing treatment, therefore a protocol is not desired. Participants prefer a practical workbook that includes *suggestions* from and for more experienced therapists. Within this workbook they prefer general points of attentions that must considered before and during the usage of VR. For example, determining the environment the VR scenario will take place, determining a stop word and VR functions a therapist could consider in a specific module. For therapists that might be at the beginning of their career or need more guidance, specific *examples* of scenarios must be included that focus on recurring themes within FMHC such as encounters with authority, dealing with rejection, or dealing with hurt feelings. In both cases of suggestions and examples, participants stated their preference in a *build-up within each module.* This includes providing the patient first with theoretical information about the module, and a VR scenario with some simple triggers to which triggers tailored to the individual patient are gradually added. Lastly, a test scenario that determines if the patient is ready to finish the module. Finally, participants did not state a preference in the build-up between modules because they think the similar build-up within the existing instruction manual of 'AR – customised' could be applied.

Delivery method of the workbook

This main code refers to how the participants wish to be informed about the workbook. Most participants would like to receive the workbook via *e-mail.* A few participants would like to receive an *infographic* with the most important findings of the study and the workbook.

Additional activities desired before using the workbook

This main code refers to activities that participants would like to do in addition to receiving the workbook. Most participants would like to plan a digital or in person *intervision* to discuss how the workbook could be integrated within the organization and what could be improved about the workbook. This could be with colleagues to discuss practical possibilities and exchange of ideas and/or with the researcher of the study to have the opportunity to ask questions. In addition, some participants mentioned that they would like to have the workbook *linked to the existing instruction manual of 'AR – customised'* to prevent separate documents.

The workbook

The participants prefer a practical workbook which can be found in Appendix E. For future integration possibilities into the instruction manual of 'AR – customised', the structure should be identical which means that the sequence of the modules should be maintained. The most important component of the workbook is described as an overview of practical suggestions that points out important considerations during each session. Furthermore, multiple scenarios for each module should be provided for beginning therapists. Including both an overview of suggestions and specific scenarios ensures that the workbook is flexible to use for multiple therapists. Once finalized, this workbook shall be shared with the participants through e-mail and possible evaluation moments could be continued by the *VooRuit met VR* project group.

4. Discussion

This study provided an answer to the main research question of **"How can the Virtual Reality (VR) intervention 'Triggers & Helpers' be integrated into the current treatment of 'AR – customised' within forensic mental health care?"**. In order to integrate VR, the results of the three research sub-questions should be considered.

Each module of 'AR – customised' could benefit from the VR intervention 'Triggers & Helpers' (research sub-question 1). The added value is mainly seen in terms of increasing interoceptive awareness, enhance helping thoughts and self-reflection, enhancing coping skills, identifying triggers and coping skills, preparing the patient for societal situations, providing a preview of VR, enforcing the patients' ability to set boundaries, or enhancing the patients' social participation. This list of added value VR could have is fairly close to the treatment goals as mentioned in 'AR – customised' itself [73]. Besides this list of added values, arguments why VR would not be of added value was also explored and resulted in that sometimes modules benefit more often from in-person treatment because another important focus of 'AR – customised' treatment is to enhance patients' non-verbal communication skills such as facial expressions which would be blocked by the VR headset. Another recurring argument was that it would be impractical for therapists because they would lose valuable treatment time to set up a VR session which could also be practiced with their conventional treatment. This study is the first study that focused on the integration of VR within 'AR – customised' which means that the gained information could be seen as new information. However, it is not surprising that the added value of VR is mainly seen in modules that require reactive skills from the patient within a triggering context. Both in the interviews as well as in the literature it was mentioned that this triggering context in the treatment room was missing within the current treatment because both the therapist and patient often lack imagination skills implying the need for VR [28, 41].

The indication criteria (research sub-question 2) are as followed. VR could be beneficial for patients with a lack of interoceptive awareness and those who lack to express themselves in emotions. In order to personalize VR treatment, the patient must have a positive attitude towards VR where they are motivated to co-create a scenario by providing real-life experiences and are enthusiastic to practice these scenarios within VR. Furthermore, the patient should obtain the necessary technological skills to use VR as intended without experiencing cybersickness. As the head-mounted display and noise-cancelling headphones isolate the patient from real life, the therapist is tasked with considering the severity of the patient's diagnoses and establishing a mutual trust between the patient and therapist to make sure the patient, the therapist themselves, and the VR set are kept safe. So, if a patient does not meet these indication criteria or the therapist has a reason not to integrate VR: this could be seen as the exclusion criteria. It was previously mentioned in the introduction that the indication criteria could be unique for every integration of VR. However, it is seen that the indication criteria found in this study is similar to the literature as both mention the importance of therapists' expertise, safety, and usefulness for the patient [41, 48]. The literature mentions exclusion criteria of having an IQ below 70, epilepsy, and the inability to communicate in the same language as the therapist. However, this not seen back in this study. A possible reason for this is that some therapists mentioned that they would integrate VR in the treatment of every individual patient receiving 'AR – customised' and 'AR – customised' itself has some exclusion criteria that is in line with these exclusion criteria in the literature [73].

The activities and materials required to integrate the VR intervention 'Triggers & Helpers' within 'AR – customised' (research sub-question 3) were that the therapists must have the expertise to co-create a realistic scenario and the right skills to use the technological features of VR. They desired a workbook that could guide them in setting up a VR treatment by either providing suggestions such as reminders to focus on the patients' physical reactions and to decide a stop word with the patient or to assist (beginning) therapists in developing VR scenarios by providing specific examples. Finally, participants desire to be informed about the workbook through e-mail and have an intervision moment with colleagues to discuss the workbook before implementing the workbook in practice.

Furthermore, previous research mentioned the need for a protocol [7, 28] whereas the results of this study required materials in the form of a workbook. If we look back on the found literature, study process, given answers this was an expected outcome because it is nearly impossible to create a structured protocol for this heterogeneous patient population [7, 14] with varying triggers per individual but also per session for each individual. This was an expected outcome of this study though it could be that if the implementation models of CFIR and NASSS were used that the integration of a protocol could have been facilitated. However, these models were not included in this study due to a lack of found research on the application of these models in practice [40, 63].

Implications for practice

Firstly, as part of the first research sub-question, when participants were asked to describe specific scenarios they often mentioned that this is nearly impossible to provide because each individual patients' experience and treatment plan is different. So, the input from the patient is leading in co-creating the VR scenario. In the interviews, participants mentioned that patients are often capable to reflect on their week and clarify which actions from which person bothered them to then co-create a VR session. In the literature, however, it was mentioned that one of the main characteristics of FMHC patients was a lack of reflection on their own behaviour and/or being cognitively impaired [11, 12]. Additionally, patients were likely to experience memory loss resulting in them be unengaged with their treatment process [13]. However, there are certain considerations. First, patients themselves were not included in this study and thus not given the opportunity to provide their opinion. Specifically, therapist mentioned that patients could provide scenarios based on their experiences although it could be that a portion of the FMHC patients may not be able to provide VR scenarios. The received data was based on the personal experiences of the participants. Second, the participants mentioned this ability to self-reflect to the extent that a patient could present a situation that happened to them in real-life but that self-reflection on their emotions and interoceptive awareness is lacking. Third, the found difference could also be because the literature studies had the main focus on inpatient care whereas the participants worked within outpatient care only. This means that these patients made progress within their treatment to the extent that they have partially returned to society.

Secondly, another finding in the answers of the first research sub-question about the added value versus no added value of VR within the 'AR – customised' modules were that the answers differed between therapists with a different expertise in the FMHC work field. The difference was mainly seen between the drama therapists and remaining psychologists. The drama therapists were quickly to disregard the added value of VR within the 'AR – customised' modules. They were often of the opinion that it would be more beneficial for both the patient and the therapist to practice in person. Specifically, the examples that they provided of how VR could have been applied changed quite easily to a rather conventional treatment example of how they would rather apply it in person. The main reason given was that they can provide the sense of presence partially in real-life as drama therapists. However, some drama therapists also mentioned that the added value of VR compared to current treatment is to create a context in the treatment room. This lack of context the current treatment endures was also mentioned in the literature [28].

The answers between the remaining therapists, however, differed less during the first research sub-question but there was a difference in their answers of the third research sub-question in participants whether they were recently trained or used VR for multiple years. Specifically, recently trained participants preferred more specific examples in the form of scenarios whereas those with multiple years of experience preferred practical suggestions. According to the literature, it is important to consider the characteristics of the individual therapist during the implementation of VR [75, 76]. This could prevent low adoption and low uptake of VR within FMHC [40]. However, despite this consideration for the therapists with different expertise. It still could be that therapists will not use the intervention because of differences in their subjective attitudes and objective use of the intervention. [66, 77].

Finally, the literature mentioned the need for a structured yet flexible enhanced protocol of VR and 'AR – customised' [7, 28]. This was also mentioned in a previous study by Hans (2021) [69], who performed a study in which FMHC therapists were asked about barriers they experienced during integration of VR in current treatment. Therapists were of the opinion that embedding VR in protocols would be a great solution for implementation in practice. However, participants' answers as part of the third research sub-questions about which activities and materials they required was that they do not desire the development of a protocol. The main reason for this was that a protocol is seen as a document that lays down the way in which certain activities must be carried out. However, the participants indicated that they would not like to be restricted by a document. That is why they prefer to have a workbook with suggestions that they can consult from time to time if necessary. Therefore, the decision to create a workbook instead of an enhanced protocol was made in this study because the usability of the implementation material should also be considered in order to enhance the usability of the VR intervention in practice [78].

Strengths and limitations

The main strength of this study was to include key stakeholders from two separate FMHC organizations to integrate VR within 'AR – customised' where there was a clear focus on their experiences and ideas, this bottom-up approach is rarely done [78, 79]. Another strength was the use of both deductive coding and inductive coding for the first research sub-question. Specifically, it started deductively with codes linked to the 'AR – customised' modules to structure the interviews. Afterwards, it continued inductively with codes that actually explained how VR could or could not be of added value within the 'AR – customised' module. This inductive coding was also of beneficial for the second and third research sub-question to create a new *theory* in the form of a list of indication criteria and a list of implementation requirements for this specific target group.

The main limitation of this study was the limited time available for richer data collection with each participant due to the large number of modules that were planned for discussion. Specifically, it made it difficult to discuss every possibility within each module. This limited time also resulted in including less participants within this study which could have been in the form of including FMHC patients themselves. In addition, this study was performed by only one researcher. This could challenge the reliability of the data analysis. In order to promote reliability, constant comparison within each transcript and between transcripts was performed. Unfortunately, the internal reliability was slightly limited due to a lack of consistency within some interviews. Because of overlap between modules participants could not provide scenarios for each 'AR – customised' module. However, as reliability in the results was established by means of added value this should not have been of significant influence on the results. For example, participants mentioned quickly that a previously given answer could be applied in multiple modules. A last limitation is that convenience sampling was applied in this study which could be connected to self-selection bias [80]. A large number of participants agreed to participate because of their interest in VR. The inclusion of more participants who are more skeptical of the usage of VR could have contributed to a broader picture of the integration of VR in 'AR – customised'.

Recommendations for further research

The implications for practice and the mentioned limitations provided multiple points of improvement further research could focus on. First, it would be valuable to also collect the opinions of FMHC patients themselves on the integration of VR within their current treatment of 'AR – customised'. There could also be made a distinction between inpatient and outpatient FMHC patient population, specifically to see if their characteristics differ and whether this has an effect on their opinions. Second, focus groups on this similar topic can be performed to include more participants which could make the data collection richer and stimulate discussions that could generate new and more specific scenarios. Finally, the participants specifically mentioned that further research should carefully consider the need to create new protocols or enhance protocols because their colleagues often mention that they are not excited to be introduced to yet another (expanded) protocol.

Conclusion

The results of this qualitative study provide insight into the added value VR could have in treatment combined with 'AR – customised' for FMHC outpatients within two Dutch FMHC organizations. The use of the VR intervention 'Triggers & Helpers' could be of added value in all modules of 'AR – customised' to increase interoceptive awareness, enhance helping thoughts and self-reflection, enhance coping skills, and identify triggers, coping skills, prepare the patient for societal situations, provide a preview of VR, enforce the patients' social participation, or enforce the patients' ability to set boundaries. This VR intervention could be introduced to every patient following 'AR – customised', however the attitude, adherence, and diagnosis of the patient must be considered regardless. Additionally, both the therapist and patient must be able to use the VR. There must be sufficient trust between the patient and therapist in order to ensure a safe environment within the treatment room. Whereas the literature mentioned the preference for a protocol with specific scenarios, the participants of this study preferred a flexible workbook with practical suggestions on how to co-create a VR scenario with the individual patient because the VR scenarios must fit the experiences of the individual patient.

