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A New World beyond boundaries: An exploration of Virtual Reality within Drama Therapeutic sessions by assessing Role Theory & Method in correlation to Avatars for clients displaying anxiety symptoms.

by

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10 February 2023

Submitted in partial fulfilment of the requirements for the degree

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In the

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UNIVERSITY OF THE WITWATERSRAND

Supervisor: Monique Hill

DECLARATION

I, the undersigned, hereby declare that the work contained in this research report is my own original work and that it has not previously, whether in its entirety or in part, been submitted to the University of the Witwatersrand or any other for the purpose of a degree. I have used the author-date convention for citation and referencing. Each significant contribution to and quotation in this essay from the work or works of other people has been acknowledged through citation and reference. This reflection is my work. I have not allowed and will not allow anyone to copy my work with the intention of passing it off as their own work. I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my own unaided work or that I failed to acknowledge the source of the ideas or words in my writing. My Ethics Clearance number is WSOA202111002.

Name: Lebogang Mokgatle

Date: 10 February 2023

Signature: 

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- To my lord and saviour **Jesus Christ,** for the resilience given to me in my research journey, thy name will always prevail.
- To my **Mother and my Sister, Mpho Marota and Boitumelo Mamatshele,** for your continual prayers and grounding that you have given me in moments of overwhelm. Your faith in me fulfilling my passion and purpose have carried me in times where I have broken down and often felt like giving up. Kea Leboga.
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TABLE OF CONTENTS

Declaration……..ii

Acknowledgements ……..iii

Abstract ……..……...iv

List of Figures……...vi

Glossary of terms……..vii

Research Title……1

Introduction & Context of research……1

Research Questions…….……...5

Theoretical Framework……..……5

Note on VR hardware choices…….…….7

Literature Review ……11

Psychological interventions for anxiety…….…..20

Research Method…….……24

Research Findings…….……..…….27

Drama Therapy core principles in relation to VR.…….……..28

Avatars vs Archetypes in relation to role……32

VR session planning: Connections between Medical field and Drama Therapy……35

VR and the rehabilitation field…….……39

Physiological considerations of VR engagements……..41

Approaches in Psychotherapy & Drama Therapy for anxiety……44

Discussion……57

Recommendations and Limitations……..72

LIST OF FIGURES

Figure 1. Qualitative performance of different VR systems ……...…10

Figure 2. Market value of the virtual reality market in South Africa from 2016 to 2023 by category……...…….11

Figure 3. Amelia virtual care VR driving simulation…….……..22

Figure 4. Process used for VR in the medical field…….…….…36

Figure 5. Mirror Feature in Rec Room…….……..……...48

Figure 6. Mindfulness VR capabilities in the Amelia virtual care application…….……..50

Figure 7. Avatar customization available in Rec Room.……61

Figure 8. Example of social atom.……..62

Figure 9. Diagram of VRDT and Role Method model.…….65

Figure 10. VR users visiting different parts of the world using the Wander VR Application 69

Glossary of Terms

Drama Therapy: "Drama Therapy is the intentional and systematic use of drama and theatre processes to achieve the therapeutic goals of symptom relief, emotional, cognitive and physical integration, and personal growth" (UKEssays, 2018: NPN).

Role Method: Role Method is a Drama Therapy technique focusing on an individual's ability to express a variety of roles in their daily lives.

Virtual Reality (VR): Virtual Reality is a computer-generated simulation that occurs using electronic equipment such as VR goggles and immerses the user in a three-dimensional environment.

Role Repertoire: The range of different roles that an individual plays/can play in their lives. It is the actual and tangible form that the ego takes at a specific moment or situation.

Avatar: An Avatar within the virtual world is a icon or figure that represents the user as they see the virtual world from the avatar's point of view. The avatar is fully customizable by the user.

Immersion: The perception of being physically present in the virtual world. The VR user is invested in the virtual world that they become unaware of what is happening around them in the real world.

Anxiety Symptoms: These are all the mental features that may indicate an individual's mental wellbeing, mood and other mental processes leading to anxious/anxious like behaviour.

Dramatic Projection: "Dramatic projection within Drama Therapy is the process by which clients project aspects of themselves or their experience into theatrical or dramatic materials or into enactment, and thereby externalize their inner conflicts" (Jones, 1996: 101).

Embodiment: From a Drama Therapeutic lens, **"**Embodiment concerns the way a client physically expresses and encounters material in the 'here and now' of a dramatic presentation" (Jones, 1996: 114).

Distancing: This is when the therapist incorporates elements such as symbolism and role play that may represent an element of the client's life through dramatic material.

Embodied Cognition: "Embodied cognition is an approach to cognition that has roots in motor behaviour. This approach emphasizes that cognition typically involves acting with a physical body on an environment in which that body is immersed" (Schneegans & Schoner, 2008: 245). This definition falls in the VR engagement and the context of the client engaging in the virtual environment

Research Title

A NEW WORLD BEYOND BOUNDARIES: AN EXPLORATION OF VIRTUAL REALITY WITHIN DRAMA THERAPEUTIC SESSIONS BY ASSESSING ROLE THEORY & METHOD IN CORRELATION TO AVATARS FOR CLIENTS DISPLAYING ANXIETY SYMPTOMS.

Introduction & Context of research

The transdisciplinary use of game technologies and digital media for improving the therapeutic benefit and quality of life for a wide range of people is an area of study that is rapidly evolving into a vibrant field in mental and physical healthcare. (Brahnam & Brooks, 2015: 153).

In the 21st century, technology is constantly evolving around us, with innovations such as smartphones, smart TVs and smart cars that look to make life easier for us (Marr, 2021). Adapting to the constantly evolving innovations around us could prove beneficial for the human race, particularly when it comes to mental health. One of the most notable recent innovations to be incorporated into mental healthcare is Virtual Reality, or VR (McMahon & Boeldt, 2022).

VR is a computer-generated simulation that is accessed using VR goggles. The simulation is three-dimensional, and it provides realistic qualities that resemble real-life structures and can be interacted with in a virtual world. Although many VR companies focus on gaming, there are specific companies, such as Amelia virtual care *(2022),* who focus on developing VR technology that is specifically tailored for therapeutic interventions. In its motivation for the transition to VR interventions, the company lists several advantages that VR presents when addressing mental health. Some of the advantages that Amelia virtual care (2022) lists is how VR is a non-invasive and safe technology that uses Head Mounted Displays (HMDs) to isolate external stimuli using configurations that can be tailored to the users' needs. VR also allows the therapist to control and observe what the client is seeing in the virtual environment which can allow them to detect which stimuli have greater clinical relevance (Amelia virtual care, 2022).

An article by FocusOnVR (2019) titled *VR Uses: VR for Therapy and Mental Health* highlights crucial processes that can be used to address anxiety. These processes range from teaching the

client to practice breathing, meditation, calming techniques as well as teaching clients to be mindful of their anxious symptoms (FocusOnVR, 2019). A combination of virtual scenes, colours and natural sounds can assist in the treatment of anxiety symptoms by creating an immersive experience for clients that allows for a calm exploration. This focus on anxiety in particular becomes important when we focus in on South Africa in 2022, and the rise in anxiety that was seen during the COVID-19 pandemic (Arndt et al: 2020).

During the COVID-19 pandemic, Arndt et al. (2020) reported that there was a significant impact on the anxiety levels of the public due to aspects such as job loss, illnesses, and the death toll that the pandemic brings. Arndt et al. (2020) shows how the lockdown regulations that have resulted from an attempt to contain the COVID-19 pandemic have impacted the general South African economy at large, with wage earnings falling by about 30% and earnings by lower educated workers falling by more than 40%. The effect this has on households is significant, with food security, access to education and general stress and anxiety for breadwinners all being factors. I have personally witnessed my sister lose her job and experience panic attacks due to her anxiety regarding getting employed. As a drama therapist in training, I was interested in combining my interest in the burgeoning field of VR with drama therapy techniques, in order to better serve the needs of anxious South Africans post-COVID.

According to Johnson & Emunah (2009) Drama Therapy can be defined as a therapeutic approach that uses drama and theatre techniques which may include role-playing, improvisation, acting out stories (all elements of the performance arts) to give clients psychological therapy in an expressive form. The Drama Therapeutic approach assists clients in various modes of expression where they can use their bodies to express something that they cannot express using words. Drama Therapy also allows for clients to explore different roles (such as the role of a confidant, helper or listener) in order to broaden their perspective of what they may be going through in viewing their situation from an objective point of view, rather than their own subjective viewpoint.

When looking at Drama Therapy in relation to anxiety and how it can assist in addressing the mental illness, Drama Therapy can be found to have fundamental differences from other therapeutic interventions such as cognitive behavioural approaches. This is because, according to Johnson (2009), Drama Therapeutic spaces focus on the client's story and the personal narratives that they bring. An anxious client in a drama therapy session can explore the various triggers as well as events that the anxiety stems from. This means that rather than tackling the

symptoms alone, drama therapy takes a holistic approach that looks at the client's entire story which can help the client address the events that triggered the anxiety.

With this in mind, this inquiry sought to answer the question of to what extent virtual reality can be used in Drama Therapy sessions to address anxiety symptoms. Furthermore, the research focused on the application of virtual reality within the South African context as with our country's socio-economic standing, it becomes crucial to address whether VR is accessible for mental healthcare in the country. When it comes to South Africa's socio-economic context and the high rate of unemployment, it becomes important to increase access to mental health services for South African citizens. Furthermore, the cost of living is increasing at an exponential rate as Arndt et al (2020) expands and it does not assist South Africans that salary increases are not equivalent to the inflation rates in South Africa. This may impact the general population's anxiety by being unsure as to whether they will survive the month with the salary and wages they receive from work. Fortunately, there are cost-effective solutions that are available for therapists and clients with smartphones in the form of *Google Cardboard*. Android Authority (2015), for example, released a YouTube video on how to create DIY VR goggles using cardboard and plastic lenses which could increase access to VR interventions, despite South Africa's socio-economic standing.

Considerations of research interest and problem statement

There are many correlations between drama therapy and VR. Robert Landy's (2009) Role method involves having a client identify and explore the roles that they play in their day to day life, with the goal of allowing the client to expand the number of roles available to them, and achieve better flexibility in how they approach life's challenges. Just as Landy's (2009) Role Method focuses on the client embodying a role in the therapeutic space, so too does VR allow for the user to embody an avatar in a virtual space. Both VR and drama therapy offer ways for the client/user to envision how the avatar or role looks, and the mannerisms and thought patterns of the avatar/role before engaging in a ritual to "become" the character.

The research has, however, taken into consideration how VR may have an effect on an individual who may live in over-stimulated environments (i.e. environments that are crime ridden, cramped households where there is no privacy due to large families etc.) as they may become overwhelmed by VR. Exposing the client to an unfamiliar digital environment that is operated by a device they are not accustomed to operating may result in the client feeling

overwhelmed, as these may be simultaneous over-stimulants for them. In an article by Hendriksen (2018) published in *Psychology Today*, she makes mention of how technology insulates us from small uncertainties that may leave us vulnerable to bigger ones and this correlates with how VR may overwhelm the client if the therapist does not prepare them first. The therapist can prepare the client by walking them through what VR is and what it entails regarding usage, ergonomics and the actual engagement. A VR engagement has the potential to aggravate a client's anxiety and instead of assisting the client, worsen their state. I have thus taken into account various contexts and how they affect individuals, particularly from a South African lens and more particularly, underdeveloped communities.

Regarding the statement of the problem, Sinethemba Makanya's (2014) notion of the African perspective of health being from a sense of community and the roles that each member plays within that community correlates with an expansion of role repertoires. Role repertoire according to Landy (2009) is the number of roles an individual inhibits, and they are able to shift roles according to a situation that they are experiencing. The expansion of our role repertoires can contribute towards a healthy ecosystem where members of the community can equip themselves with healthy coping mechanisms and tools that aim to address factors that may make one anxious or present anxiety symptoms. VR has the potential to give the therapist tools that can be applicable in teaching the client how to manage their anxious symptoms as will be highlighted from the lens of McMahon & Boeldt (2022) and the Amelia virtual care guidelines (2022). Role engagement in a Virtual Reality Drama Therapy (VRDT) session could develop the persons different roles towards potentially dealing with the anxious symptoms as will be explained in the discussion section. Having individuals who are open to therapy and equipping themselves with tools in a context where therapy has a negative connotation in communities, can help encourage a healthy outlook not only for the individual, but also potentially the community at large. This means that community members can expand their role repertoire by exploring roles where they are teachers, leaders and concurrently learners who can access these roles to fit various situations and contexts where they are able to address factors that may contribute to their anxious states. Therefore, I approached the research from a perspective that the client can explore various roles within a virtual environment as several avatars in order to create a healthy ecosystem for themselves, for a reintegration into society inhibiting the appropriate role system.

Research questions

The questions that the research aims to answer are:

- To what extent can virtual reality be used in a Drama Therapy session to address clients with anxious symptoms?
- What ethical considerations would need to be considered for a VR exploration with a client displaying anxiety symptoms?
- How can avatars allow for an expansion of role repertoire and assess the triggers of the client in VR?
- What perspective could be gained from a comparison of applications and limitations of VR in other therapeutic fields, that could be applied in VRDT.
- How can VRDT be applicable within the South African context?

In essence, the above-listed questions will be answered by analysing several perspectives and texts from different scholars. A thematic map of VR will be drafted that informs a hypothetical engagement with a client displaying anxiety symptoms. With a comparison of the applications, limitations and possibilities of VR, various valuable considerations into the incorporation of VR in the Drama Therapeutic field will be made and these will provide a lens on how VR could be considered in the drama therapy space.

Theoretical Framework

Anxiety symptoms in the South African context & across different disorders

According to the DSM-V tr (APA, 2022) an individual needs to display a minimum of 5 symptoms before a psychological diagnosis can be made. The reason this research is choosing to focus on anxiety symptoms rather than a diagnosis is due to anxiety being a consistent symptom in several disorders including general anxiety disorder, social anxiety disorder, depression, post-traumatic stress disorder etc. As previously mentioned, some individuals in South Africa may be displaying anxiety symptoms but have not been diagnosed due to a lack of access to mental healthcare practitioners, or because of certain stigma associated with seeking mental health support. I will therefore be approaching the research from a broad lens of anxiety symptoms and taking into consideration the different environmental factors that can contribute towards reaching an anxious state, not as a diagnosis or specifically a strictly clinical lens, but from a societal and environmental causation that may lead to individuals experiencing anxiety symptoms. I am particularly interested in the cultural aspects, including the

environmental factors like South Africa's socio-economic status, the education system and registration issues experienced by primary and secondary scholars etc. that could firstly contribute to how anxiety is viewed in certain communities and secondly, what effect this may have on the client's anxiety.

Role Theory & Method

Landy's (2009) Role Theory and Role Method are pertinent and serve as frameworks for this study. Landy's (2009) perspective of role assumes that human beings play a variety of roles in their daily lives and contexts. Through an interaction between their roles and their contact with others from the social world, the individual develops their own role system. Landy (2009) believes that human personality can be a construct conceived as a dynamic system of roles in which each role represents a single aspect. Landy (2009) further claims that an individual's ability to interact with more roles could lead to a dynamic balance. Landy (2009) argues that this represents a healthy management of the human personality, which correlates with the South African perspective of health being roles that individuals play within the community and the sense of the community representing health. This will be further expanded on in the Role Method (the eight-step process) section of the paper.

Landy (2009) mentions how dramatic action (i.e. social interactions and nurture/care) is a central feature of human existence and engagement in dramatic play can enhance an individual's ability to support and maintain a flexible and healthy role system that copes with the human condition. I opt to link the dramatic action with dramatic play in the form of an exploration in a virtual environment through a Drama Therapeutic lens. Grinberg et al (2012:43) in their article on Dramatic play state "[d]ramatic play offers a platform to practice the tolerance needed in order to accept life's ambivalence, and the courage to see other aspects of ourselves. This is the core of the healing potential inherent in drama". It is my hypothesis that the use of avatars within a VRDT session may allow the client who displays anxious symptoms to uncover and explore different roles within themselves. This can provide a platform for them to extract qualities or possible coping mechanisms for themselves in the space as "because roles are interconnected, any changes effected in a given role inevitably influence the rest of the system" (Grinberg et al, 2012:43). This theoretical lens provides the basis for a VRDT session, and Role Method will be explored further and, in more detail, later in this paper.

A note on VR hardware choices

According to Caponnetto, Triscari, Maglia & Quattropani (2021) there are different types of immersion that can be experienced in VR and the level of immersion can be determined by the type of system one uses for the VR engagement. Caponnetto et al. (2021) review the application of VR in the treatment for social anxiety disorder but for the purpose of this section of the research, I focus on their accounts of the types of immersion available in VR. The different systems that exist within VR are: non-immersive (desktop) systems, semi-immersive projection systems as well as fully immersive head-mounted display systems. In an article titled *5 types of virtual reality – creating a better future,* Sultan (2022) refers to the above-mentioned systems as the three main categories in VR. It is pertinent to note the different types of immersions in detail, with particular emphasis on the one which will be applicable to the hypothetical Virtual Reality Drama Therapy (VRDT) session.

The first system that I will speak to is the non-immersive system. According to Sultan (2022) these are systems that are considered to be the least immersive due to the user viewing the virtual environment through a portal or window by utilizing a standard high-resolution monitor. I had considered the utilization of this system for clients as a form of psychological projection. However, due to the interaction with the environment through keyboards, mice, and controllers, the level of immersion would make the engagement too over-distanced. The over-distanced state entails those that place the client in a logical or 'thinking' state, rather than an emotional one. There are some advantages in using over-distancing devices in that it does not require the highest level of graphics performance and the system can be regarded as the lowest cost VR solution that is applicable to many applications (Caponnetto et al., 2021). However, when it comes to the hypothetical VRDT sessions, the perception of scale – which refers to the ability of the user to have a 360-degree view of the environment – is removed (Sultan, 2022). This could have a less significant impact for the client in engaging in a role without embodying the actual character, increasing the distancing for them. This is more considerable when regarding an exploration using the role method that would require the client to embody the role in order to make more connections between themselves and the character/avatar. These non-immersive devices would be beneficial for much of the South African populace, as the current socio-economic status of the country are likely to afford non-immersive device.