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Appendix A – Modules of 'AR – customised'

Aanbod	Toegepaste veranderingsstrategieën, relevante oefeningen en rightlijnen voor het afsluiten van een module

Introductiemodule	
Doelen: De cliënt is gemotiveerd en herkent risicovolle situaties en triggers / gevoelens die kunnen leiden tot gewelddadig gedrag. Het motiveren is gericht op het maken van contact en het aansluiten op eigenbelang van de cliënt. Er wordt onderzocht wat de voor- en nadelen zijn van het volgen van het zorgprogramma en van agressief gedrag gerelateerd aan wat een cliënt graag in zijn leven wil bereiken. De module is gericht op het vergroten van de 'zelfeffectiviteit' om de leerbaarheid te vergroten.	Veranderingsstrategieën: • Motivatietechnieken /GLM • Veiligheidsmanagement • Functieanalyse • CGT-elementen: psycho-educatie en inzicht. Relevante oefeningen / onderdelen: ○ Kijken naar de voor- en nadelen van agressief gedrag / het volgen van behandeling. ○ Opstellen veiligheidsplan Psycho-educatie over agressie ○ Empoweren (doornemen positieve eigenschappen) ○ Doornemen van triggers, gevoelens, gedachten en lichamelijke signalen die gerelateerd zijn aan de agressieproblematiek. Wat is er nodig om af te kunnen sluiten/ door te kunnen gaan met andere module: ○ De cliënt heeft minstens één motivator; ○ De cliënt heeft (deels) zicht op zijn triggers; De cliënt heeft een veiligheidsplan opgesteld; ○ De cliënt heeft (deels) zicht op gevoelens en gedachten die een rol spelen bij zijn agressieve gedrag.

Netwerk Module	
In deze module wordt geprobeerd om de cliënt meer inzicht te geven in eigen netwerk door het maken van een netwerkanalyse. Er wordt gekeken hoe het netwerk verbeterd kan worden, bijvoorbeeld door meer gebruik te maken van steun/kracht uit het netwerk. Er wordt ook geoefend met het weerbaarder worden ten opzichte van negatieve invloeden uit het netwerk. Indien nodig is er aandacht voor het oefenen met het onderhouden van bestaanderelaties en het aangaan vannieuwe relaties.	Veranderingsstrategieën: • Motivatietechnieken / GLM • Veiligheidsmanagement • Netwerkanalyse • CGT-elementen: psycho-educatie, inzicht, **rollenspelen**/dramatherapeutische technieken en het toepassenvan helpende gedachten; • Mentaliseren. Relevante oefeningen: ○ Netwerkanalyse ○ Plan van aanpak maken voor het verbeteren van steun ○ Analyseren welke netwerkleden een negatieve invloed hebben ○ Plan van aanpak om weerbaarheid tegen netwerkleden dat een negatieve invloed hebben te vergroten ○ Oefenen met communicatie vaardigheden voor behoud van het netwerk ○ Oefenen met validatie-vaardigheden *(optioneel)* ○ Stimuleren tot uitvoeren plannen van aanpak ○ Inzetten van vrijwilligers (buddy) als netwerk minimaal is. Wat is er nodig om af te kunnen sluiten/ door te kunnen gaan met andere module: ○ De cliënt onderneemt actief stappen om prosociale relaties teversterken / positieve steun te krijgen; ○ De cliënt heeft afstand genomen van risicosystemen uit zijn netwerk (waaronder eventuele vrienden); ○ De cliënt weet met welke instanties hij in zee moet om problemen op te lossen en hier ook contact mee kan aangaanen onderhouden.

Module Stressreductie (optioneel)	

De cliënt leert meer greep te krijgen op eigen spanningen, stress en agressie en past vaardigheden toe om de stress te verminderen. Hierdoor neemt het agressieve gedrag dat voortkomt uit stress af. Er worden verschillende mogelijkheden aangeboden,het is de bedoeling dat de cliënt onderzoekt welke mogelijkheden bij hem helpen om het stressniveau (structureel) te doen verlagen.	Veranderingsstrategieën:
	• Motivatietechnieken
	• Veiligheidsmanagement
	• CGT-elementen: psycho-educatie, toepassen helpende gedachten en **rollenspelen**/dramatherapeutische technieken
	• Bewerkte mindfulness-oefeningen
	
	Relevante oefeningen:
	Stressreductie-oefeningen:
	1. Vermijd triggers waar je gestrest van wordt.
	   ○ meer zicht op mijn stres
	   ○ registreren van stressmomenten
	2. Bewust iets gaan doen wat je rustig maakt
	   ○ ontspanningsoefeningen, zoals ademhalen door je buik en spieren aanspannen en ontspannen
	   ○ cardio
	   ○ wisselen van aandacht
	   ○ bewust naar muziek luisteren die rustgevend werkt
	3. Bewust afleiding koeken door iets te doen wat je leuk vindt (zorg voor afleiding).
	4. Bewust iets met je gevoelens van boosheid doen.
	   ○ Praten over je stress, spanningen en boosheid. Schrijf je gedachten op.
	   ○ Probeer boven je stress en spanning te gaan staan door deze te beschrijven alsof je er naar kijkt.
	   ○ Irritaties uitspreken.
	   ○ Wisselen van aandacht
	5. Bereid je voor en stel haalbare doelen.
	6. Let op de interpretatie (betekenis) die je geeft aan een situatie
	7. Verbeteren van vaardigheden / gedrag
	8. Richten van de aandacht
	
	Wat is er nodig om af te kunnen sluiten/ door te kunnen gaanmet andere module:
	   ○ De cliënt is in staat zijn stress te reduceren, onder andere door hetadequaat hanteren van coping vaardigheden;
	   ○ De cliënt geeft aan voldoende middelen te hebben om zijn stress engespannen gevoelens te verminderen en past deze ook ter preventie regelmatig toe. (Dit betekent niet dat het vanaf nu ook altijd zal lukkenom deze gevoelens te verminderen, het onderhouden van deze aardigheden is noodzakelijk!).

Module Impulscontrole (optioneel)	
Er wordt aandacht besteed aan het verbeteren van de impulscontrole, onder andere door de cliënt te leren zijn impulsen beter te herkennen en door te werken met (bewerkte) mindfulness oefeningen gericht op het leren focussen / aandacht richten. Er worden verschillende mogelijkheden aangeboden, het is de bedoeling dat de cliënt onderzoekt welke mogelijkheden helpen om meer de baas te worden over zijn impulsen.	Veranderingsstrategieën: • Motivatietechnieken • Veiligheidsmanagement • CGT-elementen: psycho-educatie, toepassen helpende gedachtenen **rollenspelen**/dram therapeutische technieken. • Bewerkte mindfulness-oefeningen. Relevante oefeningen voor het verkrijgen van meer impulscontrolevaardigheden: 1. activiteiten doen die onrust wegnemen en ervoor zorgen dat impulsiviteit vermindert. 2. Impulsief handelen op tijd signaleren! 3. Behoeften leren uitstellen. 4. Leren je aandacht richten (concentreren) 5. Je wilskracht versterken 6. Spreek jezelf met helpende gedachten toe! Wat is er nodig om af te kunnen sluiten/ door te kunnen gaan met andere module: ○ De cliënt kan zijn impulsen beter signaleren. ○ De cliënt is duidelijk minder impulsief; ○ De cliënt kan zich beter concentreren / kan beter focussen.

Module Beheersingsvaardigheden (standaard) Ondanks standaard, niet gedaan, omdat	

Voor cliënten met een agressieproblematiek is het essentieel om te werken aan beheersingsvaardigheden. Er wordt geoefend met het toepassen van diverse beheersingstrucs. Hierbij wordt de cliënt (in overleg) geconfronteerd met triggers die boosheid oproepen. De cliënt probeert uit of de vaardigheid voldoende werkt of toch nog moet worden aangepast. De moeilijkheidsgraad wordt tijdens het oefenen langzaam opgevoerd, zodra duidelijker is welke truc helpt. Een cliënt die vooral instrumentele agressie vertoont, zal tijdens deze module vooral oefenen met het leren beheersen van de drang om zijn doel / wens te bereiken werkt of toch nog moet worden aangepast.	Veranderingsstrategieën:
	• Motivatietechnieken
	• Veiligheidsmanagement
	• CGT-elementen: psycho-educatie, vijf G's, toepassen helpendegedachten en **rollenspelen**/dram therapeutische technieken.
	• Bewerkte mindfulness-oefeningen.
	
	Beheersingsvaardigheden, er is geoefend met:
	1. Aandacht buiten jezelf richten.
	   ○ Aandacht richten op een vast punt op de muur of een voorwerp.
	   ○ Doe met aandacht iets dat je afleidt.
	   ○ Roep een tegenovergesteld gevoel van agressie op.
	   ○ Denk aan iemand die belangrijk voor de cliënt is en die agressief gedrag afkeurt.
	2. Denk vooruit:
	   ○ denk aan de nadelen van agressie.
	   ○ denk aan dat wat je wil bereiken.
	3. Spreek jezelf bemoedigend toe.
	   ○ Bijvoorbeeld: "rustig maar", "niet op reageren", "haal diep adem", "tel tot tien".
	4. Loop weg uit de situatie (neem een time-out).
	   ○ oefenen met het op tijd nemen van een time-out.
	
	Wat is er nodig om af te kunnen sluiten:
	○ De cliënt weet en signaleert welke situaties bij hem agressie kunnen oproepen;
	○ De cliënt kan duidelijk benoemen welke beheersingsmethoden bij hem werken en concrete voorbeeldengeven over hoe het heeft toegepast in de praktijk;
	○ De cliënt blijkt zich op verschillende leefgebieden aanmerkelijk vaker te beheersen / minder vaak agressief te reageren.

Module Anders denken (standaard)	Ondanks standaard, niet gedaan, omdat
Via CGT-technieken wordt er gewerkt aan het verminderen van vervormende cognities. De invloed van het denken op emoties en gedrag wordt uitgelegd. Het model van de vijf G's wordt regelmatig gebruikt. Er wordt onderzocht welke niet-helpende (kern)gedachten een rol spelen, kijken naar diverse thema's. De cliënt oefent met het toepassen van helpende gedachten in diverse situaties. In deze module wordt de cliënt uitgedaagd zich te identificeren met een gedachte die haaks staat op zijn eigen overtuiging. Door over deze denkwijze na te denken en te verkennen welke standpunten je kunt innemen, leert de cliënt meer gezichtspunten kennen en wordt de cliënt uitgedaagd minder rigide te denken.	Veranderingsstrategieën: • Motivatietechnieken • Veiligheidsmanagement • CGT-elementen: psycho-educatie, RET, vijf G's, toepassenhelpende gedachten. • Identificatie met mensen die anders denken; mentaliseren. Vaardigheden en oefeningen om anders te leren denken: 1. Het hebben van overzicht over (kern)overtuigingen / (kern)gedachten aan de hand van verschillende thema's 2. Herkennen van (niet-helpende) gedachten die leiden tot (het goedpraten van) agressief gedrag 3. Leren toepassen van helpende gedachten 4. Meer flexibiliteit realiseren m.b.t. gedachten / stellingen die leiden tot agressief gedrag door de cliënt rollen in te laten nemen van mensen die hier anders (tegenovergesteld) dan hem over denken en vanuit die positie discussiëren over de denkwijze 5. Morele dilemma's bespreken vanuit verschillende perspectieven. Wat is er nodig om af te kunnen sluiten: ○ De cliënt kan in voldoende mate (er is een ontwikkeling waargenomen) zijn gedachten signaleren en benoemen; ○ De cliënt kan in voldoende mate (er is een ontwikkeling waargenomen) helpende gedachten toepassen tijdens oefeningen / lastige situaties; ○ De cliënt kan zich inleven in de denkwijze van een helpende gedachte die tegengesteld is aan zijn eigen gedachte.