Semi-immersive projection systems comprise of relatively high-performance graphics computing systems that can be accompanied by either a large screen monitor, screen projector

system or multiple television projection systems (Sultan, 2022). The semi-immersive projection system uses a wide field of view and because of this, it brings an increased sense of immersion for the client. This can be beneficial for the immersion of the client as they are able to navigate the virtual environment using VR handheld controllers or haptic gloves. According to Perret & Poorten (2018) haptic gloves are wearable devices in the VR setting. They allow users to experience realistic touch through advanced tactile feedback. Haptic gloves can improve the immersion aspect of VR for the client as it adds depth to physical interactions in the virtual environment as well as provides sensory feedback for the user (Perret & Poorten, 2018). A disadvantage of haptic gloves would be how costly they are to purchase, as well as the fact that some users find the gloves heavy to operate.

Semi-immersive systems provide more immersion for the user than non-immersive systems due to the navigation of the virtual environment by the client, as well as the higher quality of graphics that it provides. When it comes to the hypothetical VRDT session, the disadvantageous element of using a semi-immersive projection system is that the client is still aware of their immediate environment, and this could affect their level of immersion in the therapeutic space. From a Drama Therapeutic perspective, it could possibly be more beneficial to immerse the client fully as using a semi-immersive system could have them too conscious of what's going on around them. These semi-immersive devices allow for adequate distancing for clients.

Partial awareness of the virtual environment and the real world has both advantages and disadvantages for the client. For instance, should a client feel overstimulated, they are still able to realize that they are partaking in a non-realistic VR session without much guidance from the drama therapist. On the other hand, if they are over-distanced and/or under-stimulated, semi-immersive devices provide just the needed amount of stimulation to get the client invested in the virtual environment. This is essential for role exploration as Landy (2008) emphasizes the importance of how much a client invests in the role they're exploring (in this case the avatar). Coupling Landy's (2008) reasoning for adequate distancing with the provided information about semi-immersive devices, one can deduce that semi-immersive devices can possibly bring about more therapeutic benefits for the client compared to non-immersive devices.

Fully immersive head-mounted display (HMD) systems in VR use small monitors which are placed in front of each eye. These monitors provide stereo and bi-ocular images for the user (Sultan, 2022). Unlike semi-immersive projection systems, fully immersive HMDs place two

screens of about 50-70mm close to the eye but the image appears further away from the user because of its optical system (Caponnetto et al. 2021). The level of high immersion that this system provides is due to the design of the HMD which either partially or fully excludes the user's view of the real world and enhances their field of vision of the virtual environment or computer-generated world. Full immersive VR gives a high sense of situational awareness that the non-immersive and semi-immersive systems do not offer. This element becomes important in Jones' (2008) life-drama connection principle in drama therapy. Jones (2008) expands on this importance by highlighting how a realistic and immersive role engagement gives capabilities of significant levels of connections that might symbolize the client's aspects of self if executed correctly. In my recommendation, it is thus important to provide an experience of the high sense of immersion that a fully immersive VR system utilizing an HMD offers for clients. Fully immersive systems can therefore utilize a healthy amount of distancing through the immersive capabilities that HMD offers. By the client being immersed in using HMDs, they are able to focus on the avatar as an extension of themselves. In the invocation of role as Landy (2009) highlights, the client's engagement as the avatar has the potential of surfacing the underlying triggers that the client has not confronted, which is equivalent to the immersion in the avatar's role in a VR environment.

Out of the three immersive systems, I find the fully immersive HMD to be the most suitable system to utilize for the hypothetical VRDT session. To provide context on why I recommend the fully immersive VR system, below is a comparison between the different VR systems and the level of functioning for each feature in the systems as Kalawsky (1996) reported.

Qualitative performance of different VR systems
(adapted from Kalawsky, 1996)

Qualitative Performance			
Main Features	**Non- Immersive VR (Desktop)**	**Semi-Immersive VR (Projection)**	**Full Immersive VR (Head-coupled)**
Resolution	High	High	Low - Medium
Scale (perception)	Low	Medium - High	High
Sense of situational awareness (navigation skills)	Low	Medium	High
Field of regard	Low	Medium	High
Lag	Low	Low	Medium - High
Sense of immersion	None - low	Medium - High	Medium - High

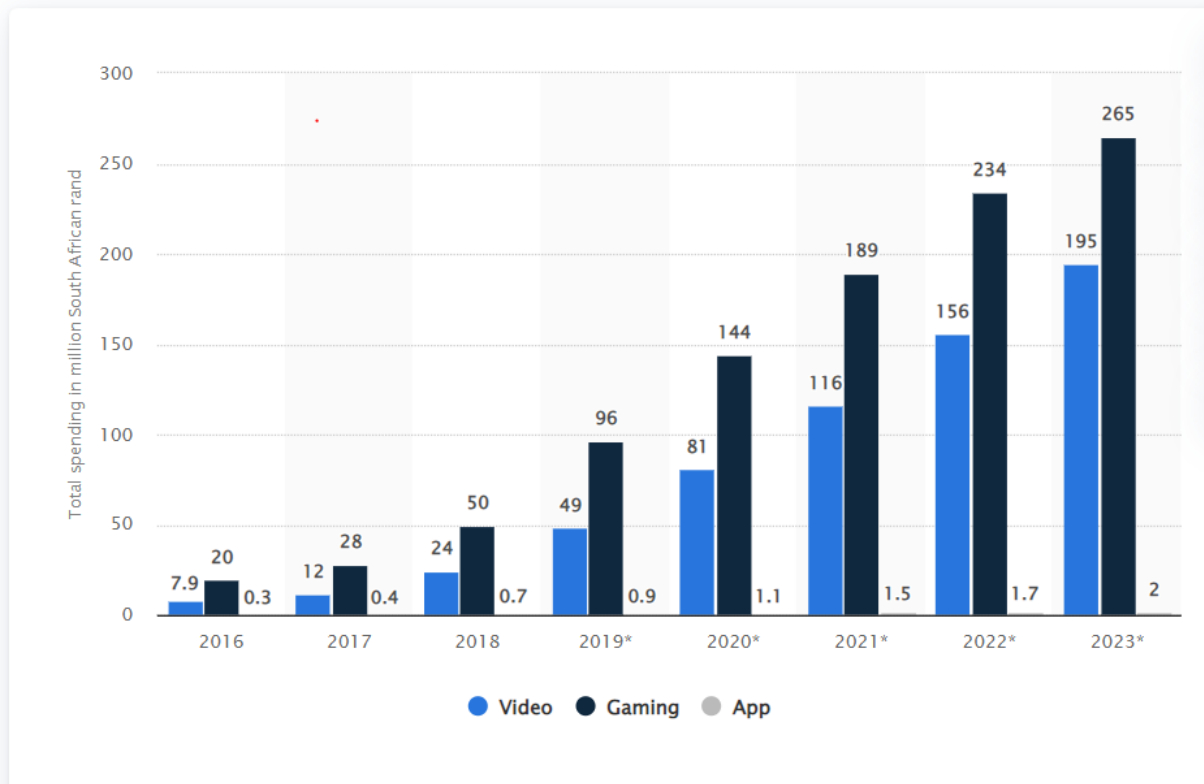
Figure 1 Qualitative performance of different VR systems

As seen above, each system has its advantages and disadvantages with regards to adapting VR for the therapeutic space. In terms of the resolution of non & semi-immersive VR, they offer a higher resolution of graphics, which can create the realistic features that the client may need, but does not provide the level of immersion that could lessen the distance for the client. This is referred to in terms of the client's interaction with the virtual environment. Full immersive VR, however, has a lower resolution compared to non & semi-immersive VR but it provides a high level of scale perception for the client. In role exploration, as Jones (2008) lays out, the investment in the avatar (role), in conjunction with the level of immersion of the client in the virtual environment could be enhanced by a fully immersive system in the client engaging and interacting as the avatar/character. This will be discussed further under discussions in the layout of the hypothetical VRDT session.

Literature review

VR in South Africa

VR usage in South Africa is growing at an exponential rate (Statista, 2022). In 2018, the revenue of the VR market stood at 24 million South African Rand. According to Statista (2022) by 2023, it is expected to rise up to 195 million South African Rand which suggests a compound annual growth rate of 52,5%. With the increase in demand for VR devices, it is pertinent that various practices find ways to adapt and incorporate VR in their modalities. The figure below shows the market value of the virtual reality market in South Africa from 2016 to 2023 (Statista, 2022).



1

Figure 2 Market value of the virtual reality market in South Africa from 2016 to 2023 by category

From the information provided, it is evident that VR is emerging in various fields in South Africa, and it could prove beneficial to utilize such emerging technology as VR in a manner that benefits the public, particularly from a general and mental health perspective. This is so

there can be an increase in the range of therapeutic interventions accessible to the public and as a means of finding alternative methods that cater to the different needs of individuals.

Anxiety in South Africa

Due to the context in which we live, and the vast number of cultures we occupy as a country in South Africa, it is pertinent that cultural considerations be taken into perspective. Hofmann et al. (2010) speak to the cultural aspects of anxiety in a South African study that was conducted. Hofmann et al. (2010) reviewed the literature on the prevalence rates, expressions, and treatments of anxiety in relation to culture, race, and ethnicity. Hoffmann et al. (2010) also look at factors that contribute to the differences in anxiety between different cultures, including individualism/collectivism, the perception of social norms, gender roles, and gender role identification. Hoffmann et al. (2010) have found that the individual diagnosed with SAD and displaying anxiety symptoms needs to be viewed in the context of their cultural, racial and ethnic background in order to assess the degree and expression of anxiety adequately.

Wege's (2014) paper titled *The Relationship between Anxiety Symptoms and Behavioural Inhibition in young South African Children* gives insight into how anxiety in young South African children influences their functioning. Wege (2014) speaks to the anxiety symptoms that children, aged between two and six years, face within a South African context and the factors that contribute to this. Wege (2014) mentions how childhood anxiety symptoms are usually not severe and only temporary, but they become a problem if they interfere with the child's daily functioning. The majority of the children who experienced anxiety symptoms were those who lived in crime-ridden communities, those whose parents have marital problems and those who are exposed to various gender-based violence settings in their immediate households (Wege, 2014). Other factors that contribute to children's anxiety symptoms are cultural and traditional pressures that are placed onto children such as the eldest child needing to finish school so that they may take care of their siblings, and spiritual callings where traditional customs need to be completed to appease ancestors (Wege, 2014).

It is interesting to note how in the South African context, it is the same individuals who find themselves in these crime-ridden communities who have little access to therapy, even with what Docrat, Besada, Cleary, Daviaud & Lund (2019) mentioned as a global commitment to include mental health among the highest priorities for investment. The public healthcare system finds it hard to keep up with the demand for mental health interventions as Docrat et al. (2019)

report, and sometimes mental health practitioners have a long list of clients who seek mental health interventions but only come in once or twice a week. South Africa's health system comprises a large public sector which serves 84% of the population whereas only 40% of the overall health budget is funded by the state (Docrat et al. (2019). This has a negative effect on mental health services in the public sector which caters for individuals who cannot afford private psychotherapeutic interventions and rely on those offered in the public sectors. Docrat et al. (2019:6) also found that "the total health system costs of inpatient and outpatient mental health services across all provinces of South Africa amounted to an estimated USD573.6 million in the 2016/17 financial year". This may have an influence on how on a national level, there are only 0.31 public sector psychiatrists per 100 000 uninsured patients and 0.97 public sector psychologists, senior psychologists and principal psychologists per 100 000 uninsured patients (Docrat et al. 2019).

VR also serves as a factor to consider in terms of access for those who reside in under-privileged communities and households that cannot afford VR, where prices range from one thousand six hundred rand (R 1 600) to six thousand five hundred rand (R6 500). Power cuts are other factors that may affect the VR process. There are often times where we experience unscheduled power cuts which is called load shedding. The hours in which the electricity is shut off can range from two to four hours either in the day or night and prices for back-up generators, and the petrol which fuels them, are steep. In a news article by Tau of *The Citizen* (2022) on loadshedding, an energy expert warned that there would be rolling blackouts for the remainder of 2022 with a very little chance of resolving the power cut crisis.

Drama therapy and anxiety

Jones (2008) introduced the Drama Therapy core principles as the foundations of any Drama Therapeutic work. The core principles "describe the ways in which drama and theatre forms and processes can be therapeutic" (Jones, 2008:99). In total there are nine core principles in Drama Therapy and this section will name a few in relation to how they address anxiety. Dramatic projection will be explained in detail in relation to psychological and avatar projection in the later sections of the paper and will thus not be expanded on here.

The first core principle that will be expanded on is the therapeutic performance process. This core principle looks at the ways in which performance is reached in the framework of Drama Therapy (Jones, 2008). In the therapeutic performance process various aspects could occur

including identifying a client's needs, showing and disengagement of dramatic scenarios and rehearsal within the Drama Therapeutic session. In relation to addressing anxiety, being able to identify the unmet needs of the client in early sessions, could shape how the therapist structures the following ones. This could take the form of what Jones (2008) defines as the need to express material in a performance (enactment) by the client in the therapeutic session. Often times it may occur that the material that arises in the session is at a sub-conscious level, and therefore the client does not have the opportunity to filter the engagement, presenting what they may need without realising it (Jones, 2008). The need identifying also correlates with the showing and rehearsal in the therapeutic performance process (Jones, 2008) as it involves sharing the dramatic process with others if in a group process, or the therapist in an individual session. The client also could have an internalised rehearsal (Jones, 2008) where they work inward. In the cases of anxiety, the client has the platform to rehearse different ways in which they firstly identify the triggers for the anxiety and subsequently, how they react to the triggers. The important question that arises here is how the rehearsal element of the therapeutic performance process can translate into a VRDT context. Jones (2008) refers to two main therapeutic effects within the performance structure. The first one is that the process allows the client to find expression for the material to be worked on as well as the means for working on the material. Here the client can look at the anxiety triggers that they have identified and "change their relationship to personal material by exploring the dramatization during the rehearsal and showing" (Jones, 2008: 102). An example that Jones (2008) gives which correlates with Landy's (2009) role method is the client taking on different roles within an enactment or finding alternative ways to respond to the scenario in enactments.

Playing is a core principle in Drama Therapy that is multi-faceted in meaning in the field. According to Jones (2008) play in Drama Therapy refers to processes which involve both adults and children. These processes can refer to the following as listed by Jones (2008:115):

- The use of play as an expressive form within Drama Therapy
- A general attitude or framework which the experience of Drama Therapy can encourage playfulness
- The creation of a play space in the Drama Therapy session
- The use of a developmental model of play within the process of the therapeutic change in Drama Therapy
- The use of play as an expressive form within Drama Therapy

A question that arises when considering play in relation to anxiety is what effect the anxiety levels of the client could affect their level of play in the session and how VR can reduce the effect with its immersive nature or if it does indeed reduce it. When looking at play within Drama Therapy and how it can be utilized in addressing anxiety, Jones (2008) reports on how "a state of playfulness is created where the client enters into a special playing state" (2008: 117). By being able to create a play space for the client, Jones (2008) states that a playful relationship with reality can be established. This has the possibilities of changing the relationship with anxiety triggers/symptoms in which the playful quality of the relationship can be characterised by a more creative, flexible attitude towards events, consequences and held ideas that the client may have initially contained (Jones, 2008). "This enables the client to adopt a playful, experimenting attitude towards themselves and their life experiences" (Jones, 2008: 116). In relation to the research, a key question that could be answered is what applications in VR are available to facilitate the necessary play? Jones (2008) speaks to how play is able to develop along a continuum of increasing complexity. This means that one is able to heal in the development of play by broadening the expressive range of the client and acknowledge the connection between developmental stages in play and stages of emotional, cognitive and interpersonal functioning (Jones, 2008). In essence, development in processes where there is playing, can often be accompanied by changes in the interpersonal, cognitive and emotional developments and this has the ability to influence the client's associations to anxiety which can assist in changing their feelings towards triggers (Jones, 2008).

The transformation Drama Therapy core principle refers to the transformation of human being to performer/player or to an audience member (Jones, 2008). Transformation can also refer to objects or props being transformed into representations of other things as well (Jones, 2008). In the lens of addressing anxiety, Jones (2008) reports on the transformation of events into fictional representations acted out by invented characters which can facilitate a 'becoming' through an active constructing of experience that is taking place all the time and facilitated by the Drama Therapist. This then means that "transformation refers to the changes in state which the client experiences through the enactments in Drama Therapy" (Jones, 2008: 120). By enabling the client to interact with anxiety triggers in a healthy and contained manner, they could interact with different experiences containing triggering elements for them and experiment with ways in which they could cope or transform their perceptions of said triggers. Therefore, transformation, according to Jones (2008), can occur through dramatic language transforming the usual ways in which an individual experiences the self. This occurs by the

self being described through an enacted story and an event being improvised rather than lived (Jones, 2008). The life event can then be experimented with and altered through playing and re-playing the experience by giving the experience an improvisatory quality of enactment (Jones, 2008). “The dramatic language can transform the experience as it opens up new possibilities of expression, feeling and association” (Jones, 2008:121).

Personification and impersonation is the next Drama Therapy core principle that can aid in addressing anxiety. This core principle looks at dramatic representation of the material that the client brings to the therapeutic space (Jones, 2008). In this context, personification is the act of representing something or some personal quality or aspect of a person using objects dramatically. When looking at personification in relation to anxiety, the anxiety aspect could be represented by an external object such as clay which can be used to mould the anxiety into anything the client feels it represents. According to Jones impersonation “refers to processes such as the impersonation of one person by another, creating a persona, or the Brechtian demonstration of a person” (2008:107). Within the Drama Therapeutic context, this would involve the improvisation or role playing of an imaginary character or if more direct, a person from the client’s life experience. Landy has defined impersonation as an ability to ‘fashion a personality’ by taking on and playing out various personae or roles (2009:30). The main question that arises from here is if the impersonation could be therapeutically effective for the client if they partake in the impersonation in a virtual environment using the animated graphics provided by the VR program.