Module Waarnemen en Interpreteren (optioneel)	

Om het sociale informatieproces beter te laten verlopen, is het helpend als de cliënt leert om meer waar te nemen, het (ver)oordelen op tijd te signaleren en te leren deze op te schorten. Tijdens deze module wordt hier daarom aandacht aan besteed. Via (bewerkte) mindfulness oefeningen leren de cliënten waar te nemen en te interpreteren zonder hierbij geen (tot weinig) irrationele gedachten en negatieve emoties te betrekken. Door te leren de intenties van anderen objectief te interpreteren, zullen er minder snel agressieve gevoelens ontstaan.	<u>Veranderingsstrategieën:</u>
	• Motivatietechnieken
	• CGT-elementen: psycho-educatie, toepassen helpendegedachten, **rollenspelen**.
	• Mentaliseren en bewerkte mindfulness oefeningen.
	
	○ Oefenen met het minder selectief waarnemen aan de hand van verschillende situaties
	    ○ ruimtes en plaatsjes
	    ○ levende situaties en filmsituaties
	○ Oefenen met het objectief interpreteren
	    ○ ruimtes en plaatsjes
	    ○ levende situaties en filmsituaties
	○ Bewustwording realiseren m.b.t. aard van de cognitieve vervormingen die van invloed zijn op inadequate SIV.
	○ Bewustwording realiseren m.b.t. aard van emoties die van invloed zijn op inadequate SIV.
	
	<u>Wat is er nodig om af te kunnen sluiten:</u>
	○ De cliënt weet welke emoties SIV negatief kunnenbeïnvloeden;
	○ De cliënt weet welke cognitieve vervormingen SIVnegatief kunnen beïnvloeden;
	○ De cliënt interpreteert de bedoelingen van anderenduidelijk minder negatief (liefst neutraal);
	○ De cliënt is vooruit gegaan in objectief waarnemen.

Module Emotieregulatie (optioneel)	
Het doorlopen van deze module draagt bij aan het verminderen van stemmingswisselingen en/of het beter kunnen differentiëren en vormgeven/uiten van emoties die gerelateerd zijn aan boosheid en agressie. De module helpt om emoties beter te leren herkennen (bij de cliënt zelf en bij anderen), meer greepte krijgen op emoties en emoties gemakkelijker los te kunnen laten. Rationale: een betere emotieregulatie zal bijdrage aan vermindering van agressief gedrag.	<u>Veranderingsstrategieën:</u> • Motivatietechnieken • CGT-elementen: psycho-educatie, RET, vijf G's, toepassen helpende gedachten, **rollenspelen**. • Mentaliseren en bewerkte mindfulness oefeningen. <u>Relevante vaardigheden/ onderdelen:</u> 1. Het herkennen van emoties ○ Stil staan bij wat een emotie lichamelijk te weeg kan brengen. ○ Stil staan bij de gedachten die heftige emoties oproepen. 2. Greep krijgen op je emoties ○ oefenen met verstandig nadenken ○ oefenen met het gebruik van helpende gedachten zorgen voor afleiding (leuke activiteiten) en doen van ontspanningsoefeningen ○ oefenen met het bewust uiten van emoties, waaronder wisselen van aandacht. ○ oefenen met de ander laten weten wat zijn/haar gedrag met je doet 3. Stilstaan bij accepteren en loslaten ○ oefenen met oordeelvrij kijken naar een emotie ○ oefenen met het observeren door afstand te nemen. ○ oefenen met het loslaten van een emotie <u>Wat is er nodig om af te kunnen sluiten:</u> ○ De cliënt kan emoties beter herkennen ○ De cliënt blijft minder lang hangen in negatieve emoties ○ De cliënt kan negatieve emoties op een adequate manier uiten ○ De cliënt heeft minder last van stemmingswisselingen.

Module Conflicthantering (optioneel) N.V.T	
In deze module wordt gewerkt aan diverse vaardigheden, die nodig zijn om op een constructieve wijze conflicten te hanteren. Denk aan het adequaat communiceren, omgaan met autoriteiten, omgaan met kritiek. Het leren toepassen van conflictremmers en het leren herkennen van eigen conflictaanjagers. De cliëntleert eveneens om conflicten of lastige situaties op assertieve wijze te benaderen. Ook wordt aandacht besteed aan het leren herkennen (en daar waar nodig) van eigen conflictstijl aan de hand van verschillende contexten.	Veranderingsstrategieën: • Motivatietechnieken • CGT-elementen: psycho-educatie, toepassen van helpendegedachten, **rollenspelen** / drama therapeutische interventies. • Metaliseren. Relevante vaardigheden/ onderdelen: o Inzicht in eigen conflictstijlen gerelateerd aan verschillende contexten o Oefenen met het assertief reageren o Oefenen met het toepassen van verschillende conflicthanteringsstijlen (afhankelijk van de situatie) o Oefenen met het toepassen van conflictremmers. o Aandacht voor het adequaat hanteren van conflictsituaties met (diverse) instellingen (plan van aanpak + oefenen). o Aandacht / oefenen met vaardigheden uit de AR-vaardighedenlijst waarbij een score van 3 of minder is gehaald. o Oefenen in adequaat omgaan met kritiek en autoriteiten o Meegaan naar instanties om te ondersteunen bij het aanleren van vaardigheden voor het oplossen van het probleem! Wat is er nodig om af te kunnen sluiten: o De cliënt kan argumenten opnoemen waarom assertiefgedrag werkt; o De cliënt reageert tijdens oefensituaties voldoendeassertief op diverse lastige situaties; o De cliënt is vooruit gegaan in het onderhandelen; o De cliënt blijkt (ook volgens relevante netwerkleden) op verschillend leefgebieden minder vaak in conflictsituaties tebelanden.

Module Partner in Beeld (optioneel)	N.V.T.
Deze module wordt toegepast als de cliënt een partner heeft en er sprake is van huiselijk geweld of als het werken aan de relatie kan leiden tot vermindering van stress en agressieve gevoelens. Er wordt gewerkt aan het toepassen van de time-out procedure en het verbeteren van de onderlinge interactie door onder andere elkaars positieve eigenschappen te benadrukken, te oefenen met het onderhandelen en het verminderen van conflictaanjagers. Partners stellen zelf een plan van aanpak op om te bepalen wat zij binnen hun relatie willen verbeteren. Het is verstandig om de partners vier weken na het afronden van de module terug te laten komen om te checken hoe de uitvoering van hun plan van aanpak verloopt en om te toetsen of er geen sprake is van terugval.	<u>Veranderingsstrategieën:</u> • Motivatietechnieken • Veiligheidsmanagement • CGT-elementen: psycho-educatie, toepassen van helpendegedachten, **rollenspelen** / drama therapeutische interventies. • Metaliseren. <u>Relevante vaardigheden/ onderdelen:</u> o Opstellen veiligheidsplan (gebeurt al tijdens de intromodule, maar mocht de partner er toen bij betrokken zijn geweest, dan wordt het tijdens deze module alsnog doorgenomen. o Werken met de time-out procedure o Kennis hebben van elkaars triggers o Leren elkaar te valideren o Helpende gedachte toepassen om de relatie te verbeteren o Kennis van eigen conflictaanjagers o Oefenen met het toepassen van conflictremmers. <u>Wat is er nodig om af te kunnen sluiten:</u> o Het gebruik van de time-out procedure wordt goed uitgevoerd, bovendien is de noodzaak om het toe te passen duidelijk vermindert o De doelen die door de partners en behandelaar zijngeformuleerd zijn grotendeels behaald of er is voortuitgang zichtbaar. o De onderlinge communicatie tussen de partner isverbeterd.

Module Zelfbeeld (optioneel)	N.V.T.

Deze module is enerzijds gericht op het verbeteren van de responsiviteit. Een beter zelfbeeld vergroot immers de zelfeffectiviteit (geloof in eigen kunnen) en dit leidt tot het gemakkelijker aanleren van nieuwe vaardigheden. Anderzijds is het hebben van een laag zelfbeeld bij een deel van de doelgroep gerelateerd aan het delict gedrag. Zo kunnen cliënten juist vanuit onzekerheid meer stress ervaren en hier uiteindelijk met agressie op reageren. Er worden verschillende oefeningen aangeboden die helpen om het zelfvertrouwen te vergroten. De cliënt leert hierbij een positieve herinnering (of fictieve situatie) op te roepen en dit onder andere te versterken door lichaamshouding en helpende gedachten. N.B. deze module niet aanbieden bij cliënten met sterke narcistische trekken.	<u>Veranderingsstrategieën:</u>
	• Motivatietechnieken / GLM
	• CGT-elementen: toepassen helpende gedachten en oefeningen gericht op verkrijgen van meer zelfvertrouwen /beter zelfbeeld (COMET)
	• Bewerkte mindfulness-oefeningen
	
	<u>Relevante oefeningen:</u>
	o Oefeningen die inzicht geven in het zelfbeeld
	   o inzicht in hoe je zelfbeeld is gevormd; breng positieve eigenschappen in beeld; breng negatieve eigenschappen in beeld
	   o breng de triggers voor onzekere gevoelens in beeld
	o Onderzoek waar het negatieve zelfbeeld vandaan komt
	   o negatieve ervaringen
	   o jezelf vergelijken met anderen geen aansluiting
	   o invloed ondermijnende gedachten
	o Onderzoek hoe het negatieve zelfbeeld gecompenseerd wordt
	   o zoeken naar sensatie zogen voor mooie spullen
	   o aansluiting specifieke groep onderzoek hoe cliënt dit compenseert
	   o onderzoek hoe dit op een positievere manier kan
	o Je zelfbeeld verbeteren
	   o basisaanpak (oproepen beeld waarin cliënt zelfvertrouwen ervoer, dit wordt versterkt door houding, muziek en gedachten.
	   o oefenen inzetten beeld bij triggers
	   o oefenen om minder zelf-ondermijnend te denken

	<u>Wat is er nodig om af te kunnen sluiten/ door te kunnen gaan met andere module:</u> o De cliënt heeft zicht op eigen zelfbeeld; o De cliënt kan beeld 'het ervaren van zelfvertrouwen' oproepen; o De cliënt is weerbaarder tegen triggers door oproepenbeeld; o De cliënt past minder zelfondermijnende gedachten toe.

Appendix B – Interview scheme

Informatie

Mijn naam is Gamze Tintin. Voor mijn afstuderen van de studie Gezondheidswetenschappen aan de Universiteit Twente doe ik onderzoek naar de integratie van de Virtual Reality interventie 'Triggers & Helpers' binnen AR op Maat. Dit doe ik onder begeleiding van onderzoekers Hanneke Kip en Marileen Kouijzer die tevens eindverantwoordelijken zijn van dit onderzoek.

Dit interview heeft als doel om op basis van uw ervaringen te identificeren hoe we VR het beste kunnen integreren binnen de AR op Maat modules. Daarnaast wil ik samen met u kijken welke patiënten baat kunnen hebben bij zo'n behandelcombinatie. Ten slotte, wil ik samen kijken naar wat u nodig heeft om VR binnen AR op Maat zowel efficiënt als effectief te gebruiken in de praktijk.

De uitkomsten van dit interview zullen gebruikt worden om het AR op Maat protocol aan te vullen met voorbeelden van hoe je VR in desbetreffende AR op Maat modules zou kunnen toepassen. Uw ervaring en inbreng zijn hierin dus erg belangrijk.

Voor het interview
a) Dit interview zal ongeveer één uur duren.
b) Is het doel van het onderzoek en dit interview duidelijk bij u?
c) Uw antwoorden zullen anoniem behandeld worden en niet individueel teruggekoppeld worden naar de projectleiders. Graag wil ik u erop wijzen dat u op elk moment zich kan onttrekken van dit onderzoek zonder hiervoor een reden te hoeven geven.
d) Het informed consent had ik u via de mail toegestuurd zodat u dit kon doorlezen. Ik heb het ook hier bij de hand. Heeft u hier nog vragen over?
    a. Indien alles duidelijk is en er geen vragen zijn. Dan wil ik u graag vragen om het informed consent te ondertekenen.
e) Ter verbale bevestiging. Is het goed als dit gesprek opgenomen wordt?

Introductie (AR op Maat)
1. Zou u om te beginnen mij willen vertellen waar u werkzaam bent en onder welke functie(beschrijving)?
2. Hoeveel ervaring heeft u met AR op Maat?
3. Wat vindt u van het gebruik AR op Maat?
4. Welke modules van AR op Maat gebruikt u het vaakst? En waarom?

VR
5. Wat zijn uw ervaringen met VR?
6. Hoe vaak gebruikt u VR al binnen uw behandelingen?
7. In hoeverre gebruikt u VR tijdens uw behandelingen in combinatie met AR op Maat?
    o Hoe ziet dat er precies uit?
    o In hoeverre heeft deze combinatie toegevoegde waarde?