Brown (2015) speaks to the limited availability of research surrounding additional means of addressing anxiety with clients. This is both from a psychotherapeutic lens as well as alternative therapies that are available in the mental health sphere. Brown (2015) does, however, speak to how drama therapy is well known for its efficacy in working with youth with behavioural challenges. Furthermore, it is important to note how drama therapy, according to Cossa (2006), “is often employed as a means to engage reluctant youth in therapy, as it allows a more fluid and symbolic means of addressing concerns” (Cossa, 2006: 46). To provide context on the arts in therapy, Irwin (1986) highlights how the arts in the therapeutic process can substantially benefit clients as there are multiple forms of communication that are possible. Irwin (1986) further speaks to how the engagement through arts therapies is not strictly verbal. There are various other forms of communication such as the body or art that allow for healing and transformation.

Irwin (1986) further emphasizes the supportive element that drama provides in giving clients room to explore their stories within a space that encourages clients to reflect and examine interpersonal and contextual exchanges that contribute to their feelings of distress. When considering this in the context of a client with anxiety symptoms, it becomes important to offer them a space for exploration that looks at various aspects that contribute to their anxiety. Linking this to a psychosocial lens, Irwin (1986) asserts that the use of drama therapy provides substantial assessment and diagnostic information, and this "enables the observer to glimpse an individual's psychosocial and psychosexual level of development, including character and self-image" (Irwin, 1986: 350).

Emunah (2019) introduced the integrative five phase model in Drama Therapy which consists of: dramatic play, scene work, role play, psychodrama and dramatic ritual. Each phase flows towards a gradual unfolding process that transitions from the imaginary to the real and the pace depends on how ready the client is. When looking at the integrative five-phase model in addressing anxiety, it can be utilized in the same way as the role method as the model focuses on an integration of play and scene work. The development of the client proceeds along a continuum of integration at each phase (Emunah, 2019). the first phase of the integrative model, which is dramatic play, focuses on the foundations of play to resolve conflict, releasing pent up emotions and expressing unaccepted parts of the self (Emunah, 2019). This could represent the anxiety symptoms that the client experiences in certain situations in which the five-phase model could help the client in exploring ways to address the aspects that contribute to the feelings of anxiety. The dramatic play phase can constitute the warm-up and give clients the freedom of re-experiencing dramatic play from childhood (Emunah, 2019). The second phase of the model is scene work with the third being role playing. Role-playing occurs from phase two onwards in the Emunah's (2019) process as scenes are acted out. Due to the depth in which I expand on role, I will not go into the intricate details, but it is important to note how role-playing in the integrative model is described as an engagement with facets of our personality that have been concealed from others and ourselves (Emunah, 2019). This could represent the anxiety symptoms that the client may be experiencing and needing to be encountered through role by perhaps giving the anxiety symptoms a character. The combined interaction of the dramatic role and the containment in what Emunah (2019) ascertains as the safe arena of the dramatic mode, provides the client with an opportunity of open exploration of the contributing factors of their anxiety.

The fourth phase, which is culminating enactment, has its foundations in psychodrama techniques. The phase enables a deeper introspection and consciousness towards the building of empathy and relief for clients (Emunah, 2019). In this phase, "people enact scenes from their lives, dreams or fantasies in an effort to express unexpressed feelings, gain new insights and understandings and practice new and more satisfying behaviours" (Buchanan. 2009: 397). Here, a possible form of catharsis may occur as emotions are let out from the inner world being externalised (Emunah, 2019).

In this form of healing and therapy, there are various Drama Therapeutic techniques that offer ways to engage the client in a manner that engages with the personal, from a safe and distanced perspective. We have already covered Emunah's integrative five phase model, and now we turn to psychodrama and the Role Method. Landy (2017) speaks to the fundamental differences and similarities of both approaches and how they are applicable in addressing anxiety. For instance, he speaks about how classical psychodrama is a fairly fixed approach based on several techniques such as mirroring[2], doubling[3] and role-reversal[4]. In the Role Method, there is an aesthetic distance, which Landy (2017) describes as the gap between a viewer's conscious reality and the dramatic elsewhere in the Drama Therapeutic process, that is prevalent throughout the technique. Landy (2017) refers to how psychodrama often leads to overt expressions of feelings as clients engage directly with real contextual dilemmas in their lives. From the role method perspective, there is a primary work through metaphor and not overt emotional release. This means that the aesthetic distance aims to protect the client from any personal events that may surface unpleasant feelings. Bringing in the metaphor and an embodied interaction-based role exploration could allow clients to find the best possible adaptations to anxiety-triggering situations.

"Sociologists have considered how identity is connected to the ways in which the body is presented in social spaces. Some consider that the self represents selected personae in different situations and arrives at a sense of identity through bodily expression and behaviour in relationship to others." (Jones, 2008: 113)

[2] Mirroring is a therapeutic technique where the therapist repeats back to the client what they said or the feelings they expressed.
[3] Doubling is when a client supplements a role of the protagonist by standing behind the protagonist and speaking the protagonist's internal thoughts or what they would actually say in a scenario.
[4] Role reversal is when there is an exchange of everyday societal roles and playing the role of another.

Looking at Role Method, Landy (2009) highlights how it is not a separate theory but rather the practical application of Role Theory. This means that to understand Role Method, I will need to give insight into what Role Theory entails, including its grounding principles. This will inform the imagination of how Role Method will be applicable within the VR engagement from a Drama Therapeutic context. Landy (2009) speaks to how the personality can be conceived as an interactive system of roles that correlates with Jung's archetypal systems. "Role is not necessarily a fixed entity, but one that is capable of change according to the changing life circumstances of the individual role player" (Landy, 2009: 67). This suggests that an individual's role can change and adapt according to the individual's circumstances. Considering anxiety and how various thoughts and events can trigger it, it can be possible to suggest that the individual has not equipped themselves with a role that can accurately navigate the challenges that anxiety brings. It then becomes essential for the therapist to observe and witness the client in the therapeutic session and find ways to reinforce the role that can best equip the client with the skills they need to cope with the anxiety. Irwin (1986) suggests that Drama Therapy allows clients to explore "non-real realities", and this means that "opportunities exist to try on and rehearse new [behaviours] in a protected environment" (Irwin, 1986: 351).

The eight steps of Role Method

For the purpose of the research, I will interweave my imagination of how Landy's eight steps of role method could translate into a VRDT session. Landy (2009) highlights the eight steps of Role Method being:

1. Invoking the role.
2. Naming the role.
3. Playing out/working through the role.
4. Exploring alternative qualities and sub-roles.
5. Reflecting upon the role-play: discovering role qualities, functions, and styles inherent in the role.
6. Relating the fictional role to everyday life.
7. Integrating roles to create a functional role system.
8. Social modelling: discovering ways that the clients' behaviour in role affects others in their social environments.

Landy (2009) suggests that one's role system changes continually depending on the time, place and need that they have. Within the context of a drama therapy session, Landy (2009) explains how a role is invoked by guiding a client into their internal system and extracting a role that needs to be expressed as well as examined. This role is invoked to aid a client's immediate focus on a single part of their personality. For example, if the client struggles with social encounters, the main role that would be invoked is the role of a conversationalist or that of a friend. This role would then be explored in a manner that allows the client to explore different ways of engaging in and with the role to accustom themselves to adapt to various situations, as the "invocation of the role, then, is a calling into being of that part of the person that will inspire a creative search for meaning" (Landy, 2009:7). Bean's (2019) work on psychological projection (which will be expanded on in the findings section of the paper) pertains the taking the part of the self and externalising it onto a different object or person is reminiscent of Landy's Role Theory work which states that the role of an individual is explorable in "two contiguous realities" (Landy, 2004:7). This comprises of the imagination, which is seen as the source of unconscious imagery, including the everyday reality which is grounded in daily existence and physical realities. The use of Role Method in drama therapy is for therapeutic purposes, as Radmall (1995) states. Radmall (1995) further mentions how, through enactment, role enables the client group to become more integrated. In Drama Therapy, both the client and the drama therapist enter roles and Jones (2004) expounds on Role Method allowing for an active audience. In contrast, instead of participants viewing roles from an external perspective, they view and engage with the role internally.

Psychological interventions for anxiety

Rodebaugh, Holaway & Heimberg (2004) are significant voices in the research as they focus on the different treatments available for anxiety from a psychological (and psychotherapeutic) perspective. Although they focus primarily on psychotherapeutic interventions for adults, they give summaries of pharmacological treatments and treatments for children and adolescents. Rodebaugh et al. (2004) speak to cognitive behavioural therapies (CBTs), exposure, social skills training, and applied relaxation techniques. The particular focus of the study is how the aforementioned treatments are the most well-researched treatments when addressing anxiety and how they could possibly be applied as warm-up and bridge-in techniques within a VR perspective. Rodebaugh et al. (2004) conduct a meta-analysis that indicates how all forms of

the above-mentioned interventions appear likely to provide some benefit for adults living with anxiety.

The first treatment that Rodebaugh et al. (2004) detail is the exposure technique. Exposure, as explained by Rodebaugh et al. (2004) is when a client enters and remains in a feared situation from a contained and safe space. The key factor in the exposure approach is that the client remains in the feared situation for a sufficient length so that they may produce new learning or habituation to reduce anxiety in that situation. Rodebaugh et al. (2004) report how exposures take the form of role plays that simulate the fear rather than a direct product of the feared situation. If there are situations that are difficult to stage, the use of imagery is incorporated. Hope, Heimberg, Juster & Turk (2000) have a report on treating SAD where it was found that clients may attempt to mentally distance themselves when put in exposure situations. This is important to note and poses a question as to how VR bridges the gap in the distancing tendencies of clients displaying anxiety symptoms.

The second treatment that Rodebaugh et al. (2004) detailed is applied relaxation. A technique incorporated in this approach is progressive muscle relaxation (PMR), which McMahon & Boeldt (2022) incorporate in their VR sessions as listed in their book *Virtual Reality Therapy for Anxiety: A Guide for Therapists*. PMR is a technique for the management of the "physiological arousal that often accompanies anxiety" (Rodebaugh et al. 2004: 885). Although PMR alone is not considered sufficient in the treatment of anxiety and anxiety symptoms, Rodebaugh et al. (2004) mention how in applied relaxation, the practicing of PMR during daily activities and when confronting feared situations, can be effective for the client by allowing them to enter a calm state for further exploration. To supplement this, McMahon & Boeldt (2022) report on utilizing visual cues for the client to not only get verbal instructions from the therapist, but projected cues that can accurately relay the technique for the client by giving hand projection examples. According to McMahon & Boeldt (2022) this would occur by having an outline of a body within the virtual environment that would guide the client through the PMR exercise by having the client repeat after the projection of the body outline.

This could prove effective for reducing tension headaches, insomnia, and anxiety particularly with clients who are still adjusting to the HMDs while in the VR session. McMahon & Boeldt (2022) state how the learning of this technique by clients, can allow them to achieve overall relaxation or even relax specific body parts. This technique can prove beneficial for clients as Stein (2008) lists the various symptoms of anxiety ranging from tension in the hands, shoulders

and other body parts. Allowing for those body parts to be targeted with PMR while enhancing the experience for the client to engage in a calming and conducive VR environment can equip them with a necessary skill to apply in their real-life contexts. For example, McMahon & Boeldt (2022) mention how driving phobics often tense their arms and shoulders when driving and how being guided in PMR while driving a virtual car can help them apply this skill during actual driving. Here, the therapist could enlist the exposure environment of a driving simulation available in the Amelia virtual care (2022) application as seen in the picture below.



Figure 3 Amelia virtual care VR driving simulation

The third treatment that is highlighted is social skills training as highlighted by Rodebaugh et al. (2004). Social skills training is justified with a skills deficit model which assumes that anxiety arises from inadequate social interaction skills. The treatment that is thus associated with the skills deficit model is teaching the client social skills that combine modeling, behavioural rehearsal and corrective feedback. It is however contradictory when looking at the evidence regarding the social skills that people with anxiety symptoms possess, as "people with social anxiety disorder may possess adequate social skills but fail to enact them as a result of anxiety or negative beliefs about the behaviours, giving the appearance of social skills deficits when, in fact, this is not the case." (Rodebaugh et al. 2004: 886). An alternative to the skills deficit model could be role play and, in my opinion, its prevalence in exposure treatment. Role engagement could include the necessary behavioural rehearsal for the client to pick up the specific moments that serve as triggers for them in feared situations. The engagement in role play, could expose the client to the necessary social skills that could firstly model how to communicate their fears in triggering moments and rehearse the behaviours that come up when they are experiencing any form of anxious triggers in the lens of Rodebaugh et al. (2004).

Rodebaugh et al. (2004) demonstrated efficacy of different types of anxiety treatment and allows me to evaluate which aspects and exercises of the treatments were effective when dealing with clients diagnosed with anxiety. The five meta-analyses that Rodebaugh et al. (2004:242) conducted show that both psychological and pharmacological interventions are effective in the treatment of anxiety and social phobia "and have large positive effect sizes on clients". Rodebaugh et al. (2004) also outline some issues and concerns to take note of such as questions about the influencing factors regarding treatment responses and the role combinations of cognitive behavioural therapy and medication and what those may be.

Current uses of Virtual Reality in psychotherapy

Lamb and Etopio (2018) advocate for VR technology within the therapeutic space and speak to its potential in engaging in meaningful therapy. Lamb & Etopio (2018) further make reference to VR showing promise in cognitive retraining and exposure therapy, as well as translating to the essential components of play. The components include the child having the capacity to make decisions within the virtual world, the child experiencing full immersion in the moment and an intrinsically motivating VR activity (Lamb & Etopio, 2018). The immersion that a child experiences in VR can be equated to Bean's (2015) viewpoint of character development from the perspective of VR videogames. Bean (2015: 95) refers to character development in video games to be critical to "gameplay, and an attribute which necessitates a conversation based upon the accomplishment and characteristics one creates, plays as and focuses upon throughout their journey". This substantiates Lamb & Etopio's (2018) reference to VR translating essential components of play that can help individuals make decisions within the virtual world by being exposed to decision making scenarios in a virtual environment. The level of immersion that a client undergoes can provide the biggest opportunity for projection in the virtual environment to take place. It then becomes important to look at how projection could occur in a VR engagement.

Bean (2019) highlights a case study that looks at the archetypal heroic journey for a 10-year-old client diagnosed with post-traumatic stress disorder as a main form of treatment with prescribed video games to increase his personal growth. By including immersion playability, which is the user's ability to play as if they are in the virtual world, Bean (2019) reported an improvement in the client's symptoms across his environments by utilizing virtual worlds and concepts within to increase his abilities and then overlay them upon his life difficulties. I understood this literature to address how immersion into the virtual world and an application

of avatars and their characteristics in the Drama Therapeutic field, could aid in allowing the client to create the necessary connections in the aspects of their avatar, to themselves as a form of catharsis within the virtual world. This literature thus highlights the theme of immersion and psychological projection within the research. With this level of engagement, one would need to consider the safety of the client to ensure that they have the best possible VR experience.

There are ergonomic considerations that Lamb and Etopio (2018) map out as well, which allows for the safe usage of VR technology for the client. Some of them include the ruling out of pre-existing conditions and referral to consultations with specialists before engaging. Lamb & Etopio (2018) further recommend constant breaks in VR sessions for the client's benefit, among other recommendations that ensure the safety of the clients. In contrast, Rushton & Riddell (1999) discuss the possible changes in basic visual function and adaptation that may arise through regular use of VR displays/goggles. The findings were reached by Rushton & Riddell (1999), considering the differences in accommodation (focusing) and vergence (direction of gaze in depth) altered in VR displays. Rushton & Riddel (1999) suggest that the prolonged use of VR by children, can result in visual impairments occurring to the child. Rushton & Riddell (1999) found that there were transient changes to adult's binocular functions. This meant that when the adults removed the VR headsets after engagements, their eyes took some time to adjust to the simultaneous perception. Due to this, it is important that I consider Lamb & Etopio's (2018) voices who recommend breaks in between sessions as well as McMahon & Boeldt (2022) who recommend screening clients regarding their eligibility to engage in VR sessions. I do however note that due to the year in which Rushton & Riddell (1999) had published, technology has improved to cater to the human body such as adjustments to the light-emitting diodes (LEDs).

Research Method

The method that I will be utilizing is a comparative literature review. This method was chosen to extract crucial information from existing research that focused on the application of VR technology in several fields. Due to the lack of available South African VR research, the research also looked at adapting western applications of VR to reimagine how it could be applied in the South African context, considering the geographical, cultural and socio-economic context. The adaptation included looking at various target populations for the intended VR usage and the settings and intentionality of using VR equipment. Several bodies of text will be compared to one another, and a critical analysis of the applications across various

fields such as psychology, medicine and rehabilitation will occur in the findings section of the paper. The research will further outline Landy's (2009) Role Method to hypothesise how the method can apply within a VR session. I will further adapt a model of operation for VR that considers preparation, engagement, evaluation and reflection of the VR engagement with a client.

The commonalities and differences in modalities around VR incorporation will be scrutinized and evaluated. The application of VR, contextual considerations around anxiety symptoms within individuals, as well as avatars as possible assessment tools in the therapeutic space will be looked at. An analysis will be conducted where the strong and weak points of the application of VR in addressing anxious symptoms for clients will occur.

The research conducted is based on an adaptation to possibilities that have not been widely researched within the South African context, so the body of work is still in its infant stages. This has thus required sorting of information obtained that looks at similar phenomena within different fields. Seeing that VR is an emerging field and how there is not a wide variety of literature contextually, in addition to peer-reviewed journals, other forms of sources such as websites and blogs have been used as sources while considering aspects such as validity and ethics. Regarding how the validity of the sources were measured, the sources cited in the blogs and forums were consulted to evaluate if they were peer-reviewed. The ethics that were considered were whether correct conduct of practice was followed and whether factors such as ergonomics and the client's well-being are considered in the posts. There is a further challenge regarding literature that focuses on a specific age group concerning anxiety and engagement in VR-related activities. This was addressed by my finding articles that created models that are suitable for all ages such as McMahon & Boeldt's (2022) VR sessions for clients of all ages with anxieties.

Using a comparative literature review, I have identified several valuable points that have allowed for a generation of data from a comparative lens. One advantage includes that of parallelism, which Sangia (2014) describes as taking literature that, though does not have direct contact in relation to the field it addresses, but having a similar phenomenon, context, or reality. In this case, it is the application of VR technology in other fields and its application in a Drama Therapeutic field, specifically in the South African context. Furthermore, Sangia (2014) speaks to how a comparative literature review allows for the presentation of arguments in which I formulate my personal opinions. These arguments are structured around the literature reviewed

and an agreement with the literature has been made and this gives a holistic perspective that looks at both the strengths and weaknesses of the particular phenomenon.

I generated knowledge using a thematic analysis approach. Caulfield (2019) states how, in a thematic analysis, the researcher closely examines data to identify common themes, ideas and patterns of meaning that come up repeatedly. I focused on several texts that were centred around VR and looked at themes such as ergonomics, the role of the practitioner/therapist, the immersion of the client in VR engagement and the applications of VR across several fields.

Within a thematic analysis, there are different approaches that I needed to consider. According to Caulfield (2019) these approaches include the inductive and deductive approach. The inductive approach involves allowing the data to determine themes that will be included in the research. The deductive approach, which is the approach that was applied to the research, involved coming to the data that I have gathered with preconceived themes based on existing knowledge around VR across several fields. This approach was chosen so that I could acknowledge their prior knowledge in the field, whilst remaining open to any new themes that may emerge through the analysis.

The next step to conducting the thematic analysis was to select between the semantic and latent approach to analysis. I approached the analysis from a semantic approach in which I analysed the explicit content of the applications of VR and the various ergonomics that were thus required to be considered in using VR. This approach was taken because I wanted to formulate how a hypothetical VRDT session would need to consider the role of the therapist in ensuring the clients' safety among other factors.

Once I had concluded considering the important elements that would guide my research, I was then ready to proceed into Braun and Clarke's (2008) six steps of thematic analysis.

The first step in the thematic analysis was to familiarize myself with the data. This included getting an overview of the data I have collected regarding VR engagements across several fields before analysing them individually. To achieve this, I read through the texts and took notes to gain an understanding around the subject matter and familiarize himself. I then went into the next step which involved the coding of the data. This entailed highlighting various sections of the text by colour coding them and labelling them to mark the various themes and assign them to the accurate theme. Caulfield (2019: npn) refers to how this stage involves doing the above mentioned then collating the data into groups identified by the code which, "allow

us to gain a condensed overview of the main points and common meanings that recur throughout the data.".

In the third step of the thematic analysis, I collated the codes and identified the various patterns among them to generate themes. These themes are detailed and explored in the next section of this paper. Before solidifying and finalizing the themes, I first reviewed them to ensure that they are accurate and useful in answering the research questions of the paper. This included looking at the data once more and comparing it to the themes that surfaced. In this step, I found that there were repetitive themes that needed to be split into two. For example, there was a theme of planning for things to acquire for a VR engagement that coupled with safety and ergonomics. These both spoke to acquiring equipment that is suitable for all recommended users and software that is user-friendly and accessible for people who use the VR hardware. The fifth step of the thematic analysis involved naming and defining each theme which is included in the findings section, giving the main points of the comparisons conducted in the research.

Regarding the gaps present in the methodology which grounds the research, Sangia (2014) further refers to how a comparative literature review is highly reliant on literature and any empirical evidence that is unpopular could be unavailable. Another gap in conducting a comparative literature review is that they do not involve hypothesis testing, which would have been one of the aspects I would have liked to apply in my Master's research. To further elaborate, I would have wanted to host a VR drama therapy session with a client while taking into consideration the ethical implications included. However, it is essential to note that the Health Professions Council of South Africa (HPCSA) has not allowed Master's level drama therapy students to conduct therapeutic research with clients. Due to this, this study instead forms a baseline of what is available, and this information can then inspire and inform further pilot studies. I will, however, highly scrutinise VR applications in different areas while considering the suitable techniques such as Role Method and Theory within drama therapy as well as the applications such as Rec Room and Amelia virtual care that allow for a safe and contained VR session with a client.

Research Findings

The thematic analysis enabled me to identify eight themes which will be detailed below, as well as eleven sub-themes. These themes focus on psychological interventions towards anxiety,

VR, the ergonomics involved in VR, and the steps prevalent in Drama Therapy that correlate with the virtual space.

Drama Therapy core principles in relation to VR

Dramatic vs psychological projection

Jones (2007) defines Dramatic Projection (which is one of the core principles) as a process in which clients project aspects of themselves or even their experience into either dramatic materials or enactment and externalizing their inner conflicts by doing so. Hill (2020) and Johnson (1992) both refer to using Dramatic Projection in their work, and it plays a prominent factor in gauging where the client is at as well as allowing for the client to express themselves without filter (Bromfield, 2007). Bromfield (2007: 77) further goes on to define puppet play, which is one of the aspects that go into Dramatic Projection, as "nothing more than a vehicle to expedite the attaining of treatment goals, be they changed behaviours, symptom relief, self-understanding, or the freedom to be who one is."

Bean (2019) defines psychological projection within the virtual space as an individual projecting elements of the self onto an avatar in which characteristics and ideal versions that the individual aspires to integrate into themselves get projected onto this fictional virtual character. This correlates with the Dramatic projection core principle of Drama Therapy. Bean (2019) speaks to how projection is an occurrence that is completed subconsciously by the client who is not aware of it when it happens. Bean (2019) also speaks to how this helps the individual create a specific narrative for their avatar, which may represent internal manifestations of their own personality in the subconscious. Stein (2018) speaks to how anxious symptoms sometimes hinder interactions of an individual, which makes VR an interesting area of exploration that may allow for a client to externalize their internal conflicts and give them agency and psychological distance. This agency could be afforded through an immersive archetypal engagement that allows the client to explore different aspects of their personality.

Psychotherapeutically, the concept of psychological projection is derived from theorists such as Freud (1916) and Jung (1960) who suggest that every individual projects outward onto their surroundings in all aspects of life. Within VR, this suggests that there is a way that the client's projection can be understood and assessed, as the lens through which the therapist would view the client's behaviour could stem from the prior assessment from observations of the client while engaging in the virtual environment. This correlates with Wilshire's (1982: 5) views on

projection being fundamental to the way we see and comprehend ourselves: “to come to see oneself is to effect change in oneself in the very act of seeing”. Wilshire’s (1982) works on *Role playing and identity: The limits of the theatrical metaphor* though outdated, gave the foundational viewpoint on projections through roles that serves the lens that the paper is aiming to achieve. Jones (2008) describes the projection as the change in the way we understand or see ourselves, and I believe that this can accompany a shift in perspective as it becomes viewed from the lens of another’s perspective rather than our own. Bean (2019) does, however, highlight how projection can have destructive consequences. He highlights how a projection onto one’s surroundings poses the possibility of the individual meeting other psychic projections from others that may collide. If the individual is not aware of the projections and cannot reclaim them, then it poses the danger of leading to difficult interpersonal problems that require support such as having trouble setting the boundaries between the avatar and their actual selves. It is for this reason that I stress the pertinence of the VRDT session always remaining guided and under no circumstance should the client engage on their own until they can have a secure understanding of their own boundaries.

From just these two readings (Jones 2007, and Bean 2015), it is plain to see that projection is a fundamental element of both drama therapy and VR therapy. Though in Drama therapy, traditionally, clients would be projecting onto physical objects or embodied roles in the space, it is not a difficult leap to imagine a VRDT session, where roles and objects are used digitally, but with the same intent.

Avatar Projection

The immersive nature that VR provides allows for a subconscious projection of how the client sees themselves, onto the virtual world in which they are engaging. McMahon & Boeldt (2022: 33) refers to the capabilities of VR in its immersivity and its being experienced as real, to how it can “bring fears to conscious awareness”. Through the connections that can be made with avatar choice to explore the virtual world, the client may project their experiences onto the avatar or the virtual environment in which they may be engaging. Concerning dramatic projection in the Drama Therapeutic context, Jones (2008) refers to client interactions in the dramatic elsewhere (in this case the virtual world) and how they identify with the characteristics of a role or character they encounter either through motivation, attitude or experience.

The safe and distanced VR exploration is essential for projection work. This can occur by the client's projection onto the virtual environment, characters and atmosphere that creates a distanced engagement that is strictly virtual. Jones (2008) gives an example of how it occurs in a psychodrama engagement in which clients project their own motivations, feelings and experience onto the world (dramatic world) provided in the session. As a result of this form of engagement, Jones (2008) mentions how it can shift how the client projects and relates to their feelings of a particular role while in the session. The same could be said for a VR engagement in a therapeutic context. The client is offered the opportunity to engage from a fantastical perspective, which still adheres to their characteristics while providing distance in the engagement. This form of engagement can provide not only the distancing that would be beneficial for the client but also a witnessing from a different perspective, rather than the possibly biased one from which the client could engage. "This may, in turn, affect the way we understand and feel about the parts of ourselves which have been engaged with the projection" (Wilshire, 1982: 101). In conjunction with this statement, it is important to note how Jones (2009) speaks to how a dynamic can be played out between projected desires and the potency of engagement in the Drama Therapeutic session as they both involve and interact with projected feelings that surface.

There is a recommendation for clients to have a level of control in explorations as McMahon & Boeldt (2022) refer to the importance of allowing clients with anxiety to have familiarity constantly present in the engagement, so that they do not feel triggered during the engagement. It is important to note how as much as the immersive nature of VR can aid in distancing the client, it can also potentially hinder it (Bean, 2019). When the client enters the virtual world and environment, distancing can sometimes be affected by the client's inability to "step in and out of the drama" (Jones, 2008: 192). This is because when in VR, the individual is in the world, and it is in good practice with the client to pause when necessary and take off the headset when they feel overwhelmed and need to exit the engagement.

Embodiment and avatar engagement

Jones (2008) defines embodiment in Drama Therapy as the way in which an individual relates to their body and develops through their body when involved in dramatic activities within a Drama Therapeutic session. Concurrently, "[e]mbodiment in Drama Therapy involves the way the self is realised by and through the body" (Jones, 2008: 113). In this regard, the body is seen as the primary means of communication between the self and other. Peck & Franco (2021)

make reference to embodied VR explorations and the potential benefits it presents for clients. Embodied avatars within a virtual environment are defined as "avatars that are co-located with the user's body and seen from a first-person perspective within an immersive virtual environment" (Peck & Franco, 2021: 1). One of the benefits to embodied avatars that Peck & Franco (2021) highlight are having a virtual representation of the self that is able to interact with others in social VR setups. This feature enables users with social anxiety symptoms to interact with virtual avatars and experience the social elements as if they are in a room socializing with others. Jones (2008) mentions how in embodiment, psychologists have considered how identity is connected to the ways in which the body is presented in social spaces. This lens gives insight into the client's self-perception in social interactions and how that could translate within a virtual environment engagement. The other benefits to avatar embodiment that Peck & Franco (2021) make reference to are the shown increase in the user's cognitive abilities, the improvement in haptic performance, and an increase in self-recognition and identification through enfacement which is the function of making the avatar similar in appearance to the user.

Jones (2008) refers to the role repertoire of an individual in different situations and how one arrives at a sense of identity through bodily expressions (embodiment) and the interactive relationship with others. In this regard, Peck & Franco (2021) speak to how being embodied in an avatar can dramatically change a user's experience including a reduction of biases like racial biases, mitigating stereotype threat and responding differently to situations. This gives insight into the different quality of engagement that the user could experience through embodiment within a virtual environment. This correlates with what Jones (2008) mentions about including the body in interactions stating that "when an individual is involved in drama, knowledge is gained primarily by and through the body in action: Dramatic knowledge is gained not through detachment, but through an actual, practical bodily involvement" (Jones, 2008: 113). This poses a question on whether learning can occur through a client embodying an avatar in a simulated event to interact from a distanced and objective perspective?

Avatars vs Archetypes in relation to role

Pietikainen (1998) refers to Jung's archetypes theory which evaluates how they can be viewed in the context of symbolic forms. In support, Bailey (2017) speaks to how Drama Therapy has its foundations in applied drama and theatre, and as such, symbolism within the applied context plays an important role when working with clients to apply the connection of the engagement

to their lives. This then highlights how symbols in Drama Therapy are a prevalent factor when providing meaningful distance for the client. It is important to consider the South African context and the multitude of cultures within the country when considering the formulation of identity. Pietikainen (1998: 325) states how archetypes can be understood as "culturally determined functioning forms organizing and structuring certain aspects of man's cultural activity". This would then highlight how predominantly non-cognitive mental aspects of human life such as emotions, pathology etc., can help shape human identity and how they view themselves in their contexts. By reimagining Jung's (2014) initial theory of archetypes being genetically inherited, Pietikainen (1998) views the archetypes as active constituents of human experiences, and these give the experiences a "non-discursive, symbolic form" (Pietikainen, 1998: 325). This perspective can provide insight into the subconscious and unconscious mind in determining the inherent archetypal patterns that the client with anxiety symptoms displays.

When considering the above-mentioned in relation to avatars, Bean (2019) states how avatars within the virtual world can represent how the client views themselves. This could represent a variety of roles that the client may see within themselves and could pose a question as to whether the drama therapist can apply this information in planning the structure of the VR engagement with the client in mind. Due to the nature of embodying the avatar that the client chooses, I would like to highlight whether the creation of the avatar by the client could assist in their assessment and the extent to which it could accurately depict the client's self-esteem. I take into cognizance the sensitivity of equating the client's avatar choice to their self-esteem and acknowledge that this may be influenced by various cultural and contextual factors to which the client may be exposed.

The engagement of the user taking the avatar's characteristics as the avatar takes those of the user, allows the client to create a specific narrative for the avatar, which may represent internal manifestations of their personality (Bean, 2019). I wonder how this may manifest in role-play within a VRDT session, in the expansion of the role repertoire of the client, by looking at the engagement with the client's avatar (role). As previously mentioned, with one of the main goals in the drama therapy process being to expand the range of an individual's role repertoire as Landy (2009) accounts, it becomes important to utilize an engagement with the client's various roles, in addressing anxiety symptoms. Keisari (2021:2) refers to how role theory in drama therapy "is not just a social facade or creation but rather is the actual and tangible form of the self, comprised of a set of qualities representing the various facets of the individual." From

this angle, allowing for the expansion of the roles of the client through engagement with them from the perspective of the avatar, can allow for the necessary distancing required to access different roles or avatars that could help them address their anxiety symptoms. This can occur by what Keisari (2021) describes as an enabling of expression and flexibility between the various roles that the client already has at their disposal, including roles that they can access to face various challenges that they may encounter.

Keisari (2021) equates archetypes to tangible forms the ego takes. She also speaks to how the client's role is malleable depending on the individual's reaction to a specific situation. This is said to be created from the individual's past experiences and the cultural modes of society, which is influenced by personal and collective components that become performed according to the views and abilities of the individual. When looking at the Drama Therapeutic context, Landy (2009) states how psychodrama is the most preferred technique for building the role repertoire of the client. With the performative qualities that Drama Therapy finds its foundations in and in relation to identifying the best role to address the anxiety symptoms, could psychodrama play a significant role in transitioning into the virtual environment? Would the therapist then be able to facilitate a psychodramatic exercise and would the virtual simulation enhance the experience for the client? In essence, one needs to consider how "Psychodrama role theory encompasses all dimensions of life: social roles - they express the social dimensions; psychosomatic roles - they express the physiological dimensions, and psychodramatic roles - they express the psychological dimensions of the self" (Landy, 2009: 326).

VR, Immersion and Psychotherapy

In the types of immersive devices section, I touched on immersion within the commercial use of VR, this section will look into expanding on how immersion can be utilized for therapeutic purposes, while referring to psychotherapeutic accounts. According to McMahon & Boeldt (2022), immersion can facilitate or deepen relaxation. By entering a safe and peaceful environment in VR, McMahon and Boeldt (2022) report how the client can achieve deeper levels of mental and physical calm, giving them a respite from fear and tension. I see this as especially important when working with a client displaying anxiety symptoms as "because VR is immersive, clients are removed from the stressful real world, which can facilitate or deepen relaxation" (McMahon & Boeldt, 2022: 29). There is a possibility for an even more substantial engagement if the client could have agency in changing or customizing aspects of the

environment they engage in to increase their quality of engagement. It is fortunate that applications such as Rec Room and Amelia virtual care provide such customization capabilities to give therapists and clients a platform to create said environments. Creating conducive therapeutic environments could be beneficial for clients as McMahon & Boeldt (2022) mention how "pleasant virtual experiences create a sense of peace, safety or distance from distress" (McMahon & Boeldt, 2022: 29).

Lamb & Etopio (2019) do, however, speak to how there is little adoption of virtual reality technologies within the areas of mental health therapeutic services. Though this may be the case, virtual reality still provides a basis for working with mental illnesses that a client may be going through. Lamb & Etopio (2019: 80) account to how VR technology provides a means for the development of interaction within the virtual realm, allows opportunities for problem-solving and, most importantly for the context of this research, allows for "the exploration of abstract emotional concepts such as trust, impulsiveness, and anxiety".

When looking into the engagement in a VR session with the client, it is important that there be a consideration regarding the type of immersion the client will display. Lamb & Etopio (2019:81) speak to two forms of immersion that require consideration in a VR engagement: mental immersion and sensory immersion, which, "in conjunction with fluidity and authenticity of environments, form the basis for successful therapeutic approaches". According to Lamb & Etopio (2019) mental immersion is the level of immersion where the user feels that they are in the virtual environment and sensory immersion is how accurately the hardware immerses the user in the virtual environment such as through their perception (sight) and how they hear using headsets. The successful therapeutic approach that Lamb & Etopio (2019) speak of refers to the form of therapeutic experience the therapist wants to create for the client. For example, in a cognitive behavioural approach, though there would be movement and response in the VR engagement, there would be a higher focus on the behaviour of the client in the virtual world. Lamb & Etopio (2019) speak to how when VR is used appropriately, both in interventions as well as treatment plans, the users (clients) interpret auditory, visual, and tactile cues as they gather information in the simulated environments. This means that while the users are interacting in the simulated environments, their cognitive functioning gathers the information and relates it to the client's personal experience or knowledge to make sense of the engagement.