Integratie / Implementatie

In het vervolg van dit interview wil ik samen kijken naar hoe VR en AR op Maat gecombineerd kunnen worden. Dit wil ik graag per module doen. Een overzicht van deze modules en een overzicht van de omgevingen in de VR interventie had ik u van tevoren doorgestuurd.

Ik wil even aangeven dat het niet uitmaakt als u op een gegeven moment iets niet weet te omschrijven. Dan gaan we namelijk door naar de volgende module en komen we, indien mogelijk, er op terug.

Daarnaast heb ik deze overzichten nu ook bij de hand en, indien nodig, kan ik u ook voorzien van informatie over de desbetreffende module.

De vraagstructuur per module zal hetzelfde zijn, waardoor het een repetitieve interview zal worden. Per module zal ik u in eerste instantie vragen of VR in die module toegepast kan worden, indien dit het geval is zullen we verder gaan met het opstellen van een concrete scenario hoe volgens u VR geïntegreerd kan worden in de desbetreffende module. Is het structuur zo duidelijk?

De standaard modules AR op Maat zijn **introductie, netwerk, beheersingsvaardigheden, anders denken** en optionele modules zijn **stress en angstreductie, impulscontrole, waarnemen en interpreteren, emotieregulatie, conflicthantering, partner in beeld, zelfbeeld**.

8. Zijn er modules waar u graag mee wilt beginnen?
9. In hoeverre kan VR van toegevoegde waarde zijn binnen de standaard module **introductie**?
   ➤ *Uitleg module (indien therapeut hierom vraagt): De module is gericht op het vergroten van de 'zelfeffectiviteit' om de leerbaarheid te vergroten. Het doel is om de cliënt te motiveren en leren om risicovolle situaties, triggers / gevoelens te herkennen die kunnen leiden tot gewelddadig gedrag.*
   - o Indien "het kan **niet**": waarom niet?
   - o Indien "het kan **wel**": op welke manier zou VR ingezet kunnen worden?
     - Kunt u een voorbeeld geven? (dus: in welke omgeving?, met welke virtuele karakters?, welke handelingen moeten zich voordoen?, wat moet er gezegd worden door de virtuele karakters?, wat voor een scenario?)

10. In hoeverre kan VR van toegevoegde waarde zijn binnen de standaard module **netwerk**?
    ➤ *Uitleg module (indien therapeut hierom vraagt): De module is gericht om de cliënt meer inzicht te geven in eigen netwerk door het maken van een netwerkanalyse. Het doel is om het netwerk te verbeteren door weerbaarder te worden t.o.v. van negatieve invloeden uit het netwerk, en (indien nodig) onderhouden van bestaande relaties en het aangaan van nieuwe relaties.*
    - o Indien "het kan **niet**": waarom niet?
    - o Indien "het kan **wel**": op welke manier zou VR ingezet kunnen worden?
      - Kunt u een voorbeeld geven? (dus: in welke omgeving?, met welke virtuele karakters?, wat moeten ze zeggen/doen?, wat voor een scenario?)

11. In hoeverre kan VR van toegevoegde waarde zijn binnen de standaard module **beheersingsvaardigheden**?
    ➤ *Uitleg module (indien therapeut hierom vraagt): De module is gericht op het toepassen van diverse beheersingstrucs. Het doel is om de cliënt te confronteren met triggers die boosheid oproepen waarop de cliënt reageert met een vaardigheid om te bepalen of de vaardigheid voldoende werkt of toch nog moet worden aangepast.*
    - o Indien "het kan **niet**": waarom niet?
    - o Indien "het kan **wel**": op welke manier zou VR ingezet kunnen worden?
      - Kunt u een voorbeeld geven? (dus: in welke omgeving?, met welke virtuele karakters?, wat moeten ze zeggen/doen?, wat voor een scenario?)

12. In hoeverre kan VR van toegevoegde waarde zijn binnen de standaard module **anders denken**?
    ➤ *Uitleg module (indien therapeut hierom vraagt): De module is gericht op het identificeren van niet- helpende (kern)gedachten en deze leren toe te passen in diverse situaties. Het doel is om diverse perspectieven te verkennen waardoor de cliënt uitgedaagd wordt om minder rigide te denken.*
    - o Indien "het kan **niet**": waarom niet?
    - o Indien "het kan **wel**": op welke manier zou VR ingezet kunnen worden?
      - Kunt u een voorbeeld geven? (dus: in welke omgeving?, met welke virtuele karakters?, wat moeten ze zeggen/doen?, wat voor een scenario?)

13. In hoeverre kan VR van toegevoegde waarde zijn binnen de module **stressreductie**?
➢ *Uitleg module (indien therapeut hierom vraagt): De module is gericht op het leren omgaan met eigen spanningen, stress en agressie. Het doel is om vaardigheden toe te passen om de stress te verminderen.*
    o Indien "het kan **niet**": waarom niet?
    o Indien "het kan **wel**": op welke manier zou VR ingezet kunnen worden?
        - Kunt u een voorbeeld geven? (dus: in welke omgeving?, met welke virtuele karakters?, wat moeten ze zeggen/doen?, wat voor een scenario?)

14. In hoeverre kan VR van toegevoegde waarde zijn binnen de module **impulscontrole**?
➢ *Uitleg module (indien therapeut hierom vraagt): De module is gericht op het leren herkennen van impulsen door middel van mindfulness oefeningen gericht op het leren focussen / aandacht richten. Het doel is om de impulscontrole te verbeteren.*
    o Indien "het kan **niet**": waarom niet?
    o Indien "het kan **wel**": op welke manier zou VR ingezet kunnen worden?
        - Kunt u een voorbeeld geven? (dus: in welke omgeving?, met welke virtuele karakters?, wat moeten ze zeggen/doen?, wat voor een scenario?)

15. In hoeverre kan VR van toegevoegde waarde zijn binnen de module **waarnemen en interpreteren**?
➢ *Uitleg module (indien therapeut hierom vraagt): De module is gericht op het leren om meer waar te nemen, het (ver)oordelen op tijd te signaleren en leren deze op te schorten door middel van (bewerkte) mindfulness oefeningen zonder hierbij geen (tot weinig) irrationele gedachten en negatieve emoties te betrekken. Het doel is om het sociale informatieproces beter te laten verlopen.*
    o Indien "het kan **niet**": waarom niet?
    o Indien "het kan **wel**": op welke manier zou VR ingezet kunnen worden?
        - Kunt u een voorbeeld geven? (dus: in welke omgeving?, met welke virtuele karakters?, wat moeten ze zeggen/doen?, wat voor een scenario?)

16. In hoeverre kan VR van toegevoegde waarde zijn binnen de module **emotieregulatie**?
➢ *Uitleg module (indien therapeut hierom vraagt): De module is gericht op het leren herkennen van emoties (bij de cliënt zelf en bij anderen), meer greep te krijgen op emoties en emoties gemakkelijker los te kunnen laten. Het doel is om stemmingswisselingen te verminderen en/of beter kunnen differentiëren en uiten van emoties die gerelateerd zijn aan boosheid en agressie.*
    o Indien "het kan **niet**": waarom niet?
    o Indien "het kan **wel**": op welke manier zou VR ingezet kunnen worden?
        - Kunt u een voorbeeld geven? (dus: in welke omgeving?, met welke virtuele karakters?, wat moeten ze zeggen/doen?, wat voor een scenario?)

17. In hoeverre kan VR van toegevoegde waarde zijn binnen de module **conflicthantering**?
➢ *Uitleg module (indien therapeut hierom vraagt): De module is gericht op het leren toepassen van conflictremmers, leren herkennen van eigen conflictaanjagers, leren om conflicten of lastige situaties op assertieve wijze te benaderen, en leren herkennen van eigen conflictstijl aan de hand van verschillende contexten. Het doel is om diverse vaardigheden aan te leren die nodig zijn om op een constructieve wijze conflicten te hanteren.*
    o Indien "het kan **niet**": waarom niet?
    o Indien "het kan **wel**": op welke manier zou VR ingezet kunnen worden?
        - Kunt u een voorbeeld geven? (dus: in welke omgeving?, met welke virtuele karakters?, wat moeten ze zeggen/doen?, wat voor een scenario?)
18. In hoeverre kan VR van toegevoegde waarde zijn binnen de module **partner in beeld**?

> *Uitleg module (indien therapeut hierom vraagt): De module is gericht op het toepassen van de time-out procedure, het verbeteren van de onderlinge interactie door onder andere elkaars positieve eigenschappen te benadrukken, te oefenen met het onderhandelen en het verminderen van conflictaanjagers. Het doel is om stress en agressieve gevoelens te verminderen door gezamenlijk te werken aan de relatie.*
>   o Indien "het kan **niet**": waarom niet?
>   o Indien "het kan **wel**": op welke manier zou VR ingezet kunnen worden?
>   - Kunt u een voorbeeld geven? (dus: in welke omgeving?, met welke virtuele karakters?, wat moeten ze zeggen/doen?, wat voor een scenario?)

19. In hoeverre kan VR van toegevoegde waarde zijn binnen de module **zelfbeeld**?
> *Uitleg module (indien therapeut hierom vraagt): De module is gericht op het leren om positieve herinnering (of fictieve situatie) op te roepen en dit onder andere te versterken door lichaamshouding en helpende gedachten. Het doel is om responsiviteit te verbeteren en zelfvertrouwen te vergroten.*
>   o Indien "het kan **niet**": waarom niet?
>   o Indien "het kan **wel**": op welke manier zou VR ingezet kunnen worden?
>   - Kunt u een voorbeeld geven? (dus: in welke omgeving?, met welke virtuele karakters?, wat moeten ze zeggen/doen?, wat voor een scenario?)

20. Bij welke module of onderdelen van AR op Maat denkt u dat VR het **meest** kan toevoegen? En waar het **minst**?
   o Kunt u dit verder toelichten?

21. Bij welke patiënten denkt u dat VR binnen AR op maat een geschikte optie is in een behandeling?
   o Welke indicatie criteria zou u daaraan stellen? En Waarom?
     - Verschilt deze omschrijving per module?
       • Zo ja, hoe?

22. Hoe zou het protocol er volgens u uit moeten zien?
   o Zijn er bepaalde aanwijzingen (tips) over het gebruik van VR die u graag terug ziet in het protocol?
     - Verschilt dit per module?
       • Zo ja, hoe?
   o Op welke manier wilt u geïnformeerd worden over het protocol?
   o Welke materialen of activiteiten zou u nodig hebben om dit opgestelde protocol daadwerkelijk te gebruiken in de praktijk?

Afsluiting
23. Zijn er nog dingen dat u zou willen toevoegen?
24. Heeft u nog vragen voor mij?
25. Is het mogelijk dat ik u via e-mail kan benaderen voor een eventuele verheldering of wat extra vragen?

Dankwoord

Appendix C – Informed Consent Form

Informatieblad voor onderzoek 'Integration of Virtual Reality within Aggression Regulation treatment in forensic mental health care'

Doel van het onderzoek

Dit onderzoek wordt uitgevoerd door Gamze Tintin aan de Universiteit Twente. Onder begeleiding van Hanneke Kip en Marileen Kouijzer.

Dit interview heeft als doel om op basis van uw ervaringen te identificeren hoe we VR oefeningen het beste kunnen toepassen en integreren binnen de AR op Maat modules. Daarnaast wil ik samen met u kijken welke patiënten baat hebben bij zo'n behandelcombinatie. Ten slotte, wil ik samen kijken naar wat u nodig heeft om VR binnen AR op Maat te gebruiken in de praktijk.

De uitkomsten van dit interview zullen gebruikt worden om het AR op Maat protocol aan te vullen met voorbeelden van hoe je VR in die AR op Maat module zou kunnen toepassen. Uw ervaring en inbreng zijn hierin dus erg belangrijk. Het interview zal ongeveer één uur duren en naar uw wens in persoon of digitaal plaats vinden.

Hoe gaan we te werk?

U neemt deel aan een onderzoek waarbij we informatie zullen vergaren door interviews. Tijdens het interview worden uw antwoorden opgenomen met een audio recorder. Deze audio-opname wordt gebruikt om het interview anoniem uit te schrijven. Daarna wordt dit geanonimiseerd, beveiligd opgeslagen en de audio opname wordt verwijderd.

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.

Voordat onze onderzoeksgegevens naar buiten gebracht worden, worden uw gegevens zoveel mogelijk geanonimiseerd. Denk hierbij aan dat er enkele vragen plaats vinden over uw ervaringen en functie. Deze worden uiteraard ook 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 opgaaf van redenen. Het stopzetten van deelname heeft geen nadelige gevolgen voor u.