The application of VR from a psychotherapeutic perspective thus focuses on clients' mental and emotional immersion within the VR environment. Lamb & Etopio (2019) speak to how in VR environments, the development of treatments mostly relates to the achievement of mental immersion or the client's level of involvement within the therapeutic environment. This further refers to the skills and strategies (session outcomes) the environment is designed to teach (Griffiths, Kuss & Ortiz de Gortari, 2017). In this regard according to Lamb & Etopio (2019), VR thus affords users the ability to interact with the environment in ways that reinforce both the mental and sensory immersions of clients and this provides greater efficacy to treatment plans set up by the therapist.

VR session planning: Connections between the Medical field and Drama Therapy

To give context to the thinking around a hypothetical VRDT session, I looked at the benefits of VR in other fields such as the rehabilitation and medical field in order to give the reader a holistic perspective on the possibilities of VR throughout. Some of the steps and diagrams below gave me a sense of grounding and foundation on what to consider for client's safe and effective engagement in the VR setting and what to consider in the planning of the hypothetical VRDT session.

The application of VR technology within the medical field is referred to by Javaid & Haleem (2020), who speak to the innovative training method of medical practitioners through the incorporation of VR. Javaid & Haleem (2020) mention how the technology provides a better opportunity for 3D visualization for teaching purposes. It gives students and doctors a chance to interact with the human body virtually, and this gives the practitioners experience with the holographic images using VR headsets. By taking this approach to training, surgeons are assisted in operating without causing any harm, and VR has been used in cases where Intensive Care Unit staff could practice the procedures in a limited time (Javaid & Haleem, 2020). VR is also considered a useful tool for pain management, becoming helpful in reducing the pain during treatment. There is also an emergence of the application of VR for a range of diseases in providing adequate medical communication. I consider this information with regards to the adaptive behaviour of individuals that can give the practitioner insight into the various reactions to stimuli by the client. I ponder on coupling the training surgeon interacting with the virtual world, with a client in the VRDT engagement learning new coping mechanism tools and thus experiencing neuroplasticity. Cheung, Tunik, Adamovich & Boyd (2014) describe neuroplasticity as the brain's ability to adapt due to interactions with our environment. Cheung

et al. (2014) report on how VR technology can capitalise on and influence the phenomenon of neuroplasticity by providing a naturalistic environment that allows for interactive behaviour.

In essence, "[i]n the medical field, VR encompasses robotic surgery, surgery simulation, phobia treatment, and skills training. This technology provides better information in optimized time and cost. It is used for presenting complex and innovative ideas regarding treatment." (Javaid & Haleem, 2020: 601). It is important to note how various steps go into planning before engaging in the actual VR session that works towards planning treatment and execution of the actual surgery. Unlike applications of VR in other fields, Javaid & Haleem (2020) speak to nine steps required towards effective implementation of VR in the medical field.

Process used for VR in the medical field

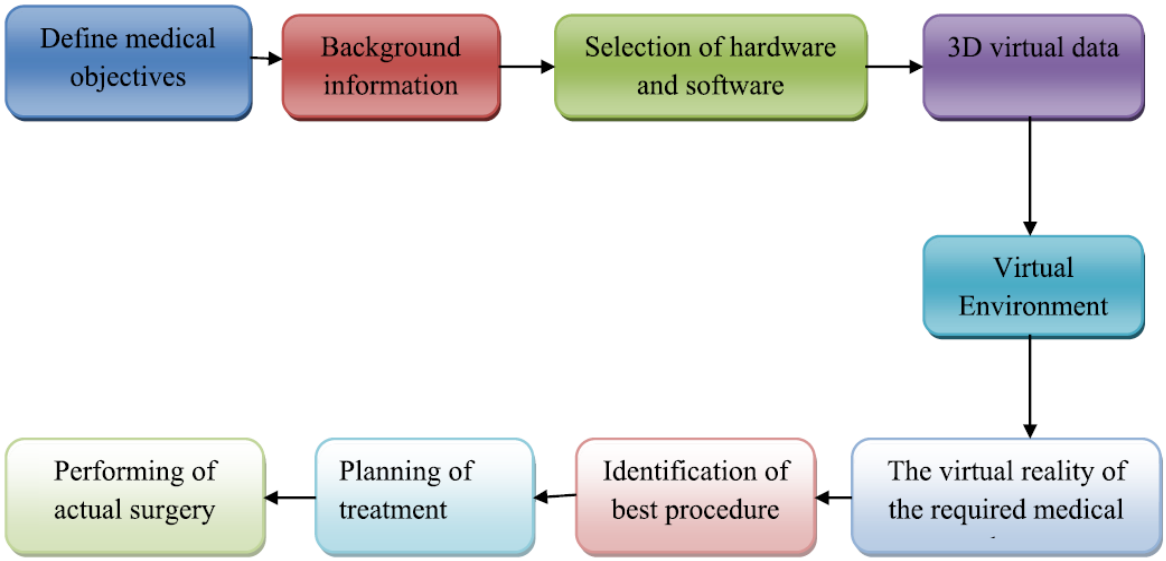


Figure 4 Process used for VR in the medical field

The first step is to define the medical objectives. Much like in psychotherapeutic and Drama Therapeutic practices (Jones, 2008), it is important to plan how the VR intervention will aid the practice, including the practitioner and client. Planning how the engagement in VR could assist in implementing the medical objectives could provide a guide for how to structure the VR environment and proceed in designing the engagement. I am intrigued on whether this could be applicable in the Drama Therapeutic context. It is crucial for the therapist to draft a

session plan of what would occur in the session and how VR could enhance the experience for the client.

The next steps in the process used for VR in the medical field, as Javaid & Haleem (2020) state, is acquiring supplementary background information and selecting the relevant software for the VR engagement. This refers to getting the relevant information about the medical procedure and how it can be applied from a VR perspective, then choosing which software (or application) can be used to create the procedure as accurately as possible. From a Drama Therapeutic lens, this would entail getting background information of the mental illness that the client has been diagnosed with, exploring the various techniques accessible to the drama therapist, and selecting the appropriate software that will allow for a VR engagement that is appropriate and not hyper-stimulating for the client.

After selecting the hardware and software, Javaid & Haleem (2020) state how the hardware and software assist in creating the three-dimensional (3D) virtual environment. This is described as the creation of the virtual world where the medical data identifies the appropriate virtual environment so that the applicable plan for treatment can be established by the practitioner.

Finally, Javaid & Haleem (2020) outline the last few steps for the process as the establishment of the virtual environment, the engagement in the VR session and an identification of the best procedure for engagement in the real-life context, to plan the treatment and perform the actual surgery as outlined by Javaid & Haleem (2020). Since there are specific apparatus that medical practitioners (surgeons) use in their practice, Javaid & Haleem (2020) report on the importance of having the VR provide the specific virtual apparatus needed to perform the virtual therapy. This part falls in the sixth part of the process of VR in the medical field as seen in figure two above. This can be equated to Lamb & Etopio's (2018) views of immersion and how the more accurately a VR simulation can depict real-life settings, the more the VR user can make connections between the virtual world and the real world.

A question that comes up is whether one can identify the connections of the virtual and real-world as crucial elements that may possibly assist clients in the hypothetical VRDT session where the client can interact through exposure as from the perspective of Rodebaugh et al. (2014). This entails the observation of the client's reactions and responses to stimuli while engaging in the virtual environment. Javaid & Haleem (2020) then make reference to the

identification of the best procedure for surgery from the VR engagement and how VR can give different possibilities for the surgeon to predict the highest probability of success through the simulation.

The last steps mentioned for the medical field could be adapted in a VRDT session, as Landy (2009) speaks to therapeutic objectives in drama therapy being formulated in conjunction with an ongoing examination of the particular issues, needs, strengths and weaknesses of individual clients or groups. This raises the question on whether the therapist, in collaboration with the client, can assist in choosing or creating a virtual environment that is the most suitable for the client, the application available for such a task and the therapeutic goals that the therapist had established for the client displaying anxiety symptoms. The Amelia virtual care (2022) company created various environments that are tailored to reach different therapeutic goals such as mountains for calmness and rainforests for exploration. The aforementioned platform could thus be utilized by the Drama Therapist in the hypothetical VRDT session. Furthermore, I imagine whether the VR engagement could serve as an assessment tool to witness how the client responds to various stimuli in the virtual world. The therapist may use the information to plan further interventions for the client, depending on their need.

The above-mentioned correlates with Jones' (2008) viewpoints of what a drama therapy session entails and how it is necessary to find a way in which the therapeutic needs, as well as the creative potentials of the individual, can connect with the expressive forms and processes of Drama Therapy. Seeing as the session's focal point is centred around what material clients bring, particularly what they may need at any particular point of the session, it is then more usual for the content and the process to relate to the material that the client brings into the session. This means that as the Drama Therapist engages in the VR session, it is important that they remain sensitive to the client's needs and situation. Hoffman et al. (2010) mention how anxiety confers an unpredictable reaction from clients as they may be triggered by something they had not anticipated. Thus, Jones (2008) speaks to how even though we may structure a session in a particular way, the therapist might have to change or restructure on the spur of the moment because "we have to work according to the needs of the special populations" (Jones, 2008: 124).

McMahon & Boeldt (2022) recommend having pre-intake screening phone calls with prospective clients. This is so the therapist can get a sense of their style, including what may require immediate attention. McMahon & Boeldt (2022) further touch on how diagnostic

assessment and treatment planning can occur during this call in this stage, particularly from a psychotherapeutic perspective. “You can start to formulate diagnostic hypotheses, ask about any crises, listen for client strengths and weaknesses, and think about possible interventions and uses of VR” (McMahon & Boeldt, 2022: 55). The pre-intake screening call will depend on the type of diagnosis the client has. For instance, if the client has a history of trauma, substance abuse, symptoms of psychosis or a personality disorder, they would then require more evaluation.

VR and the rehabilitation field

Schultheis & Rizzo (2001) speak to the application of VR technology in rehabilitation, and they mention how VR offers a variety of new possibilities within the field. This includes the potential to objectively measure behaviour “in challenging but safe, ecologically valid environments while maintaining experimental control over stimulus delivery and measurement” (Schultheis & Rizzo, 2001: 297). Shultheis & Rizzo (2001) further mention how VR offers the capacity to individualize the client’s treatment needs while further providing increased standardization of assessment and retraining protocols. This is done by engaging in computer-generated virtual environments where cognitive and functional abilities are assessed and rehabilitated. Schultheis & Rizzo (2001) speak to how interactive scenarios designed in the virtual world target client needs through exposure to simulated “real-world” or analogue tasks. Schultheis & Rizzo (2001) expand on how this level of engagement regulates exposure for the client by being able to shut down the program if the client experiences over-stimulation in which the environment can be controlled to a better degree than in analogue tasks.

When looking at the key benefit of VR within the rehabilitation context, Schultheis & Rizzo (2001) refer to the naturalistic environment that VR brings and how the advantage is twofold. The first one is a universal similarity that is evident throughout all the applications of VR technology in several fields, and it is that of the immersive experience that it creates for clients. This allows for an assessment of the behaviours of clients under “natural” conditions that can provide insight into client’s typical behaviour. This correlates with McMahon & Boeldt’s (2022) notion of teaching anxiety management skills within VR. They speak to how anxiety management skills help clients' “accept, minimize and tolerate the unpleasant experience of unnecessary sympathetic nervous system (SNS) arousal” (McMahon & Boeldt, 2022: 30). By learning anxiety coping skills in VR, McMahon & Boeldt (2022) state how the immersive

quality of VR can aid in engaging and sustaining clients' attention and captivates their attention throughout the session.

Another key application displayed is that there can be accurate stimulus presentations and response measurements according to the specifications of the therapist, as stated by Schultheis & Rizzo (2001). This can allow the therapist to tailor the VR experience for the client depending on what they may need by tailoring the type of stimulus they expose the client to while maintaining an objective means of assessment. I see this being applicable within the Drama Therapeutic context. In a Drama Therapeutic session, the therapist, alongside the client, can establish a dramatic elsewhere where they engage while in different roles other than their own. From there the client is able to create connections through catharsis (Jones, 2008). This is known as life-drama connection and is one of the nine core principles of drama therapy (Jones, 2008). Although, Jones (2008:119) states how "at times drama therapy work involves direct dramatic representation of reality", he also mentions how "at other times the actual dramatic work will have an apparently indirect relationship with specific life events". I ponder if one can create a dramatic elsewhere in the VR environment, and whether the therapist can tailor an experience that allows the client to engage with a metaphorical representation of their real-life experience and assess how the client responds in the world. Furthermore, in allowing the client to access a different role than their own, can it enable the client to find new ways of navigating and engaging with material that usually causes them to be anxious? The level of flexibility of stimulus that the VR environment offers "can allow gradual increments of difficulty and challenge. This allows for individualization of treatment while maintaining consistency in desired outcome measures." (Schultheis & Rizzo, 2001: 299).

VR in the rehabilitation context further allows for exploration in a safe environment where "supported failure", as Schultheis & Rizzo (2001: 231) describe, can occur. There can then be an increase in individuals' awareness of their limitations. This is where I wonder about VR's potential in the Drama Therapeutic context, particularly in addressing anxiety symptoms. The American Psychological Association (APA) (2022) describe people with anxiety as usually having recurring intrusive thoughts or concerns and they may avoid certain situations out of worry. I wonder if Drama Therapy in the virtual engagement could interact safely with minor exposure to explorations that are related to stressful situations for clients as Landy refers to how Drama Therapy enables distanced explorations where "at the intrapsychic level, one can remove or create distance from one's own feelings, thoughts and physical self-image" (1983:

175). In addition, the APA (2022) lists several physical symptoms such as trembling, sweating, a rapid heartbeat and dizziness, so it is thus pertinent for the therapist to understand the client's symptoms before engaging in the VR session. This is so the VR engagement is conducted in a safe and contained manner that does not negatively affect the client.

Schultheis & Rizzo (2001) mention how human performance testing environments could develop that supplement neuropsychological assessment procedures. This could offer improved reliability as well as validity that could "produce better detection, diagnosis, and mapping of the assets and limitations that occur with different forms of central nervous system dysfunction" (Schultheis & Rizzo, 2001: 302). Could this be applicable in the VRDT context by the cooperative creation of the environment where the client can explore various stressors that serve as triggers? In an attempt to interact at a gradual pace, over several sessions, could the client's progress be assessed and the experience be adjusted according by applying the essential planning that Lamb & Etopio (2018) as well as McMahon & Boeldt (2022) refer to in the form of screening calls?

The next potential application of VR that Schultheis & Rizzo (2001) speak of is vocational and social retraining. By being able to tailor the virtual environment, there can be a creation of work-appropriate environments. This can allow for an assessment and retraining of cognitive abilities relevant to work-based vocations. VR further provides an opportunity for the client to practice social encounters. This can be helpful as "VR can minimize fears and anxieties involved with new social settings by offering a medium whereby individuals can practice social encounters." (Schultheis & Rizzo, 2001: 303). This correlates with my viewpoint of Drama Therapy offering an exploration through an alternative medium by participating while in a different role than the one the client is accustomed to, to gain a different perspective into their anxiety as envisioned in the Role method exploration by Landy (2009).

Physiological considerations of VR engagements

There are risks inherent in the use of VR. It is therefore important to first gain a thorough understanding of the client, their needs, interests, and most importantly when coming to anxiety, their fears, and triggers. McMahon and Boeldt state how "you cannot reassure a client, counter a client's fears, or plan VR experiences or exposures if you do not know what the client fears." (McMahon & Boeldt, 2022: 33). Lamb & Etopio (2019) speak to the potential drawbacks of VR which include VR motion sickness or simulation sickness. To provide

context, simulation sickness occurs “when there is a disconnect between a person’s movement in the virtual environment and the person’s perceived motion in real life” (Lamb & Etopio, 2019: 81). This refers to the mismatch between vestibular and visual systems and essentially, it occurs when the brain believes it is moving when in fact, the body signals that it is not. According to Lamb & Etopio (2019), some symptoms that are associated with simulation sickness consist of headache, nausea, discomfort, vomiting, sweating, disorientation, fatigue, or other dysphoric events that reduce immersion and user enjoyment.

There are however practical steps that can help minimize simulation sickness for clients. Lamb & Etopio (2019) mention recommendations that can reduce or prevent simulation sickness. One of the steps is to clear a sufficiently large area and set up the VR system per manufacturer recommendations. It is also essential to demonstrate the boundaries to the user and rule out any pre-existing conditions that the client may have while consulting a medical provider before using if there may be any conditions. Beginning a VR engagement from a seated position and then standing could assist the client by being grounded in their senses then, only when comfortable, standing for the engagement (Lamb & Etopio, 2019). Due to some VR engagements requiring movement, Lamb & Etopio (2019) recommend that if users have eaten and don’t feel well, waiting thirty minutes to an hour before using VR will be beneficial for them.

Now considering the ergonomics involved in VR, Whitman et al. (2004) speak to VR design and user safety. Much like how Lamb & Etopio (2019) highlight simulation sickness, Whitman et al. (2004) speak to how it is caused by a conflict between an individual’s different sensory inputs. This means that any significant movement such as the room moving rather than a single object that the user has not instigated can trigger feelings such as nausea. The motion sickness is countered by the individual being able to control movement. The study by Whitman et al. (2004) found that hand presence within the virtual space is a powerful element that reinforces the user’s sense of space.

Whitman et al. (2004) list several suggestions for VR design and usage by a client or user. These include the facilitator not instigating any movement without user input. It is very important for the client to feel that they have control in the environment, or else it poses the threat of becoming overwhelming for them. It is also important that the virtual camera rotates and moves in a realistic manner, consistent with the head and body movements. Since there is a lot of head movement in a VR exploration, Whitman et al. (2004) speak to reducing neck

strain with experiences that reward – but do not require, a significant degree of looking around. Instead, Whitman et al. (2004) suggest trying to restrict any movement in the periphery.

The ergonomics involved in VR should follow a human-centred design approach as according to Whitman et al. (2004). This is to avoid user fatigue when engaging in VR and incorporate different types of interactions that allow the user to interact with the world in different ways while using different muscle groups. Whitman et al. (2004) state how the more frequent the VR sessions, the briefer and simpler they should be for the sake of the client, though the less frequent the sessions, the more effort required in a single session. This is a factor that needs to be considered when considering VRDT sessions. Jones (2008) speaks on how drama therapy sessions usually take up to 45 minutes in length for individuals and up to an hour-long for group settings. This means that the session would, at most, need to be planned for a 30-minute engagement, unless regular breaks would be taken in between for a maximum duration of an hour.

There are, however, concerns around a therapeutic engagement with a client if the therapist were not in the room with them. Kenwright (2018) speaks of the potential risk of an unsupervised VR engagement, particularly where the user is immersed in the virtual environment and unaware of their immediate surroundings potentially risking injury. In this regard, could the presence of the therapist and the incorporating of a dramatic ritual where a client enters and exits the virtual world, allow for the client to gain more awareness and have a safe engagement? According to Kenwright (2018) the therapists' presence is recommended irrespective of whether they are working with children or adults due to the level of immersion a VR engagement entails. Furthermore, it is important to facilitating the discerning of the space that the client is in.

It is important to note how an individual's perception can change in the virtual world. For instance, Whitman et al. (2004:npn) state, "human beings are great at gauging position in the horizontal and vertical planes, but terrible at judging depth. This is because our eyes are capable of very fine distinctions within our field of view (X and Y), while judging depth requires additional cognitive effort and is much less precise". It is thus essential that before engagement in VR, the client's comfort is kept in mind, especially if engaging with a client who displays anxiety symptoms as they may already be experiencing physical strain due to aspects such as their posture or physical build, disabilities etc.

Approaches in Psychotherapy & Drama Therapy for anxiety

Psychotherapeutic approaches to anxiety symptoms

With the focal point of the research being the treatment of anxiety symptoms using VR within a VRDT context, it is important to first identify the various techniques at the therapist's disposal from both psychotherapeutic and Drama Therapeutic contexts. This part of the research looks at the approaches from in-person sessions and online as well as VR sessions. It is important to note how this section has substantial changes from the initial literature review structurally, due to the inclusion of more contemporary literature. Michels (1997) speaks to the various approaches or techniques that are at the disposal of the psychotherapist, specifically looking at anxiety and depressive disorders. Although Michels (1997) lists effective methods such as cognitive behavioural therapy, it is important to note that he still alludes to pharmacotherapy as an approach towards addressing anxiety symptoms. I take note of how pharmaceutical interventions have proven effective in managing anxiety symptoms, however, there are various factors to take into consideration, such as side effects and the potential for dependency. Williams (2009) speaks to how when dealing with mental health problems such as anxiety, between 50 and 60 per cent of individuals taking drugs such as antidepressants show improvement. However, Williams (2009) further mentions that in many of these cases, the treatments are associated with an increased risk of subsequent relapse. This further runs the risk of turning what may have required short-term treatment, to a long-term chronic problem that has very little effect on symptoms over the long term. This forms part of the reason why I focus on specific psychotherapeutic and Drama Therapeutic techniques that bring a sense of grounding and calm for the client while gradually addressing the various factors that contribute to the client's anxious symptoms. Some of the techniques Michels (1997) highlights in addressing anxiety disorders include the cognitive-behavioural and the humanistic-existential-phenomenological approach.

Within the cognitive-behavioural lens, Michels (1997) references how cognition and learning are emphasized in this approach and how clients are viewed as information processing systems that attempt to predict and understand events in the world. This borrows from pioneers such as Bandura (1986), who believes that human nature assumes that people constantly interact with the world. Williams (2009:97) supplements the above statement by adding how "each of us is influenced by prevailing patterns of rewards and punishments in the environment, and our actions, in turn, influence these patterns". This becomes important when working with a client

displaying anxiety symptoms in a VR engagement, as how they perceive and interact with the virtual world can provide therapeutic benefits in creating an environment conducive to navigation and learning. For example, suppose the therapist is aiming to teach breathing and coping techniques to the client. In that case, it is essential to create a peaceful and serene environment that will aid the client in reaching that sense of calm while engaging in the breathing exercises (McMahon & Boeldt, 2022). Williams (2009) states how from the cognitive-behavioural view, therapists encourage adaptive habits ranging from behavioural or cognitive or both. The therapist helps the client see the world from an accurate point of view, and problems are solved by exposure to different forms of learning or perspectives.

Role can prove to be fundamental in exposing the client to objective perspectives. For example, the fixed-role approach from Horley's (2005) lens which encourages people to try out specific roles. This is to experience different perspectives that differ from those that they are accustomed to gain insight about the same phenomenon from a different lens. A question that arises is whether this approach is one that could be adapted to the VRDT session in the context of the client's avatar. This could be seen as changing the way the client engages in the environment as they would need to stay true to the characteristics of each given avatar. This displays the same qualities as mask play and the Role Method in drama therapy, as the client would need to embody the avatar throughout the engagement.

One more technique that Williams (2009) identifies within the cognitive-behavioural approach is cognitive therapy. What this approach entails is that clients "are encouraged to evaluate their ideas against relevant evidence, testing the 'reality' of their beliefs." (Williams, 2009: 98). This approach has been used to treat anxiety disorders that are mainly characterized by exaggerated beliefs about vulnerability. The approach can be applicable and relevant within the VR sphere as, according to Williams (2009), it helps clients cope by providing alternative ways of reaching a certain goal. The therapist can then set out various therapeutic goals that align with the client's immediate needs while providing alternatives for engagement without overwhelming the client. However, there are aspects that I am concerned about, with one, in particular, being the context in which the client is situated. When looking at the South African context, what if the client is situated in places riddled with crime? The integration of therapy for the client can only affect themselves and does not guarantee the events that the client will be exposed to, only how they may react to those exposures which ties in with the foundation

of behaviour therapy in environmental factors being the influencing elements of human behaviour (Rachman, 2015).

Williams (2009) mentions how the humanistic-existential-phenomenological model regards human behaviour as "freely chosen and therefore inappropriately explained in cause-effect terms" (Williams, 2009: 99). The focal point of this approach is self-actualization, and this entails goals for which the client thrives, their conscious awareness while they are in the thriving state, and the rationality and importance of the client's choices. Williams (2009) speaks to the several emphases of humanistic and existential viewpoints, with the most significant ones being:

- The significance of the individual
- The capacity for change inherent in the individual
- The complex organization of the individual
- The self-regulatory nature of human activity
- The significance of conscious experience

This approach is highly praised by humanists and existential theorists who believe therapists must pay more attention to a client's way of seeing the world. This is where VR technology could aid in assessing and evaluating how the client views their world as Bean (2019) speaks to how VR offers the opportunity to either create or customize the virtual world in which they engage. The Rec Room platform assists in this as the client is able utilize the *Maker pen* function to create inanimate objects as well as animals and buildings. This provides the therapist, particularly the drama therapist, an opportunity to gain insight into the client's perception of the contexts they occupy. This could come in the form of the various symbols that the client may display in their virtual world or avatar, as the therapist could use techniques such as effective questioning to gain insight into the client's choices in the virtual world.

Williams (2009) speaks to Rogers' (1951) client-centred therapy approach as one of the main approaches when working with clients living with anxiety and depression. This approach suggests that people know their problems and how to solve them if they could be placed in a setting that encourages their natural wisdom. The approach emphasizes the creation of an atmosphere that is supported and "characterized by genuineness, empathy, and unconditional positive regard." (Williams, 2009: 102). According to Rogers (1951), the most effective form of therapy must work to the extent that people's perceptions of themselves become more

congruent. It becomes important to note how when it comes to anxiety, this approach "is effective with milder forms of anxiety and depressive disorders, in which problems with self-esteem and self-perception predominate, but it is of more limited use when problems are more severe." (Williams, 2009: 102). Operating from the client-centred lens, the engagement that would ensue in VRDT would then need to follow the client-centred approach in ensuring that all client choices are adhered to. Jones (2008) speaks to how session plans provide a structure for the therapeutic session but can afford to be shifted to adapt to the client's immediate needs, hence the question on client choices in terms of customizations of the avatars and/ virtual environment and the extent of effect it could possibly have for clients.

When looking at anxiety symptoms present within disorders such as social anxiety disorder (SAD), Deacon & Abramowitz (2004) speak to various available interventions for addressing those anxious symptoms. With social phobia symptoms being incorporated in the symptoms of social anxiety disorder, it is important to note how Deacon & Abramowitz (2004) highlight the approaches prevalent in psychotherapy for social phobia as a mental illness. The psychological treatments available for social phobia range from "cognitive restructuring, various forms of exposure, social-skills training, or combinations of these approaches" (Deacon & Abramowitz, 2004: 432). From a behavioural perspective, the approaches emphasize prolonged exposure to the social stimuli, which happens while in the session and homework for the client to engage in (Deacon & Abramowitz, 2004). The supposed most effective form of treatment regarding social phobias is exposure therapy, as Deacon & Abramowitz (2004) state how exposure was found as effective as specific combined cognitive-behavioural approaches. This supports the interventions analysed by Rodebaugh et al. (2004) where the combination of exposure and social training proved effective against anxiety symptoms. From analyses, it can be said that the advantageous part of VR is it can provide exposure in the virtual world, and this can form as a pretext before exposing the client in a real-life context. This provides a safe manner that can allow the therapist to prepare the client and assess how they react to the exposure before putting the client at risk. This is one of the main points that the Amelia virtual care (2022) company highlights in their VR guidelines to their custom software. In the software the therapist is able to control the environment and tailor it to fit the client's immediate needs including stopping or changing the virtual environment at will. McMahon & Boeldt (2022) highlight how before a client can benefit from exposure therapy, they must first be willing to face whatever may trigger their fear, anxiety or panic. This means that they must face the long-avoided activities, emotions, memories or physical sensations that trigger their fears.

Anxiety management skills in VR

There are existing techniques and approaches that are possible within the VR sphere from a psychotherapeutic perspective towards addressing anxiety. McMahon & Boeldt (2022) speak to anxiety management skills helping clients minimize and tolerate anxiety. This may enable them to confront any feared experiences, and can "provide opportunities for changing their thinking, actions and emotional reactions" (McMahon & Boeldt (2022). In the act of witnessing within the Drama Therapeutic lens, the therapist has the option of enabling visual prompts for the client and, in doing so, mirror the client's avatar to them so that they may engage with it as seen in the image below. In the Rec Room application, there is a feature where the client can interact in a virtual environment with a room with mirrors. With the therapist being able to navigate the Rec Room virtual environment using a smartphone, both the client and therapist can be interacting while witnessing each other and themselves.

In this action, McMahon and Boeldt (2022) state how techniques can be projected and demonstrated to the client through their avatar, which can provide a visual aid to the instructions given by the therapist.



Figure 5 Mirror Feature in Rec Room

In any therapeutic application of VR engagements, "learning anxiety coping skills can be easier, more vividly engaging and memorable in VR" (McMahon & Boeldt, 2022:30). When considering the hypothetical VRDT session, the idea of entering and interacting with the virtual

world could be overwhelming for a client (Bean, 2019). Therefore, introducing them to anxiety management skills in the very environment they may be wary of could bridge any doubts towards the VR platform to create a new understanding of VR for the client.

McMahon & Boeldt (2022) list four common anxiety management skills applicable within the VR engagement and these could assist the Drama Therapist in warming the client up by using these simple techniques before transitioning to the actual role engagement in subsequential sessions. The first of these management skills is diaphragmatic breathing. McMahon & Boeldt (2022) state that diaphragmatic breathing activates the parasympathetic branch of the nervous system. There are different variations of this type of breathing, and clients can apply it anywhere, at any time. McMahon & Boeldt (2022:31) suggest that the therapist "can easily monitor client skill and correct as needed when clients are learning or when they are in VR". Since one of the symptoms of anxiety can be irregularities in breathing patterns (Rodebaugh et al., 2004) an important question to pose is whether diaphragmatic breathing can assist in equipping the client with mindfulness and breath work in the VRDT session. The therapist can evaluate if the client is breathing well by having clients put a hand on their chest and another on their abdomen. This method complies with ethics of practice by not displaying any physical touch to certain areas of the client's body as the therapist can observe the client's breathing. Diaphragmatic breathing is appropriate for the Drama Therapeutic context as according to Vilanova, Marques, Ribeiro, Oliveira, Teles & Silverio (2016) it is one of the foundational techniques taught in theatre to get actors to improve their voice projections and breath control for calmness.

The next anxiety management skill is mindfulness[5]. McMahon & Boeldt (2022) refer to how mindfulness effectively addresses anxiety as it helps quiet the mind and increases distress tolerance. Creswell (2016) refers to mindfulness interventions and how they aid in a broad array of outcomes ranging from mental and physical health to cognitive, affective and interpersonal outcomes. The integration of mindfulness into institutional settings such as schools, the military, the workplace and clinical treatment also creates an awareness of the adaptability and therapeutic capabilities. According to Creswell (2016), mindfulness grounds one's attention and awareness in their present moment experience. This can be beneficial for a client with anxiety as "the present moment experience that one attends to can take many forms,

[5] Mindfulness is used as a therapeutic technique and is a mental state achieved by focusing one's awareness on the present moment while accepting their internal feelings.

including one's body sensations, emotional reactions, mental images, mental talk and perceptual experiences (Creswell, 2016: npn).

McMahon & Boeldt (2022) state how mindful awareness aids clients in accustoming with their thinking brain to reassure or ignore their brain reacting to various external stimuli. Correlating with my previous question of a VR engagement in a virtual environment conducive to relaxation breathing, McMahon & Boeldt (2022) speak to EEG data in VR. They expand on how the EEG data shows how nature-based mindfulness within the virtual environment creates a greater physiological anxiety reduction rather than a quiet resting control condition. In correlation with the focus of the research, Creswell (2016) speaks to the incorporation of technology in facilitating mindfulness. He speaks to how internet and smartphone programs are easily accessible via download. One concern that comes with this intervention is the lack of a mindfulness teacher or professional, which then poses a threat of having an unguided meditation despite the AI that is programmed to respond to input, not observation. This situation is different when engaging using VR as not only is the therapist present in the room, but they are able to carefully guide and assist the client while assessing the client's progress and comfortability. This is possible with the Amelia virtual care (2022) mindfulness environment feature where you can either place a mirror in front of the client while they are engaging in mindfulness, or watch their actual selves engage and give them instructions while they are in the virtual environment. This would be accompanied with a calming environment that gives a sense of the relaxation for the client as seen in the images below.

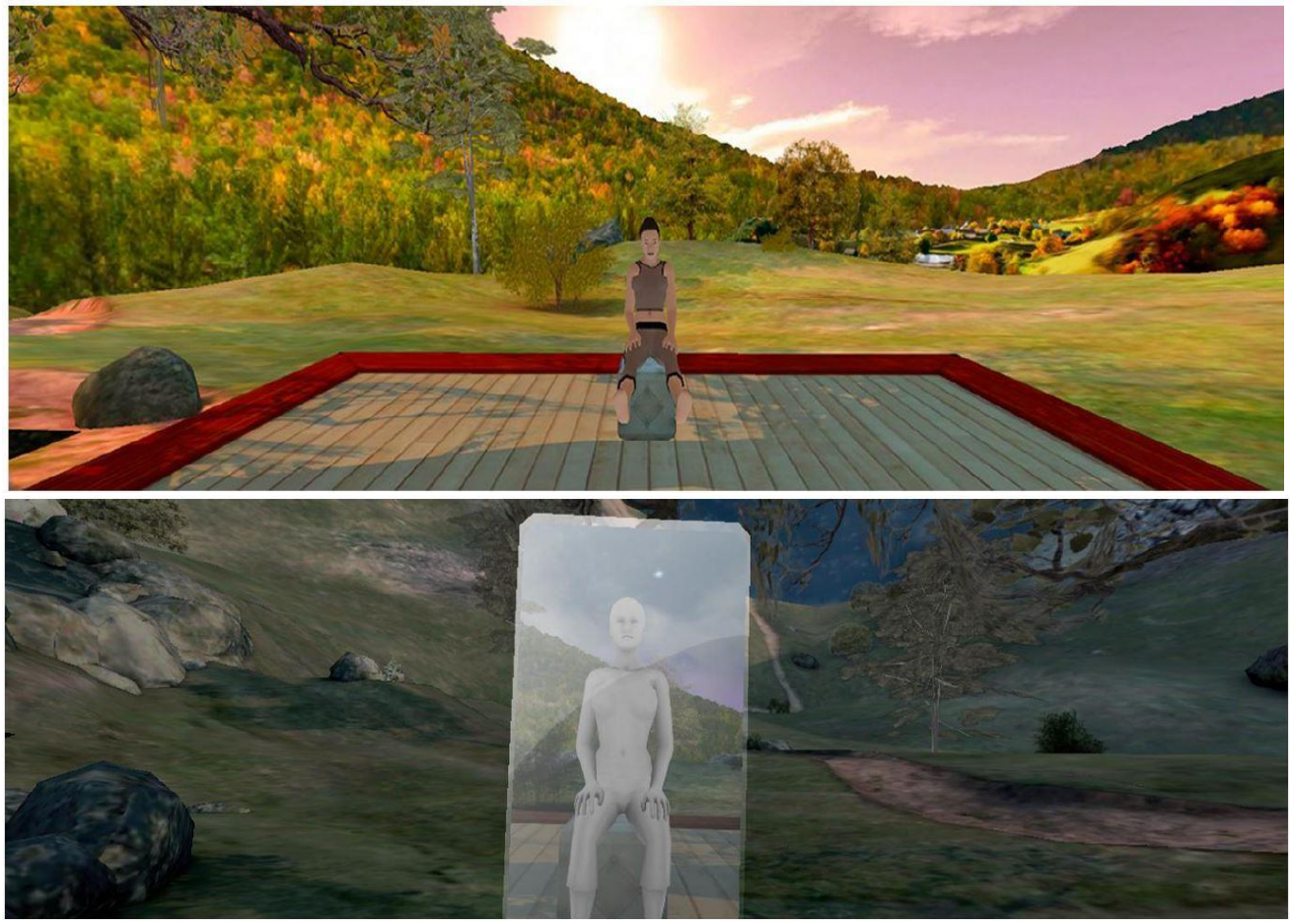


Figure 6 Mindfulness VR capabilities in the Amelia virtual care application

The final anxiety management skill is imagery. McMahon and Boeldt (2022) state the preference of some clients is the use of imagery to manage anxiety. In my Drama Therapeutic practice, I previously incorporated and witnessed the use of imagery and its benefits for clients in school and therapeutic contexts. McMahon & Boeldt (2022) refer to how imagery can reinforce suggestions of safety and calm coping. The benefit of incorporating VR for clients experiencing anxiety symptoms is that there are a variety of virtual environments to choose from, and the client could co-create the environment alongside the therapist. This links to McMahon & Boeldt's (2022) idea of having virtual environments compatible with guided imagery. This can prove effective for clients as this offers them the opportunity to encounter the anxiety symptoms from a safe and controlled virtual environment in which they utilize the technique to tolerate the anxiety.