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: g.tintin@student.utwente.nl
Telefoon: 06 36 163 550

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 vragen en opmerkingen over het onderzoek kunt u altijd contact opnemen met de bovenstaande onderzoekers.

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 de bovenstaande informatie. Ik heb de informatie 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 opgaaf van reden, kan beëindigen. Ik hoef een vraag niet te beantwoorden als ik dat niet wil.

Naast het bovenstaande is het hieronder mogelijk voor verschillende onderdelen van
het onderzoek specifiek toestemming te geven. U kunt er per onderdeel voor kiezen wel of geen toestemming te geven. Indien u voor alles toestemming wil geven, is dat mogelijk via de aanvinkbox onderaan de stellingen.

3. Ik geef toestemming om de gegevens die gedurende het onderzoek bij mij worden verzameld te verwerken zoals is opgenomen in het bijgevoegde informatieblad.	JA NEE ☐ ☐
4. Ik geef toestemming om tijdens het interview audio opnames te maken en mijn antwoorden uit te werken in een transcript.	JA NEE ☐ ☐
5. Ik geef toestemming om mijn antwoorden te gebruiken voor quotes in onderzoekspublicaties.	JA NEE ☐ ☐
6. Ik geef toestemming om de bij mij verzamelde onderzoeksdata te bewaren en te gebruiken voor toekomstig onderzoek en voor onderwijsdoeleinden.	JA NEE ☐ ☐
Ik geef toestemming voor alles dat hierboven beschreven staat.	☐

Naam Deelnemer: Naam Onderzoeker:
                                         Gamze Tintin

Handtekening: Handtekening:
Datum: Datum

Appendix D – Coding scheme Modules

Codes	Definition of code	Quotes	Par. [x]
Main code: Added Value	**Using VR could be beneficial for FMHC within this 'AR – customised' module.**		
Scenario – Preview of VR	Patients experience a VR environment for the first time to make an informed decision whether they would want to use VR.	Q1: "The only goal is that the patient knows how VR works and what the possibilities are. After that the patient could be more motivated and could say something along the lines of "That is so interesting! I think that would suit me; I would love to try it." So, I would definitely integrate this to get the patient motivated.	2, 7, 8 10
Scenario – Identification	Patients use VR to identify triggers that are yet unknown to the individual patient.	Q1: "… for instance: "What does a crying baby do? Or a very busy grocery store?" After that you try to identify what are my triggers, what do I notice in myself, what happens to my anxiety?" So, basically you search triggers if the patient does not know theirs yet.	2, 6, 7, 8, 9, 10
Scenario – Awareness	Patients undergo the first step to increase interoceptive awareness.	Q1: "... By putting the headset on the patient and putting them in a certain situation, for instance on the street, and then just asking "So, do you feel anything now? And if so, what are you feeling?".	2, 6, 9, 10
Scenario – Changing perspectives	Patients use VR to gain insight into their behaviour at the beginning of the treatment to increase their treatment motivation to achieve a set treatment goal.	Q1: "… For instance through the shift in perspective they could have a conversation with themselves where they say things such as "Hey, it's good to really try your hardest with this because I don't ever want to be in mandatory treatment again.". That way they can motivate themselves. In a situation like an office, for example. They can have a conversation with themselves from multiple perspectives. Like, they can see the negative side of things, which they would rather not have happen, and the positive sides which they would prefer to happen."	3, 6, 8
Main code: No added value	**Using VR could <u>not</u> be beneficial for FMHC within this 'AR – customised' module.**		
Too early	Patients would benefit more from real-life communication instead of practising with VR because the patient is yet at the beginning of their treatment process and must get acquainted with the theory first.	Q1: "… Because you will mainly be explaining things during the introduction. You are trying to inventorize things for the patient. I do not know if it would be beneficial to use VR with that, I do not know how."	1, 2, 3, 4, 5

[x] The therapists that mentioned the code.

Codes	Definition of code	Quotes	Par.[x]
Main code: Added Value	**Using VR could be beneficial for FMHC within this 'AR – customised' module.**		
Scenario – Social participation	Patients use VR to enhance their behaviour in a social setting by enforcing positive communication skills during conversation.	Q1: "… You want to get an idea of how someone functions within a group, and how they act in those situations."	1, 3, 4, 6, 7, 8, 9, 10
Scenario – Setting boundaries	Patients use VR to learn to say 'NO' to negative influences.	Q1: "For instance if a younger patient is hanging around in the street with their friends, and the friends go "Hey, let us go rob someone" you can practise with learning how to	2, 3, 4, 5, 8, 9

		say things such as "No, I'm not coming with you" or "I'm staying here." Like, what happens when people offer you something like that. "	
Main code: No added value	**Using VR could not be beneficial for FMHC within this 'AR – customised' module.**		
Insufficient information	Patients have to yet provide background information about their social environment that could be of use in designing a VR scenario	*Q1: "Your network basically consists out of mapping out what the network is exactly for me. So, I personally would not feel inclined to use VR with this. I would only want to use it when I think it is of added value. "*	1, 2, 7
Real-life	Patients would benefit more from real-life communication instead of practising with VR because the emotions of the virtual characters are difficult to identify.	*Q1: "Yeah, communication huh.. How do you communicate? You can do that through drama exercises, you cannot replace all of that through VR because I think it is difficult to show emotions with the avatar."*	2, 6

ˣ The participants that mentioned the code.

TABLE C: INTEGRATION OF VR IN THE MODULE STRESS REDUCTION OF 'AR - CUSTOMISED' ACCORDING TO PARTICIPANTS (N = 10)

Codes	Definition of code	Quotes	Par. ˣ
Main code: Added Value	**Using VR could be beneficial for FMHC within this 'AR – customised' module.**		
Scenario – Identification	Patients use VR to identify which coping styles and skills could help them in the best way during a provoking situation.	*Q1: "What will you do when you are in a cafe, and you hear, see or experience a trigger? What will you do? Will you try to relax, or would you try to use solution skills? Do you just leave? How do you leave? How would you handle it? "*	1, 2, 3, 5, 6, 7, 9, 10
Scenario – Awareness	Patients enhance their understanding of interoceptive awareness of their physical reactions such as their heartbeat.	*Q1: "It's a lot more like "Take a second to check how you are feeling. Someone walks up to you; what do you feel? Do you feel something in your head or does your heart rate rise?"*	3, 6
Scenario – Coping skills	Patients use VR to enhance the use of techniques to decrease their anger.	*Q1: "For instance, when it is very busy in an alleyway.. You could really apply such things, because it causes stress and you can practice with the patient by going "I'm going to put you in this alleyway, there are more people coming, focus on your breathing.".* *Q2: "Imagine you are in a situation where you're in a fight with your partner. How do you then say "Hey, I'm noticing I'm starting to get quite emotional. I will be taking a walk and we can continue talking about it once I get back." … For instance, that the wife says, "Have you still not gotten the groceries?!" or something like that, obviously you have to adjust that to the situation your patient is in."*	1, 4, 8, 9, 10
Scenario – Setting boundaries	Patients use VR to learn to assert themselves from negative influences by explaining to the virtual character what behaviour of them was triggering.	*Q1: "Imagine someone has been irritated or angry. How do you talk to them about being angry without doing that out of a place of anger? But you can also say "hey, I'm noticing this upsets me and angers me"."*	1, 4
Scenario – Preparation	Patients use VR to plan a structured day filled with	*Q1: "…What I do notice after making a day-schedule with a patient, is that they cannot manage to stick to it. And*	8

	relaxing activities that could decrease their chances of engaging in aggressive behaviour.	*then I thought: Hey, that little bit of imagining could really help with that. That way you really imagine arriving at home, taking off your shoes and sitting on the sofa. You listen to some music or put on walking shoes and go for an hour-long walk. "*	
Main code: No added value	**Using VR could <u>not</u> be beneficial for FMHC within this 'AR – customised' module.**		
Real-life	Patients would benefit more from real-life communication instead of practising with VR because bottlenecks should be identified during a face-to-face conversation before applying/enhancing coping skills.	*Q1: "… as in: "what makes it unsuccessful? Because we prepared, we imagined it, we looked at how you were going to handle the situation." I would definitely have a talk about it to figure out what makes it not work. Is it a bit of motivation that is missing? That could be the case too. Do you maybe just not feel like it? Maybe we should do something with that then. I would first want to know where it comes from, and what we need to do for it to work out."*	8

[x] The participants that mentioned the code.

TABLE D: INTEGRATION OF VR IN THE MODULE IMPULSE CONTROL OF 'AR - CUSTOMISED' ACCORDING TO PARTICIPANTS (N = 10)

Codes	Definition of code	Quotes	Ther. [x]
Main code: Added Value	**Using VR could be beneficial for FMHC within this 'AR – customised' module.**		
Scenario – Preparation	Patients use VR to reflect on the consequences of their behaviour and determine alternative ways they could have approached the situation.	*Q1: "…Like "hey, you've kind of let go of your impulses: what are the consequences of that behaviour?" And also, some patients can see some of the consequences, but not all of them. So, you can kind of show them something along the lines of "So what happens if you yell at someone to turn their music down, they can also get angry with you. Then what?".*"	5, 6, 7, 8, 9, 10
Scenario – Awareness	Patients enhance their understanding of interoceptive awareness of their emotions until the moment these emotions start to fade away.	*Q1: "Take a second to focus on the feeling of: "Hey, what are you feeling? How uncomfortable is that? Experience that that feeling is temporary, and it will go away again.?".*"	2, 3, 7, 8, 9
Scenario – Identification	Patients use VR to identify which coping skills could help them in the best way during a provoking situation accidentally engaged by themselves.	*Q1: "So it can also be an assessment tool, like "hey, when do you make that impulsive decision? And what do you do with it after?".*"	7, 8, 9, 10
Scenario – Coping skills	Patients use VR to enhance the use of techniques to decrease their anger by shifting their attention away from their trigger in the provoking situation.	*Q1: "You can, indeed, look the other way. Or you can say "Look at the person standing in front of you. What do you see in the background? Or what do you see because of the clothing? Or what is the other girl wearing? Focus on all the blue things you can see.".*"	4, 8
Main code: No added value	**Using VR could <u>not</u> be beneficial for FMHC within this 'AR – customised' module.**		
Impractical for therapists	Patients would benefit more from tangible objects instead of practising with fake attributes in VR because the behaviour	*Q1: "Sometimes I see certain exercises and I think "oh, yeah, I would do that. And that one too!" but then I think "Wait a second, that is with materials. For example, throwing a ball back and forth. Roll the ball very low or throw it really hard. That way the patient has to react with something along the lines of "I don't like this".*"	5

	could be triggered faster, and therapists will not waste valuable treatment time to set up the same experience in VR.		

^x The participants that mentioned the code.

Codes	Definition of code	Quotes	Par. ^x
Main code: Added Value	**Using VR could be beneficial for FMHC within this 'AR – customised' module.**		
Scenario – Identification	Patients use VR to identify triggers that are unknown to the individual patient.	Q1: "…You also have to start thinking: "hey, what situations can I practice? What situations anger me? What are my triggers? What are risky situations?" And then you can practice that per skill."	1, 2, 3, 4, 5, 7, 8, 9, 10
Scenario – Coping skills	Patients use VR to enhance the use of self-controlling methods such as breathing exercises or taking a time-out during provoking situations.	Q1: "I have for instance been practicing with a man who had been incredibly angry with his neighbour. So, in the roleplay the neighbour came to the door. He opens the door; the neighbour is there. What does he do? He only focuses on the neighbour. So, then we practiced with roleplay like "Try not to look at him, look past him. Look at the door, or other things. So basically, bring your attention to something else."."	1, 3, 5, 6, 8
Scenario - Preparation	Patients use VR to enhance their understanding of their behaviours' consequences to increase their confidence.	Q1: "… Thereafter you start practising with situations, preferably, that the patient has experienced themselves or will be experiencing. We use the tension thermometer. You then talk about "so when the tension rises.. Try to think ahead about the consequences. Let us practice that."."	3, 7, 8, 9, 10
Scenario – Changing perspectives	Patients use VR to gain insight into the pro and cons of their behaviour and compare this to potential behaviour they would rather desire.	Q1: "Imagine I put the patient in a situation where he can get incredibly angry I can then say: "Talk to yourself and see what happens." So, think about the disadvantages of aggression and think of what you would like to achieve."	8
Scenario – Social participation	Patients use VR to enhance their verbal and non-verbal communication skills by listening to the virtual characters' opinion and reacting accordingly.	Q1: "Yeah, so we basically have some exercises here about statements. We are using that in roleplay a lot, currently."	3, 7, 10

^x The therapists that mentioned the code.