Drama Therapeutic approaches to anxiety and their applicability to the South African context

In the literature review, I made note of Emunah's (2019) integrative five-phase model, Landy's (2009) role method and the core principles of Drama Therapy in addressing anxiety. I listed

Landy's (2009) nine-step role method process and briefly explored it, but this section will focus on laying out the steps as a foundation to addressing anxiety and questions as to how it could translate in the hypothetical VRDT session. The first stage that Landy makes reference to is the invocation of the role.

How this translates in the therapy session is that the invocation usually proceeds unconsciously, and the therapist does not directly ask the client to choose a role that they think is important. Instead, the client engages in a creative process that leads to the invocation of a role in an organic and unforced manner. Prasko et al. define transference as "a phenomenon in psychoanalysis characterized by unconscious redirection of feelings from one person to another" (Prasko et al., 2010: 190). Landy (2009) refers to how a spontaneous role that comes from unguided client choices emerges from an unconscious source. By this occurring, the role chooses the individual, and it highlights an issue that is often not consciously accessible to the client and needs addressing at that moment. The role can be a problematic role that is already present in the client's repertoire as Landy (2009) mentions how in some instances, clients enter the session being fully conscious of these problematic roles.

Once the role is invoked, it needs to be further substantiated and this happens through the next step of the role method which according to Landy (2009), is naming the role. There are various types of naming that can happen in this stage. The role could have a reality-based name, it could have an abstract name that indicates a further distancing of the role by the client, or it could correspond to the prescribed role such as "the coward" or "the bully". Landy (2009) emphasizes how naming the role for the client is important as it concretises the chosen role for them. In the concretisation happening, the client may be able to further move from the realistic into the fictional world. This may reinforce the distancing that needs to occur before effective engagement can happen for the client. A question that can be posed here is whether the creation of the avatar and the subsequent engagement with or as that avatar can allow the client to acknowledge the role created? Landy highlights the importance of naming a role as the client "dares to look at the connection between a feeling state and a behavioural state" (Landy, 2009: 8). This means that the client is offered an opportunity to search for the connection between the ideal and the real and from that, the client may be able to fathom the extent to which they may be able to cope or manage the anxiety symptoms.

The third stage of the role method is the playing out or working through the role stage. According to Landy (2009), This stage is where the deepening of the role happens through

enactment. As Landy (2009) expands, the form of engagement that transpires looks at enhancing the commitment to the role and extending it beyond expected behaviours that may be associated with the role. Landy (2009) refers to how this stage happens mainly in a group drama therapy session as clients engage with one another while enacting their various roles and interacting in those roles. Engagement in this manner allows for the client to make connections through the drama therapy core principle of interactive audience and witnessing. Jones (2004) highlights how the act of witnessing within a drama therapy session serves several purposes, such as the creation of safety, the enhancement of the engagement by the client, and an establishment of a relationship, not only between the client and the witness, but the client and the role they are engaging with as well. By this happening, Landy (2009) states how the client can discover ways in which their reaction to external situations affects their thinking patterns and vice versa, and the qualities that hinder the client from achieving their ideal state can be focused on and engaged with. "Much of the actual therapy concerns a working through of the issues embedded in a particular role (or related roles)" (Landy, 2009: 8).

It is pertinent to highlight that in a Drama Therapeutic process, clients may not simply focus on a single role. Instead, they may transition from role to role and shift the focus accordingly. In this case, the therapist's role would be to ensure that the client is aware of the implications of the shifts when they occur. Through effective questioning, the therapist can help the client determine whether they are shifting roles because they are being avoidant of the role and are unwilling to work with a single role or find it too intimidating/overwhelming in the case of anxiety symptoms. Landy (2009) does, however, highlight how there are possibilities where clients examine systems of interdependent roles and require the freedom to manoeuvre among them.

The third stage of Role Method occurs while the client is in role. Landy (2009) states that it is most successful when clients can fully accept the fictional reality of the drama. The question that arises here is whether it would prove advantageous to engage in this manner in a VRDT exploration and whether any consequences of the enactment and the embodiment happen to the avatar rather than the client. This means that the client would be potentially free to experiment, in a safe manner, with their role, while simultaneously being knowledgeable that the risk does not fall on them in the real world.

In the fourth stage of the Role Method, the exploration of sub-roles and alternative qualities occurs. In this stage, clients are encouraged to work through all the various roles that may

surface in their engagement. After some time, (depending on how the exploration of roles may be going for the client), they are then encouraged to modify the initial role and then create another modification that stems from the original role. The additional role (the modification role) takes effect by taking the form of a puppet. This represents a sub-type which is "a variation on the theme set by the character, in order to provide it with further dimension and specificity" (Landy, 2009: 9). Landy (2009) suggests how the second modification of the main role should take the form of a mask, representing an alternative quality that is more extreme in its divergence from the main role. This role would take the form of a mask because it represents the "shadow" of the client in it being the variation that is not openly expressed at all during the engagement.

Landy (1991) states how exploiting alternatives is important because one begins to recognise options that are at their disposal. A crucial aspect to this step is that "the use of sub-roles and alternative qualities allows clients to dig deeper within their characters" (Landy, 2009: 9). It then becomes important to note that clients will discover how any role, when explored fully, contains or embodies ambivalences or contradictions. In this sense, the role method is said to encourage the search for the ambivalences, and once the alternatives have been unearthed, they can be named to transition onto the next process, which is the fifth stage.

The fifth stage in Landy's (2009) Role Method process is titled: reflecting upon the role play: discovering role qualities, functions and styles inherent in the role. These steps involve a significant amount of closure for the client as this is where they encounter and acknowledge the role with which they engage. In this stage, Landy (2009) states how closure becomes a way for clients to assess the value of the engagement and validate their feelings and provide the needed transitions from the world of the imagination (the virtual world) to that of the here and now. This also accurately depicts the transition from the controlled and contained therapy space into the less controlled space of their real-life context. Landy (2009) speaks to the first part of the closure involving the ability to find meaning in the various roles and sub-roles that were engaged with from the fictional point of view. While still in this stage, Landy (2009) suggests that the client can be asked about the style of their enactment. This part of the questioning stage refers to the role in third person and the discussion that ensues focuses on "the importance of how a role is played, of the connection between feeling and thought." (Landy, 2009, 10). When the client has established the form and the purpose of the role clearly and concisely, they are ready to transition into the next stage.

The sixth stage of the Role Method relates the fictional role to everyday life. This stage looks at determining whether connections have been made between the clients' roles and their everyday lives. Landy (2009) raises a pertinent aspect to consider in that all forms of projective therapy are successful to the extent in which they lead the client into and out of the projection. When taking this perspective into the Drama Therapeutic lens, Landy (2009) refers to how the projective work involves a movement from an ordinary role into that of the imaginative and dramatic one. In the engagement in the therapy session, clients are asked to return from the reality of the fictional and imaginative to the real-life context to draw any similarities and connections between both realities.

Once the client is aware of the functions, qualities and style of their fictional role or avatar, the next step transitions into their reality and challenges the client to look at how they play the specific quality in their interactions with others in the real-life context. Landy (2009) speaks to how it may be difficult for some clients to identify the connection. Landy (2009) further substantiates how one may play a role in a broad manner that bears very little resemblance to their own life. I ponder how in the discussion, the client could be asked to specify their own role's qualities, function, and style to determine how this role may serve them. This is the role that they attribute to their real selves and that very role would then be compared to that of the fiction that the client created. If the fictional qualities prove to be more powerful and liberating than the real ones, the client and therapist would need to discuss ways to bring some of the qualities into the everyday experience of playing the particular role. Landy (2009) compares this part of the exercise to the therapist functioning as a theatre director, attempting to help an actor find a way to connect their personal experience with the particular demands of a scripted character. However, the main difference lies in how within theatre, the personal serves the fictional, while in therapy, the fictional serves the personal.

To discover meaning within the avatar, the client must be able to “accept the dramatic paradox of person and persona and find a way to live in an ambivalent world of being and not being” (Landy, 2009: 10). Thus, this means that the fictional serves the client by highlighting an equivalent non-fictional role, while that role requires the fiction for clarification. For the client to understand how the fictional roles may serve them in their everyday life, they must first be able to see both the fictional role and its reality-based counterpart clearly. This would be by scrutinizing and comprehending the purpose, content and the form of each. Next, there would need to be a further analysis of the similarities and differences. Lastly, there would need to be

steps taken towards modifying the everyday role of the client in a way that serves them as well as or better than the fictional one. The modification could play a crucial part in developing qualities that identify the anxious symptoms and act accordingly in choosing the most appropriate course of action to address it. Landy (2009) states how this form of engagement can allow the client to see the intimate connection between the real and ideal and the substance and the shadow. These all provide sustenance to each other.

The next step looks at integrating roles to create a functional role system. Landy (2009) speaks to how some clients generate several roles during a given session, while others, having begun to work through a single role, end up becoming side-tracked by other ones and perceiving those roles partially or to a full extent. Some of these roles will need to be named and worked through to a certain extent. The focus on one's role can either fade in and out according to their immediate and past experience, resistance, motivation or mood. Landy (2009) highlights how the role method is valuable as a map that helps the client and the drama therapist, first specify then traverse the domains that the client may not understand or find obscure.

Makanya (2014) speaks to how roles within the African context serve multiple purposes within communities and how they contribute towards African healing systems. An individual can find themselves in ailment due to not fully understanding the extent to which their role can be utilized to maximize useful skills, which may contribute to ill mental health such as anxiety symptoms. Landy mentions how "roles tend to become entangled in one another" (Landy, 2009: 11), and this means that in engaging in the role method, the client is challenged to unravel some of the knots and separate the roles from one another. In relation to VRDT, this poses a question on whether having multiple avatars can aid the client in distinguishing between the different roles and knowing which one they are accessing at a time and how to act accordingly regarding the behaviour and characteristics associated with that role. When looking at the integration stage, Landy (2009) refers to how the systems reassemble with specific roles transformed. He further expands on how integration as an aim often becomes difficult to assess within drama therapy and how it occurs when there are discernible shifts once the client reports them. In essence, the integration implies a reconfiguration of one's role system for them to be balanced. For the client and therapist to see the shift in role, the client would need to display an ability to live with what Landy (2009) defines as role ambivalence and, in this way, discover new possibilities of being with oneself and others.

Discussion

The research questions that this inquiry aimed to answer was the extent to which VR could be used in Drama Therapy to address anxiety symptoms as well as the ethical considerations that would need to be considered. The research has identified valuable connections between avatar work and role work that makes VR a viable platform for personal exploration. These possibly arise from aspects such as the interaction capabilities in the virtual environments supplied by VR applications such as Amelia virtual care (2022), Rec Room and Wander. This is due to the wide range of possibilities offered to the client by the ability to customize their avatars (Bean, 2019). The therapist is offered an opportunity to utilize VR to assess the client by observing the client's projection onto the avatar as well as the client's reactions to visual and auditory stimuli of the virtual environment they are interacting in. (Jones, 2009 & McMahon & Boeldt, 2022). The therapist is capable of achieving such an assessment through having dual access to the VR applications by accessing from a smartphone, while the client is engaging with HMD gear as an avatar in the virtual environment. In the client being able to engage as the avatar, it allows them to explore different roles by creating different saveable avatars offered by applications like Rec Room and that could lead to character development as Bean (2019) equates VR exploration in a virtual environment as a necessity in distancing (Jones, 2008). If not amply prepared, VR presents possible physiological problems for the client and so it becomes important to utilize the practical steps laid out by Lamb & Etopio (2019) in making sure that there is enough space for the client to engage in the therapy room. It would also be beneficial for the client if the therapist followed what Whitman et al. (2004) define as a human-centred design approach that avoids user fatigue and utilizes different muscle groups to engage in the virtual environment. These different factors aid in the ethical considerations of VR exploration for clients.

When looking at the question of whether avatars can allow for an expansion of role repertoire, I recommend that the client explore different roles through the facilitation of the therapist within a virtual environment. This could be achieved by the therapist following Landy's (2009) eight steps of Role Method. With Radmall (1995) mentioning how the Role Method allows the client group to become more integrated with their various roles, the client can engage with those roles both internally and by viewing the roles externally (through the avatar). The engagement with avatars answers how an expansion of a client's role repertoire can occur through the creation of multiple avatars that focus on different characteristics of the client. This correlates with Bean's (2019) psychological projection onto a virtual character in gaming, but instead of a third-person character with a prescribed storyline, the client engages using VR

which has them navigate from the point of view of the avatar. Here, they engage in role-play that incorporates the themes that are present in the triggers of their anxiety symptoms. This level of engagement has the capabilities where the client could project the ideal qualities that they want to inherit onto the avatar subconsciously. The client can further interact with the avatar with these ideal qualities by the therapist recording the client's engagement through the avatar. This happens when the client projects subconsciously without being aware of the projection taking place. Correlating with Jones' (2008) embodiment principle of drama therapy, the client in the character of the avatar, can embody the various qualities that they want to reflect in the avatar. With anxiety symptoms sometimes hindering the client's interactions or affecting those interactions negatively, exploration in VR can allow the client to externalize their internal conflicts (Stein, 2018). This level of engagement allows for the client to gain agency and psychological distance, highlighting how the client can learn coping mechanisms that can help address their anxiety in their autonomous engagement in VR (McMahon & Boeldt, 2022).

In learning the various triggers, fears and sensitive areas of engagement for the client, the therapist can plan a VR engagement that counters the client's fears (McMahon & Boeldt, 2022) or plan experiences or exposures that address them using the Amelia virtual care's (2022) platform that offers over 110 VR environments tailored for such therapeutic exposure to occur. This means that the therapist could create a safe virtual environment tailored to the client's specific needs and utilize the virtual environment to address specific therapeutic goals. Since the research focused on anxiety symptoms, it was pertinent to identify VR experiences such as the aforementioned Amelia virtual care (2022) that offers an opportunity to equip clients with skills that they can use to cope or tolerate their anxiety symptoms. I take into account the several exercises that address anxiety such as PMR, mindfulness and exposure that Rodebaugh et al. (2019) listed as interventions for anxiety and anxiety symptoms. In determining the appropriate VRDT session structure, I suggest that these exercises can be utilized to familiarize the client with the virtual world as a form of a warm-up before navigation and role explorations. McMahon and Boeldt (2022: 33) state, "the whole point of learning skills is for clients to be able to use and benefit from these skills in anxiety-provoking or stressful situations". I imagine that in the therapist engaging with the client while in the virtual space, they can offer experiences that can aid social anxiety symptoms, such as engaging in role play in Amelia virtual care's (2022) social or public speaking virtual environments while maintaining eye contact with the therapists' avatar. I am therefore taking into account aspects laid out in the

findings section regarding recommendable hardware and applications, the exercises that are applicable within a VRDT context, and lastly, Landy's (2009) detailed role method that informed how I structured the hypothetical VRDT session.

Accessible VR hardware to fit South African socio-economic context

In terms of VR hardware that is affordable and accessible for therapists and clients, *Google* introduced a device called *Google Cardboard* and though discontinued, was meant to address accessibility for clients by using a cardboard-based headset and plastic lenses. Fortunately, Android Authority (2015) released a YouTube video on how to create DIY VR goggles from schematics provided by Google Cardboard and this presents an opportunity to engage in a possible VRDT intervention, despite South Africa's socio-economic standing. According to *Google's* arvr.google.com website (2019) the initiative was created as a low-cost system that encourages interest and development in VR applications. There are applications that are still available for smartphone users, meaning they can still utilize the google cardboard to familiarize with VR.

With demand for VR on the rise, there are different hardware companies and software developers such as *Meta, Google, HTC Vive, Open Source VR* Etc. that offer a vast number of applications for VR exploration. Though I have previously highlighted the different hardware and systems available in VR which are the non, semi, and fully-immersive systems, there are three distinct segments of VR in HMD. These are the premium PC-connected full-immersion, the premium smartphone headsets, and the entry-level cost-efficient handheld VR devices. One of the focal sets that I will recommend in VRDT engagement is the *Oculus Quest*, which falls under the full-immersive category.

About the VR hardware and recommended in-built applications for VRDT exploration

According to a review by Wong (2019), the *Oculus Quest* is a VR headset that is standalone and wireless which means it does not require a connection to a PC or a smartphone to work. The device runs games and software wirelessly under an Android-based operating system (Wong, 2019). The *Oculus Quest* supports precision room-scale tracking without external sensors, which means it can track how big the room is and use a guidance system that lets the user know when they are out of the designated space of interaction (Wong, 2019). This feature is important in terms of the safety of the clients in their engagement with the virtual environment, especially in instances where the therapist is engaging in the virtual environment

with them. The *Quest* comprises of a HMD and *Oculus Touch* controllers for navigation in the virtual environment.