Codes	Definition of code	Quotes	Par. ^x
Main code: Added Value	**Using VR could be beneficial for FMHC within this 'AR – customised' module.**		
Scenario – Social participation	Patients use VR to explore whether the behaviour they observe from virtual characters is in line with their own interpretation by applying positive communication skills required for confrontation.	Q1: "If someone is walking around in those environments and you set it so that everyone looks at you angrily or turns around within a radius of so many metres. The patient could think: "yeah, they're all targeting me or what is this?" and feel angry. Then, if you can challenge that like: "Well, is it true what you think? And are they really after you?" That you can eventually come to a more realistic thought of: "Huh, maybe there's not so much going on". Then, you	1, 4, 5, 6, 7

		can see if someone walks around in that environment again to see if that angry feeling goes down."	
Scenario – Awareness	Patients enhance their understanding of interoceptive awareness of their emotions.	Q1: *"This is much more about feeling. Many patients have no idea how they feel when they get angry."*	1
Scenario – Changing perspectives	Patients use VR to gain insight into their behaviour by taking the perspective from another to objectively see the impact of their behaviour and determine improvement points.	Q1: *"That you, as a patient, put yourself in the role of a person who is very important to you, for example a grandparent or a teacher. And then from that perspective, you name the advantages and disadvantages of certain thoughts."*	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Main code: No added value	**Using VR could not be beneficial for FMHC within this 'AR – customised' module.**		
Real-life	Patients would benefit more from real-life scenarios instead of practising with VR because therapists expect the evaluation of the thought processes to be challenging.	Q1: *"I've often thought about this. And I think it can help anyway, but I find it very difficult to apply it in VR. This module is very much about thoughts. And I prefer to write those out myself, which you cannot do in VR."*	1, 3, 8

[x] The participants that mentioned the code.

TABLE G: INTEGRATION OF VR IN THE MODULE PERCEIVING AND INTERPRETING OF 'AR - CUSTOMISED' ACCORDING TO PARTICIPANTS (N = 10)

Codes	Definition of code	Quotes	PAr. [x]
Main code: Added Value	**Using VR could be beneficial for FMHC within this 'AR – customised' module.**		
Scenario – Social participation	Patients use VR to explore whether the behaviour they observe from virtual characters is in line with their own interpretation by applying positive communication skills required for confrontation.	Q1: *"So that afterwards you can also take a next step as in: "Gee, I can still hear that you are very much thinking for yourself about what you see". That there is not so much of a check yet and that could be practised with: "Can you actually check that too?"."*	1, 5, 6, 10
Scenario – Changing perspectives	Patients use VR to reflect on their thought processes that occur when they observe a situation versus their thought processes that occur of how they interpret that similar situation.	Q1: *"...that someone may perceive it totally as a kind of hostility while someone may *wave* and it may just be a kind of "Hello" greeting. While that might've been interpreted by the other as some kind of aggressive gesture."*	1, 2, 3, 4, 5, 6, 7, 8, 9
Main code: No added value	**Using VR could not be beneficial for FMHC within this 'AR – customised' module.**		
Impractical for therapists	Patients would benefit more from tangible objects instead of practising with fake attributes in VR because the behaviour could be triggered faster,	Q1: *"Yes, once again I would use pictures et cetera. Like: "I am the picture, just look at me! What do you see?" Of course, you could do that in VR as well, but you have to be really skilled at it. Maybe, I am not yet of course. But as in your character has to do this now with this face, with these actions, this voice. And then I think: just take off those glasses and I am here! So, I would rather do that."*	3, 5

	and therapist will not waste valuable treatment time to set up the same experience in VR.		

^x The participants that mentioned the code.

TABLE H: INTEGRATION OF VR IN THE MODULE EMOTION REGULATION OF 'AR - CUSTOMISED' ACCORDING TO PARTICIPANTS (N = 10)

Codes	Definition of code	Quotes	Par. [x]
Main code: Added Value	**Using VR could be beneficial for FMHC within this 'AR – customised' module.**		
Scenario – Identification	Patients use VR to identify which coping styles and skills could help them in the best way during a provoking situation.	*Q1:"...As in: "If you can do that, maybe next time you can think more sensibly. That we can figure out together what would be good solutions. Is it walking away? Is it engaging in conversation? Et cetera. Afterwards, you could apply that to a second session.".*	4, 9
Scenario – Awareness	Patients enhance their understanding of interoceptive awareness of their emotions and physical reactions.	*Q1: "...like: "Ok, can you tell what this is doing to you?" Not in terms of thoughts, but more: "do you feel something in your body? Do you notice your heart rate going up? Do you feel angry? Do you feel sad?" So, it's much more about feeling."*	1, 2, 4, 5, 6, 7, 8, 9, 10
Scenario – Changing perspectives	Patients use VR to gain insight into their own emotions or to recognize emotions of virtual characters.	*Q1: "Especially if patients have some difficulty with perceiving their own emotions properly or expressing them verbally like: "what is that exactly?" And it can be useful to take the perspective of others to see: "oh, what do you see happening there?" And sometimes patients are able to say: "well, I can clearly see that this person is actually very sad" and they usually don't even realise it."*	5, 7, 8, 10
Scenario – Preparation	Patients use VR to reflect on the consequences of their behaviour and determine alternative ways they could approach a potential provoking situation.	*Q1: "How do you deal with your emotions when a friend tells you: "I am not going to meet with you!" Or your partner says, "finally clean up your clothes for once!" Or someone in front of you in the queue says: "You are cutting in line!"."*	5
Scenario – Setting boundaries	Patients use VR to learn to assert themselves from negative influences by explaining to the virtual character what behaviour of them was triggering.	*Q1: "You sit across from your boss in the office during a role-play and then you practise with the patient, with you as the therapist being the boss and the patient just being themselves. The client should say: "Hey, you did this and this and that made me feel like this and that. Yes, it's still on my mind, I don't like it!"."*	8
Main code: No added value	**Using VR could <u>not</u> be beneficial for FMHC within this 'AR – customised' module.**		
Real-life	Patients would benefit more from real-life communication instead of practising with VR because interoceptive awareness could be visualised easier.	*Q1: "And I work with my hands and with my body a lot. And that sometimes is difficult in VR because your character does not do that. And sometimes I have patients who really look at me because I say: "I feel it here" or "I notice my shoulders go up like this", "I notice my neck, my jaw". And that is much harder when someone has glasses on and cannot actually see you."*	3, 5, 8

^x The participants that mentioned the code.

Codes	Definition of code	Quotes	Par. [x]
Main code: Added Value	**Using VR could be beneficial for FMHC within this 'AR – customised' module.**		
Scenario – Identification	Patients use VR to identify which coping styles and skills could help them in the best way during a conflict.	Q1: *"I think it can be of added value to get a view on a patient's conflict itself... As in: "let's practise a conflict to learn new conflict styles."*	3, 4, 7, 9
Scenario – Changing perspectives	Patients use VR to gain insight into their own behaviour during a conflict.	Q1: *"I have not used it yet, but I think the perspective switch is a very good one. So, I would use it, for example, if a patient did not really understand how they came across in a conversation with their partner, or another third party."*	9
Scenario – Setting boundaries	Patients use VR to learn to say 'NO' to negative influences.	Q1: *".. learning to say: "no"... Yes, that's also part of it, it's a small part, but I think it's actually a very important part for many patients."*	10
Scenario – Preparation	Patients use VR to apply the right behaviour on the scale of assertive, sub assertive to aggressive during conflicts.	Q1: *"... As in: "Okay, you're having problems with your supervisor. And if he is acting like that towards you then you are actually either going to be tempted to go and slap him or you are going to stay away, be very sub assertive, and say: "Yes, boss, that's okay". So, let us practise responding assertively and see if you can influence him a bit with that and not get into a conflict with him like that."*	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

[x] The participants that mentioned the code.

Codes	Definition of code	Quotes	Par. [x]
Main code: Added Value	**Using VR could be beneficial for FMHC within this 'AR – customised' module.**		
Scenario – Changing perspectives	Patients use VR to gain insight into their own behaviour in a valuable relationship with a loved one to understand their point of view.	Q1: *"Perspective change is also a really nice one. To look at it from the partner's point of view and say: "Gee, how did you come across?" So, you could, if the client and the partner also agree, you should say to the client: "Well, we're going to practise this and if your partner agrees, I'll play her and then we'll use perspective switching to see how it comes across. And we will do the same with your partner", with the aim of perhaps gaining more mutual understanding of what is happening. But also, so that the therapist can understand the situation properly."*	5, 7, 9
Scenario – Preparation	Patients use VR to practice an important conversation with a loved one.	Q1: *"I could imagine that if you still have doubts about how someone can discuss something, that you could practise this in role play before the partner is invited."*	1, 2, 4, 9
Scenario – Coping skills	Patients use VR to enhance the use of techniques to decrease their anger by removing themselves from the provoking situation.	Q1: *I do think that the client can practise this themselves, for example, by practising a time-out at home. For instance, making agreements when taking a time-out, such as: you indicate it and then you walk away without saying anything to each other."*	6, 8
Main code: No added value	**Using VR could <u>not</u> be beneficial for FMHC within this 'AR – customised' module.**		
Real-life	Patients would benefit more from real-life communication instead of practising with VR because	Q1: *"No, I don't think so. I have not done this one before, but I think with this one, the partner is also invited into this. So, then I would rather do role plays just with each other and not VR. I would not be so quick to apply VR here because they need to do it with each other."*	1, 7, 8, 9

		the partner should be included within treatment.	
No experience	Therapists describe insufficient knowledge about the module.	Q1: "To be honest, partner in view is something we have had very little of within AR — customised. So, I cannot really picture anything."	3, 4, 10

ˣ The participants that mentioned the code.

TABLE K: INTEGRATION OF VR IN THE MODULE SELF-IMAGE OF 'AR - CUSTOMISED' ACCORDING TO PARTICIPANTS (N = 10)

Codes	Definition of code	Quotes	Par. ˣ
Main code: Added Value	**Using VR could be beneficial for FMHC within this 'AR – customised' module.**		
Scenario – Preparation	Patients use VR to enhance positive thoughts about themselves in order to develop a positive view of themselves.	Q1: "You can, of course, choose an environment where someone normally feels very insecure. Suppose that is during a job interview, or during criticism at work, or a partner who says you are not worth anything, or maybe even from the past when your parents said to you: "You are a terrible child.". You can practise someone evoking more helpful thoughts in themselves. They can sit up a little straighter. You can start practising with that."	1, 2, 4, 5, 6, 10
Scenario – Social participation	Patients use VR to explore whether the behaviour they expect from virtual characters is in line with their own expectations by applying positive communication skills required for confrontation.	Q1: "...Like: "Well, I will be rejected if I talk to someone or if I do this or that". It would be useful that you could practice that to see if those situations would actually happen. And if they happen: how do you deal with it?"	9
Scenario – Setting boundaries	Patients use VR to learn to say 'NO' to negative influences.	Q1: "Of course, it may be that they are susceptible to outside pressure because of their self-image. For instance: "Just do it! Do not be silly! Do not be so childish!". And that they think: "Yeah, let me participate." So that they end up in delinquent behaviour that way. Therefore, it is important that they learn to be a little more resilient and set boundaries."	6
Scenario – Changing perspectives	Patients use VR to gain insight into their own appearance to determine improvement points for their self-image.	Q1: "Yes, that could be if you of course start practising with the patient like: "well, this is the situation where you have low self-esteem, or you feel inferior. Go and practice. Evoke an image and see how that goes". Then take the perspective of another to be: "Gee, how would you actually look at yourself when you observe this "."	2, 7, 9, 10
Main code: No added value	**Using VR could <u>not</u> be beneficial for FMHC within this 'AR – customised' module.**		
Impractical for therapists	Patients would benefit more from real-life communication instead of practising with VR because the therapist could oversee the physical reactions of the patient better.	Q1: "I don't know. I think that it is especially helpful in the room. That the patient should be the point of attention where you observe them and see what is happening."	8
No experience	Therapists describe insufficient knowledge about the module.	Q1: "No, no, I cannot think of anything with that."	3, 4

ˣ The participants that mentioned the code

Werkboek: VR in AR
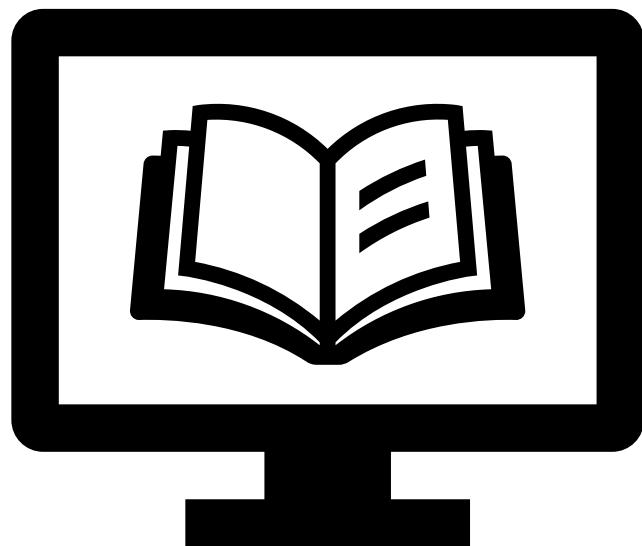
Opgesteld gezamenlijk met therapeuten voor (beginnende) therapeuten die VR willen integreren in hun behandeling met AR op Maat

Informatie

Dit werkboek is opgesteld als gevolg van een kwalitatief onderzoek naar de integratie van VR in AR op Maat. De inhoud is gebaseerd op semi-gestructureerde interviews met tien behandelaren van *Transfore* en *De Waag*, het instructie handleiding van AR op Maat, en losse documenten zoals een theoretische handleiding, werkblad, en relevante aanwijzingen die gebruikt worden door de therapeuten tijdens het gebruik van AR op Maat.

Dit werkboek dient ter ondersteuning van behandelaren die VR willen gebruiken in hun behandeling met AR op Maat. Het werkboek bevat:

- Algemene suggesties over hoe een VR scenario opgesteld kan worden en relevante aanwijzingen waar de behandelaren rekening mee moet houden (bladzijde 54).
- Overzicht van de onderwerpen waar de diverse scenario's onder vallen die geoefend kunnen worden in de verschillende AR op Maat modules met VR (bladzijde 55)
- Concrete VR scenario's en voorbeelden voor elke AR op Maat module (bladzijdes 56 t/m 66)

DISCLAIMER: De gegeven scenario's zijn alleen ter inspiratie. Het dient ter alle tijden aangepast te worden op de persoonlijke triggers en helpers van de cliënt. Gezamenlijke besluitvorming dient daarom toegepast te worden door de VR sessie samen met de cliënt te creëren.

Dit betekent ook dat er samen gekeken moet worden naar de moeilijkheidsgraad en hoeveelheid triggers die toegepast worden. Let hierbij op dat er altijd actieve communicatie tussen therapeut en cliënt nodig is om te bepalen of er een stap verder gegaan kan worden.

Algemene suggesties

- Blik terug naar de vorige sessie en sta stil bij de afgelopen dagen of week.
    - Vraag de cliënt om situaties die triggerend zijn geweest.
    - Zo nodig: geef uitleg over de AR op Maat module
    - Beschrijf de vaste onderdelen van de VR sessie.

- Stel het scenario op, houd het simpel en beperkt.
    - Bespreek de locatie en tijdstip: is het in een omgeving waar het overdag is of donker?
    - Bespreek de (groep) karakters: is het een groep jongeren of een politieagent.
    - Bespreek de drukte op de locatie.
    - Bespreek achtergrond geluiden.
    - Bespreek wat er gaat gebeuren en wat er verwacht wordt van de cliënt.

- Bespreek duidelijk dat het doel niet is om de cliënt boos te maken. Het doel is merendeels om de triggers die bijdragen aan de agressie te identificeren en vervolgens te oefenen met verschillende copingstijlen (e.g., time-out nemen, afleiding zoeken) en helpers (e.g., boek lezen, tellen tot 10) zodat de cliënt de kans krijgt om te onderzoeken welke passen en werken, en welke niet.
    - Let op dat er een opbouw is in moeilijkheidsgraad.

- Bespreek van tevoren met een cliënt dat de sessie op elk moment kan worden stopgezet wanneer de spanning of het ongemak te hoog oploopt.
    - Bespreek een stopteken of stopzin.

- Bewegen in de VR omgeving en het praten met virtuele tegenspelers kan in eerste instantie wat onnatuurlijk aanvoelen en frustratie oproepen.
    - Geef de cliënt voldoende tijd om hieraan te wennen en bespreek dit van tevoren.

- Bespreek de eventuele fysieke en mentale ongemakken.
    - Denk aan eventuele misselijkheid, duizeligheid en verhoogde spanning.
        - Check regelmatig tijdens de VR sessie (met eigen stem) hoe het met de cliënt gaat: Hoe hoog is de spanning die je voelt op dit moment op een schaal van 1 tot 10?

- Zet de koptelefoon en VR bril op, en kijk hoe dat voor de cliënt voelt.
    - Probeer de cliënt in eigen stem toe te spreken.
    - Is de cliënt gewend aan de virtuele situatie? Begin dan met de VR scenario.

Overzicht

In het overzicht hieronder is te zien welke onderwerpen terugkomen in de verschillende AR op Maat modules.

Een voorproefje van de VR geven

➢ Introductiemodule (blz. 60).

Het identificeren van triggers, copingstijlen en vaardigheden

➢ Introductiemodule (blz. 60), Module Stressreductie (blz. 62), Module Impulscontrole (blz. 63), Module Beheersingsvaardigheden (blz. 64), Module Emotieregulatie (blz. 67), Module Conflicthantering (blz. 68).

Het versterken van helpende gedachten en zelf-reflectieve vaardigheden

➢ Introductiemodule (blz. 60), Module Beheersingsvaardigheden (blz. 64), Module Anders denken (blz. 65), Module Waarnemen en Interpreteren (blz. 66), Module Emotieregulatie (blz. 67), Module Conflicthantering (blz. 68), Module Partner in Beeld (blz. 69), Module Zelfbeeld (blz. 70).

Het versterken van lijfelijke signalen

➢ Introductiemodule (blz. 60), Module Stressreductie (blz. 62), Module Impulscontrole (blz. 63), Module Anders denken (blz. 65), Module Emotieregulatie (blz. 67).

Het verbeteren van copingstijlen en vaardigheden

➢ Module Stressreductie (blz. 62), Module Impulscontrole (blz. 63), Module Beheersingsvaardigheden (blz. 64), Module Partner in Beeld (blz. 69).

De client voorbereiden op sociale situaties

➢ Module Stressreductie (blz. 62), Module Impulscontrole (blz. 63), Module Beheersingsvaardigheden (blz. 64), Module Emotieregulatie (blz. 67), Module Conflicthantering (blz. 68), Module Partner in Beeld (blz. 69), Module Zelfbeeld (blz. 70).

Het vermogen van de client om grenzen te stellen te versterken

➢ Module Network (blz. 61), Module Stressreductie (blz. 62), Module Emotieregulatie (blz. 67), Module Conflicthantering (blz. 68), Module Zelfbeeld (blz. 70).

De sociale participatie van de cliënt versterken

➢ Module Network (blz. 61), Module Beheersingsvaardigheden (blz. 64), Module Anders denken (blz. 65), Module Waarnemen en Interpreteren (blz. 66), Module Zelfbeeld (blz. 70).

1. Introductiemodule

Deze module staat in het teken van het motiveren, empoweren, het opstellen van een veiligheidsplan, het bieden van psycho-educatie, inzicht krijgen in eigen agressieketen, veiligheidsmanagement en het opbouwen van een behandelrelatie.

Zie het instructie handleiding van AR op Maat voor de volledige omschrijving.

Scenario's in VR

- Een (korte) rondloopsessie door een rustgevende omgeving zoals het park zonder triggers om te kijken of cliënt geïnteresseerd is in VR.
    - o De cliënt wordt gevraagd om te focussen op zijn lijfelijke signalen.
        - ▪ Hoe voelt dit?
        - ▪ Wat valt er op?
        - ▪ Waar gaat je aandacht naar uit?
        - ▪ Hoe gaat het met de spanning?

- Een catwalk waar de cliënt intensiteit van triggers toeneemt van de hoeveelheid tegenspelers die op hem/haar afstapt.
    - o De gezichtsuitdrukkingen van de tegenspelers worden steeds negatiever en gemener.
    - ➢ Doel: de cliënt wordt bewust van zijn lijfelijke signalen, emoties en gedachten.

- Een rondloopsessie in de bus waar de cliënt geleidelijk wordt blootgesteld aan meerdere triggers.
    - o Er stappen steeds meer mensen in de bus.
    - o Er worden meer gesprekken gevoerd op de achtergrond
    - o Er wordt steeds hardere muziek afgespeeld.
    - ➢ Doel: de cliënt wordt gevraagd om helpende gedachten in te zetten vervolgens gaan cliënt en therapeut in gesprek over deze gedachten buiten de VR.

2. Module Netwerk

Er wordt samen met de cliënt een netwerkanalyse verricht. De zorgen die er zijn kunnen immers niet los worden gezien van de sociale omgeving van de cliënt. Er wordt in beeld gebracht welke netwerkleden steun kunnen bieden en op welke manier. Naast het realiseren van een meer steunend netwerk is het de bedoeling dat er zicht komt op mogelijke netwerkleden die gevoelens van stress of negatieve emoties versterken of die de cliënt aanzetten tot agressief gedrag. Vervolgens wordt bekeken wat de cliënt nodig heeft om hier weerbaarder in te worden.

Zie het instructie handleiding van AR op Maat voor de volledige omschrijving.

Scenario's in VR

- Een rollenspel in een winkelstraat met een starende drugsdealer.
    - De drugsdealer probeert een gesprek te voeren met de cliënt om hem aan te sporen tot het nemen van drugs
    - OF: de drugsdealer vraagt om geld te lenen voor drugs.
    - ➢ Doel: de cliënt wordt gevraagd om zijn grenzen aan te geven en afstand te nemen van de situatie.

- Een rollenspel op kantoor met een formeel geklede tegenspeler.
    - Tegenspeler gebruikt overdreven lichaamstaal niet passend bij de inhoud van het gesprek.
    - Toevoeging nog een karakter die het gesprek steeds stoort door op de deur te kloppen en vragen te stellen.
    - ➢ Doel: het gesprek wordt in principe steeds verstoort waardoor de cliënt leert om te gaan met ruis.

- Een rollenspel in een winkelstraat waar de cliënt vrijwilligerswerk doet met een collega.
    - De cliënt vindt deze collega aantrekkelijk/leuk en wilt graag de collega uitnodigen om een drankje te doen.
    - OF: de cliënt wordt benaderd door de collega met dezelfde uitnodiging.
    - ➢ Doel: de cliënt leert om sociale gesprekken aan te gaan of op verzoeken in te gaan.

3. Module Stressreductie

De cliënt leert meer greep te krijgen op eigen spanningen en stress en past vaardigheden toe om stress en boosheid te verminderen. Hierdoor zal de informatieverwerking beter verlopen en neemt het agressieve gedrag af. Er wordt tijdens deze module o.a. gewerkt met diverse ontspanningsoefeningen, bewerkte mindfulness oefeningen, en de oefening 'wisselen van aandacht' met als doel het snel verminderen van boosheid / hoge arousal.

Zie het instructie handleiding van AR op Maat voor de volledige omschrijving.

Scenario's in VR

- Een rollenspel in de supermarkt waar de cliënt wordt beschuldigd van diefstal in de winkel.
  - o Een winkel medewerker loopt op de cliënt af en zegt dat hij/zij zag dat de cliënt iets had gestolen.
  - o Er hangen zichtbare camera's in de winkel.
  - ➢ Doel: de cliënt leert te oriënteren op een passende vaardigheid om deze situatie op te lossen
    - ▪ De passende vaardigheid verschilt per cliënt, maar denk aan: argumenten en overtuigen of onderhandelen.

- Een rollenspel in de supermarkt waar de cliënt een artikel wil terugbrengen maar dit wordt niet geaccepteerd.
  - o Een winkel medewerker geeft aan dat het artikel te laat is om het artikel terug te brengen OF dat het artikel niet gekocht is in dat winkel.
  - o De cliënt heeft het bonnetje met de juiste gegevens.
  - ➢ Doel: de cliënt leert te oriënteren op een passende vaardigheid om deze situatie op te lossen
    - ▪ De passende vaardigheid verschilt per cliënt, maar denk aan: argumenten en overtuigen of onderhandelen.

- Een rollenspel in een kantoor met een huisbaas.
  - o De cliënt voert een gesprek met zijn huisbaas over zijn energierekening.
  - o De cliënt vindt dat de rekening te hoog is.
  - o De huisbaas vindt dat het terecht is en zal de energierekening niet verlagen.
  - ➢ Doel: de cliënt bereidt een toekomstig gesprek voor op de echte wereld.

4. Module Impulscontrole

De impulscontrole wordt verbeterd door onder andere te werken met bewerkte mindfulness oefeningen gericht op het leren aandacht richten (langer kunnen concentreren). De cliënt leert zijn impulsen beter te herkennen en oefent met vaardigheden om deze gemakkelijker te kunnen uitstellen en te beheersen.

Zie het instructie handleiding van AR op Maat voor de volledige omschrijving.

Scenario's in VR

- Een rollenspel in het woonhuis waar de cliënt ruzie heeft met de partner.
    - o De cliënt wordt verweten dat die iets heeft gedaan OF niet heeft gedaan.
    - ➢ Doel: de cliënt wordt bewust van zijn lijfelijke signalen, gedachten en emoties, en past passende vaardigheid toe om in gesprek te gaan met de partner.
        - ▪ De passende vaardigheid verschilt per cliënt, maar denk aan: argumenten en overtuigen of onderhandelen.

- Een rollenspel op het schoolplein waar kinderen spelen met een voetbal.
    - o De voetbal wordt meerdere keren afgeschoten op de cliënt.
    - o De cliënt geeft aan dat ze dat moeten stoppen en schiet de bal weg.
    - o Een ouder van deze groep kinderen komt verhaal halen bij de cliënt.
    - ➢ Doel: de cliënt herziet de consequenties van ondernomen actie en past zijn gedrag aan.

- Een rondloopsessie waar de cliënt ziet dat een oude man ruzie maakt met de politie.
    - ➢ Doel: de cliënt wordt bewust van zijn lijfelijke signalen, gedachten en emoties, en past passende vaardigheid toe door ergens anders op te focussen of weg te lopen.

5. Module Beheersingsvaardigheden

Er wordt geoefend met het toepassen van diverse beheersingstrucs. Hierbij wordt wederom gebruik gemaakt van bewerkte mindfulness oefeningen. Voor het leren toepassen van beheersingsvaardigheden oefent de cliënt met triggers die boosheid oproepen. Ook wordt er geoefend met het tijdig leren nemen van een time-out.

Zie het instructie handleiding van AR op Maat voor de volledige omschrijving.

Scenario's in VR

- Een catwalk waar er actief gevraagd wordt naar de lijfelijke signalen, gedachten en emoties bij de patiënt zodat hij/zij bewust wordt van de signalen dat zijn of haar spanning op loopt.
  - o De cliënt wordt verkeerd aangekeken door een groep jongeren.
  - o EN/OF: hoort een negatieve opmerking van een groep jongeren.
  - ➢ Doel: de cliënt wordt bewust van zijn lijfelijke signalen en past passende vaardigheid toe.
    - ▪ De passende vaardigheid verschilt per cliënt, maar denk aan: argumenten en overtuigen of onderhandelen.

- Een rollenspel in de bus waarbij iemand niet wil opstaan voor een bejaarde medereiziger.
  - o De cliënt wordt gevraagd de stop-denk-doe methode toe te passen in combinatie met de passende vaardigheid.
  - ➢ Doel: De cliënt vergroot zijn zelfvertrouwen door een probleemsituatie op te lossen.

- Een rollenspel in het park waar een groep jongeren naast de cliënt komen zitten en harde muziek opzetten.
  - o De groep jongeren zet de muziek steeds harder.
  - ➢ Doel: de cliënt wordt bewust van zijn lijfelijke signalen, gedachten en emoties, en past passende vaardigheid toe door ergens anders op te focussen of weg te lopen.

6. Module Anders denken

De invloed van het denken op emoties en gedrag wordt uitgelegd (RET; Rationeel Emotieve Therapie) met het model van de vijf G's. De cliënt wordt gestimuleerd om helpende gedachten toe te passen in diverse situaties. Ook wordt de cliënt uitgedaagd zich te identificeren met iemand die tegenovergesteld denkt aan zichzelf als het gaat om disfunctionele cognities. Dit helpt om meer flexibiliteit in denken te realiseren.

Zie het instructie handleiding van AR op Maat voor de volledige omschrijving.

Scenario's in VR

- Een perspectief wissel in een woonhuis waar de cliënt een ruzie tussen zichzelf en zijn kameraad van een afstand bekijkt.
  - o De ruzie gaat over dat de kameraad meerdere keren een afspraak heeft verzet.
  - o De kameraad geeft geen reden, maar is erg emotioneel.
  - ➢ Doel: de cliënt confronteert de tegenspeler en krijgt inzicht in het eigen gedrag.

- Een rollenspel in een café waar er een (groep)discussie gaande is.
  - o De discussie gaat over vrouwen die je niet mag slaan maar mannen wel.
  - o OF: het gedrag van hooligans bij voetbalwedstrijden.
  - o De cliënt observeert en doet vervolgens mee in de discussie nadat een tegenspeler de cliënt om zijn mening vraagt.
  - ➢ Doel: de cliënt participeert mee in groepsdiscussies.
    - ▪ De discussie kan eventueel plaats vinden met één tegenspeler in plaats van een groep.

7. Module Waarnemen en Interpreteren

De module is gericht op het leren begrijpen van het verschil tussen het te snel oordelen en het onderbouwd een mening vormen. Verder is er aandacht voor bewustwording van niet-helpende gedachten die het waarnemen en interpreteren negatief beïnvloeden en dat dit kan leiden tot onnodige negatieve emoties of ruzies. Daarnaast wordt er geoefend met het neutraler interpreteren van de bedoelingen van anderen.

Zie het instructie handleiding van AR op Maat voor de volledige omschrijving.

Scenario's in VR

- Een rollenspel op de winkelstraat waar een virtuele karakter de cliënt voorbij loopt en boos aankijkt.
  - ➢ Doel: de cliënt leert uitdagende gesprekken aan te gaan en interpretaties te bespreken.

- Een rondloopsessie door het park waar de cliënt gevraagd wordt om elementen en virtuele karakters in dat park te omschrijven.
  - ➢ Doel: de client leert waarnemingen en interpretaties te bespreken.

8. Module Emotieregulatie

Het doorlopen van deze module draagt bij aan het verminderen van stemmingswisselingen en/of het beter kunnen differentiëren en vormgeven/uiten van emoties die gerelateerd zijn aan boosheid en agressie. De module helpt om emoties beter te leren herkennen (bij de cliënt zelf en bij anderen), meer greep te krijgen op emoties en emoties gemakkelijker los te kunnen laten.

Zie het instructie handleiding van AR op Maat voor de volledige omschrijving.

Scenario's in VR

- Een rollenspel in het café waar de cliënt op een (dubbel) date is met een tegenspeler.
    - De tegenspeler waarmee de cliënt op date is kijkt telkens naar een andere virtuele karakter naast hen.
    - De tegenspeler pakt telkens de telefoon er bij tijdens het gesprek.
    - De tegenspeler loopt opeens weg van het gesprek.
    - ➢ Doel: de cliënt wordt bewust van zijn lijfelijke signalen en bespreekt zijn emoties.

- Een perspectiefwisseling waar de cliënt in discussie is met de politie.
    - De cliënt neemt de perspectief aan van zijn jongere zelf.
    - De cliënt, als zich jongere zelf, observeert de discussie dat gaat over een situatie uniek voor de cliënt wat die eerder had meegemaakt.
    - ➢ Doel: de cliënt wordt bewust van zijn lijfelijke signalen, gedachten en emoties, en bespreekt zijn emoties.

9. Module Conflicthantering

In deze module wordt gewerkt aan diverse vaardigheden, die nodig zijn om op een constructieve wijze conflicten te hanteren. Denk aan het adequaat communiceren, het leren kennen van de eigen stijl in omgaan met conflicten. Er wordt inzicht gestimuleerd in weke stijl strategisch gezien het handigst is bij verschillende situaties. Hierbij is specifiek aandacht voor het leren onderhandelen. Er is ook aandacht voor het omgaan met autoriteiten, omgaan met kritiek.

Zie het instructie handleiding van AR op Maat voor de volledige omschrijving.

Scenario's in VR

- Een rollenspel in een woonhuis waar de cliënt wordt geconfronteerd door een boze buurman.
    - o De buurman geeft aan dat de cliënt heeft geparkeerd voor zijn uitrit.
    - o De cliënt vindt dat dat niet het geval is.
    - ➢ Doel: de cliënt past passende conflictstijlen en remmers toe.

- Een rollenspel in een café waar de cliënt als Ajax supporter naar een wedstrijd kijkt.
    - o Het is een wedstrijd tussen Ajax en Feyenoord.
    - o In de kroeg stapt een groep Feyenoord supporters naar binnen.
    - o De Feyenoord supporters beginnen steeds harder te schreeuwen en schelden omdat Ajax 3-0 voor staat.
    - o De cliënt wordt benaderd door een dronken Feyenoord supporter.
    - ➢ Doel: de cliënt past passende conflictstijlen toe en past zijn gedrag aan.

- Een rollenspel door het park waar de cliënt wordt gestopt door een politie agent.
    - o De politie agent stopt de cliënt en vraagt om zijn legitimatie zonder reden.
    - o De cliënt weigert dit.
    - o De politie begint te dreigen.
    - ➢ Doel: de cliënt past passende conflictstijlen en past zijn gedrag aan.

10.   Module Partner in Beeld

Tijdens deze module wordt eerst stil gestaan bij de motivatie. Dit gebeurt vaak door de partner eerst alleen te spreken. Verder wordt in ieder geval gewerkt aan het leren kennen van elkaars triggers en het leren toepassen van beheersingsvaardigheden voor als je als partner te maken krijgt met een trigger. De cliënt en partner gaan ook aan de slag met het benoemen van elkaars positieve eigenschappen en het leren onderhandelen. De rode draad wordt gevormd door te werken aan het verbeteren van de communicatie, de kwaliteit van het contact en het verminderen van conflicten.

Zie het instructie handleiding van AR op Maat voor de volledige omschrijving.

Scenario's in VR

- Een rollenspel in een woonhuis met de partner.
    - o De partner en de cliënt hebben een oplopende ruzie over de boodschappen dat de cliënt nog niet heeft gedaan.
    - ➤ Doel: de cliënt wordt bewust van zijn lijfelijke signalen en past passende vaardigheid toe door zijn grenzen aan te geven.
        - ▪ De passende vaardigheid verschilt per cliënt, maar denk aan: argumenten en overtuigen of onderhandelen.

- Een rollenspel in een woonhuis met de partner
    - o De cliënt wil een gesprek voeren met de partner over de recente gelduitgaven.
    - o De partner is van mening dat zij niet veel uitgeeft, de cliënt denkt hier anders over.
    - ➤ Doel: de cliënt bereidt een toekomstig gesprek voor op de echte wereld.

11.   Module Zelfbeeld

Deze module is enerzijds gericht op het verbeteren van de responsiviteit. De cliënt leert hierbij een positieve herinnering op te roepen en dit onder andere te versterken door lichaamshouding en helpende gedachten.

Zie het instructie handleiding van AR op Maat voor de volledige omschrijving.

Scenario's in VR

- Een rollenspel op het schoolplein waar de cliënt als zich jongere zelf speelt.
    - o De cliënt wordt door een ouder zoals zijn vader of een leerkracht negatief aangesproken.
    - o De ouder is niet trots op het testresultaat van de cliënt en is boos op hem/haar.
    - ➢ Doel: de cliënt wordt gevraagd om helpende gedachten in te zetten vervolgens gaan cliënt en therapeut in gesprek over deze gedachten buiten de VR.

- Een perspectiefwissel in de gevangenis waar de cliënt in gesprek gaat met zichzelf in een gevangenis.
    - o De cliënt mag bijna vrijuit maar vertoont nog niet de juiste instelling.
    - o De cliënt probeert zichzelf te overtuigen om te veranderen door de nadelen van het gedrag te bespreken.
    - ➢ Doel: de cliënt wordt gevraagd om inzicht te krijgen in het eigen gedrag door voor- en nadelen te benoemen van zijn gedrag.