The *Quest* has applications that are available for purchase in the Quest store which is accessible from their website. One application that I believe would be beneficial for the hypothetical VRDT session is *Wander*. According to the Oculus.com website, Wander is an application where the user can teleport almost anywhere in the world as it uses Google StreetView data (Oculus.com, 2022). The application has multiple navigation modes and therefore, in the VRDT context, allows the client to teleport outside any location that is within the Google StreetView limits. This feature allows the clients an opportunity to teleport them to a geographical location where they could confront unresolved triggers, sources, and/or contributing factors to their anxiety symptoms. It is however important to approach the engagement with caution as one cannot predict how the client will respond to the environment. The engagement should be approached in a way where the client's safety is prioritised and what the therapist could do here is point out the different locations for the client associated with different events in their lives. From here, the therapist would be able to gauge the client's level of readiness to engage with a particular event that serves as an anxiety trigger for the client and thus prepare the client using dramatic rituals to symbolize the entry into a dramatic elsewhere in the lens of Jones' (2008) dramatic ritual.

How role could play beneficial for the client here is that after the dramatic ritual, they could navigate at the location where they have experienced unpleasant situations from the perspective of the avatar. This speaks to the fundamental distancing that can allow for this form of engagement within a Drama Therapeutic session from Landy's (1983) point of view. I reference Landy (1983) because he is the practitioner that coined the quality of distancing that I keep referring to in this study. I am deliberate by not referencing newer sources because they have adapted Landy's theory of Drama Therapeutic distancing to fit the contexts of their studies and none of them address distancing from the perspective I present in this study. The exposure to certain environments that have an emotional impact on the client aids in the exploration of the sub-qualities of roles that could be explored in addressing their anxiety. Landy (2009) speaks to how this is achieved by the therapist observing the shifts in the client's engagement according to the environment in which they find themselves in, and Wander offers the therapist the opportunity to shift the locations instantaneously at will within the virtual space. Due to Wander not allowing clients to customize avatars or view themselves, it does lessen the level of distancing, but this application could be applicable with ample preparation for the client in

the characterization of the virtual self so that they do not engage in the realistic world as themselves. The client could undergo a series of characterization steps from the name, personality and the way the character speaks, to try and reinforce the necessary distance needed for the engagement by the client.

Another application that I recommend being suitable for a hypothetical VRDT session is *Rec Room*. According to their website, *Rec Room* is a free platform where users can build and play games with others all around the world in which they can chat and explore millions of player-created rooms. The application affords the user an opportunity to customize and dress up an avatar as a form of expression of the individual. I believe this application has the fundamental features to be applicable in a VRDT setting as it gives individuals the opportunity to fully customize their avatars from their hair, clothing items and accessories. The application is beneficial for both the therapist and the client as there is a Maker Pen feature which is a tool that allows users to build anything "from puppies to helicopters to entire worlds" (recroom.com, 2022, NPN). With this feature, the therapist and client could co-create an environment where not only a role engagement could occur, but various Drama Therapeutic warm-ups such as dramatic rituals, mindfulness exercises and drama games. *Rec Room* could also prove to be beneficial for the safety of the client during engagement as the application is accessible from mobile devices, PC and VR. This means that as the client is engaging from VR, the therapist is able to simultaneously interact with, and observe the client by engaging using a mobile device while in the same virtual environment with the client. By doing this, the therapist is able to make sure that the client is safe and comfortable within the VR engagement.



Figure 7 Avatar customization available in Rec Room

A company called *Amelia virtual care* has created a VR platform that is "used by therapists who perform mental health assessments and interventions" (Amelia virtual care, 2022. NPN). The VR platform consists of more than 110 VR immersive environments ranging from natural environments such as open fields and forests to social settings such as restaurants and bars. From a hypothetical VRDT lens, the possibilities that the virtual environments provide could allow for the therapist to set up various scenarios for the client to engage in by having them interact within these environments. In a clinical guide that was released by the Amelia virtual care company, they refer to the environments fostering an engagement that can work through exposure, systematic desensitization, diaphragmatic breathing, muscle relaxation, visualization/imagery and mindfulness techniques. Amelia virtual care (2022) also mention how the environments can be used to work on cognitive strategies such as rational emotive therapy and this begins to paint a picture on the limitless possibilities that such a platform could offer for VRDT. I thus propose that by engaging in a VRDT session that provides various environments that can stimulate the client and allow for them to engage with various roles, there is a possibility for them developing coping mechanisms and resilience towards their anxious triggers.

VR within a Drama Therapy session can thus provide an intriguing and interesting way to engage with the client in the virtual space. It may allow the client to find ways to interact with

the virtual world, building connections and finding ways to use the stimuli from the virtual world to manage the anxiety they may be facing in the real world.

Example of social atom

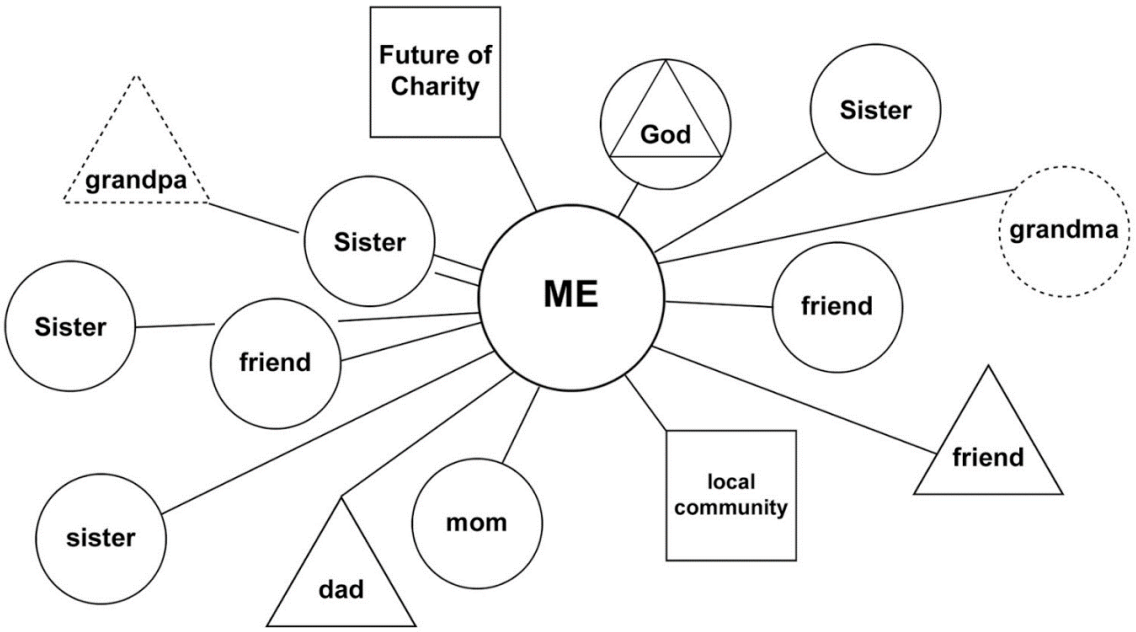


Figure 8 Example of social atom exercise

6

Jones (2008) mentions how in Drama Therapy, allowing the client to enter the therapeutic space with their personal stories and offering them a platform to interact with them could provide substantial therapeutic goals. Assessment tools are essential in determining contributing factors to a client's referral for therapy and establishing said therapeutic goals to accurately lay out the best therapeutic approach for the client. There are techniques that are applicable in Drama Therapy to assess aspects such as the interrelationships of clients. Before entering into exercises like creating an avatar and navigating virtual environments, I recommend that clients could first engage in a social atom exercise which will be detailed shortly. I have found a connection in how VR could not only focus on individual factors that may contribute to a client's anxious symptoms, but Makanya's (2014) conception of African health using a social atom exercise that could be incorporated into VR as well. Rothbaum et al. (2002) speaks to

[6] An example of a social atom activity. Link: https://4.bp.blogspot.com/-F8ql-rfc31k/WntIdhS-5hI/AAAAAAAAB6A/LQmY-zUZgC8YzmtD-MpLPczintQ_t6wLwCLcBGAs/s1600/social%2Batom%2Bsample.jpg

individuals within a family or community being connected emotionally, which affects their overall wellbeing, social relations, and behaviour. Buchanan (1984) refers to Moreno's social atom exercise. I see this technique being applicable within the VR environment where the client, in first-person, can plot different totems that represent other individuals in the client's life. In Buchanan (1984) viewing the social atom as a projective and assessment tool, I find it to be suitable when working with a client in a therapeutic setting. Verhofstadt-Deneve (2003) reports on external influences and how they may have an impact on the anxiety levels of an individual. In the virtual environment, the client, alongside the therapist, can establish a flat surfaced three-dimensional platform where the client is invited to place themselves in the centre and create as well as plot the totems/objects that represent various individuals or items/hobbies/interests that the client considers of importance to them. Please find above an example of the social atom activity.

One of the applications that may be at the client's disposal to create the social atom is Rec Room. Rec Room offers users the opportunity of creating whatever object that is imaginable for the user utilizing the Magic Pen provided by the application. Upon creating the various totems, the client can view the social atom from a bird's eye view. This can provide the client with perspective on the various factors that could play a part in their anxiety symptoms. In the client engaging in a social atom exercise in the VR environment, the therapist can collect vital information about the client's interpersonal relationships (Buchanan, 1984). From this, they can tailor future VR engagements to meet the client's specific needs while looking from a holistic perspective rather than an individualistic one.

Diagram of VRDT and Role Method model

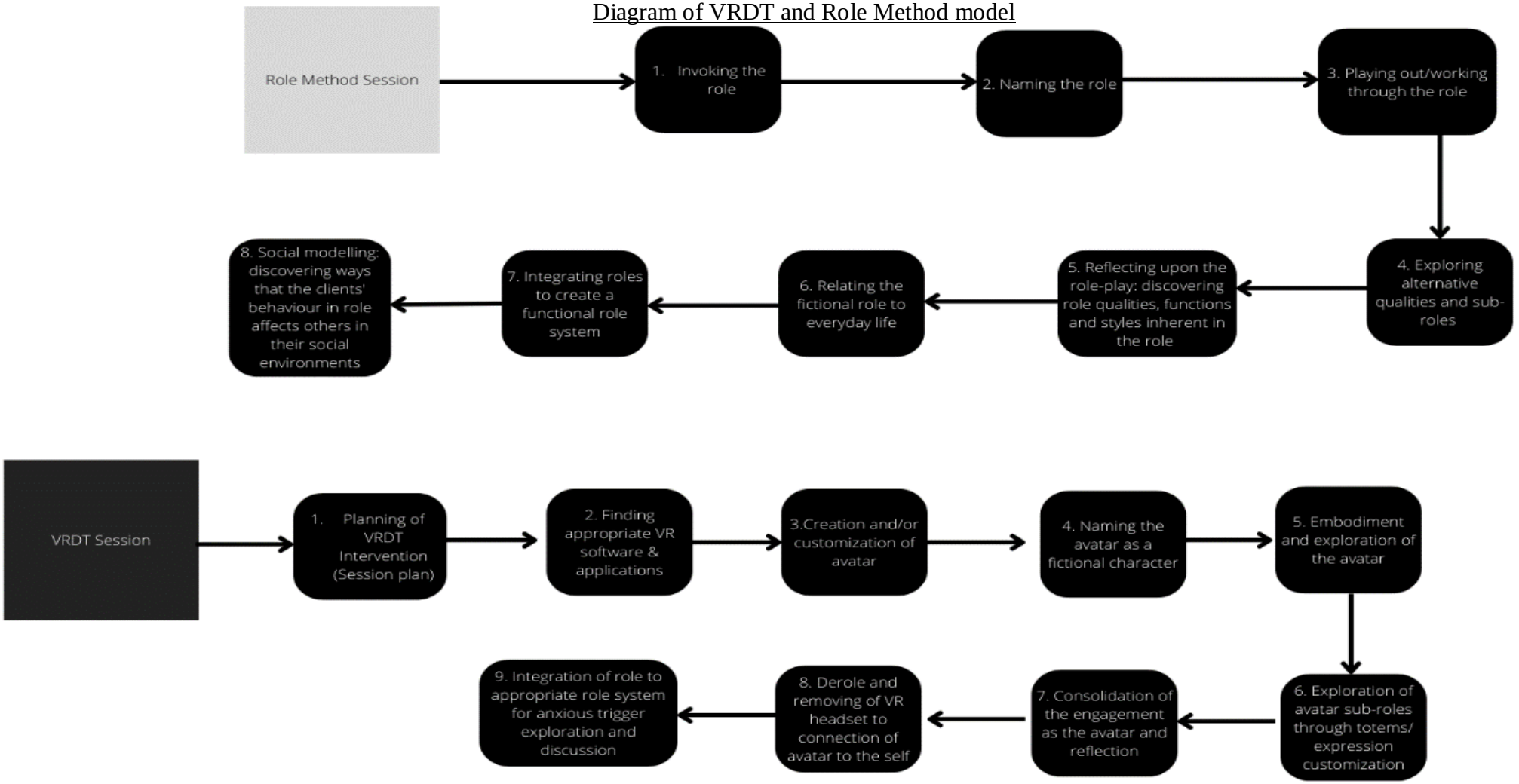


Figure 9 VRDT and Role Method Diagram

Layout of the proposed VRDT session

By combining Landy's (2009) role method and the method that was identified as part of Javaid and Haleem's (2018) work, I propose the VRDT model that is laid out above. Above is Landy's (2009) eight-step process of Role Method and the proposed VRDT model. I recommend that mental health practitioners utilize the nine-step process of incorporating VR over several sessions, depending on the familiarity of VR by the client to ensure their safety. They would further need sufficient knowledge of the client's anxious symptoms and how it may affect their VR engagement. This nine-step process can incorporate Landy's (2009) eight-step process to the Role Method as a potential VRDT session. When looking at the hypothetical VRDT session, it is important for the therapist to define the therapeutic objectives. This falls in the first step of the nine-step process of incorporating VR (Javaid & Haleem, 2020). The planning of the VR intervention occurs from the therapist gaining diagnostic and background information about the client (Jones, 2008). This could take the form of a session plan that considers the above-mentioned information.

The next step would be for the therapist to look into what software and applications within VR (such as Wander, Rec Room and Amelia virtual care) would be required to maximize the Drama Therapeutic techniques fully. In the case of utilizing the Role Method, I found that an application such as Rec Room could be used for the intended therapeutic session. The identifying of applicable applications and HMD gear correlates with the third, fourth and fifth step as it incorporates the selection of the hardware and software, and the virtual environment where the VR engagement would occur. The therapist needs to consider aspects such as mobility in the virtual world when looking at which application to apply. This is to ensure that the client has freedom of movement in the virtual environment. To ensure that the client has the safest engagement possible, there should be a consideration of the therapy room where the client will be engaging. Ferguson (2020) mentions general precautions that should be taken when engaging with VR. The first thing to take note of to reduce the risk of injury is to use VR in a safe and spacious environment where the area is cleared of any furniture or objects. Ferguson (2020) recommends that users remain seated in a VR engagement, unless there is someone present to supervise them and actual physical walking is required for the VR software. Ferguson (2020) therefore recommends that the user not walk more than thirty feet in any direction for their own safety. I would recommend that in moments where the Drama Therapist

is not engaging in the virtual world, they would be responsible for creating and maintaining a safe environment for the client at all times or interact with the client from their smartphone so they may see the client throughout the engagement. This means that they will act as a spotter while the client navigates the virtual world and ensure that the therapy room is level, firm and there are no tripping hazards present in the space.

The sixth step is the step that correlates the most with the eight-steps of Role Method as it is the step where the actual VR engagement takes place. In the therapeutic intervention stage, the client begins by invoking and naming their role (step one and two of role Method). In either the Amelia virtual care or Rec Room application, the session may begin with the client teleporting around the virtual environment using the navigation device. Here, the therapist gives the client various tasks to invoke the role with which the client wants to engage. For example, the client could engage in a characterisation exercise where the therapist prompts the client to imagine what the avatar's thought patterns could be and the various mannerisms they could have. This helps in concretizing the role for the client and building their belief. I suggest equating the invoking of a role to creating an avatar in VR. The Rec Room VR application provides various choices in terms of customization ranging from hair, skin colour, clothing accessories and even make-up and scars. The client could select and customize the VR to their preferred choice. In this action, I recommend that this could be an effective assessment tool as Bean (2019) speaks to avatars displaying characteristics that the client could attribute to and the possibility of transference occurring in that regard. This may allow the therapist to assess the client's choices in their avatar, and it would be beneficial for the therapist to take notes on what surfaces for the client. "What is different about VR from traditional therapies is the infusion of technology to create environments, and arguably more importantly, to assess therapeutic outcomes." (Lamb & Etopio, 2019: 88).

Once the creation and customization of the avatar is complete, the client then proceeds to name the avatar. The therapist can display the name that the client has chosen above their avatar so that it is always visible but it isn't necessary in every engagement. This can aid the client in what Landy (2009) emphasizes as concretising the role for the client, as it also creates a form of distancing when the client can constantly see the character's name to remind them, they are embodying a character. When looking at the client displaying anxiety symptoms, naming the avatar can help the client and therapist examine various contradictions between appearance and reality. This occurs when the client names the various characteristics of the avatar that the client

may feel describe themselves in their real-life context. The client, therefore, is given the platform to name both the avatar and the characteristics that the avatar may be assigned in the form of Jung's (2012) archetypes. Some examples of archetypes include that of the explorer which could include the seeker, the adventurer and/or the wanderer sub-types whereas the creator archetype could include the inventor, prophet, shadow and/or visionary archetype. I assume that one may be needing to incorporate a specific archetype or a combination of them that may assist the client in addressing their anxiety symptoms. For example, if someone may be lacking someone who can protect and guide them in their anxiety, they may be requiring an engagement with a caregiver archetype where they could explore that role and serve as a consolation for the client. Being able to achieve the assignation of characteristics to the avatar may encourage the client to search for a connection between the ideal and the real. This may aid the client in fathoming the extent to which they may equip themselves with various qualities that they may find to benefit them when experiencing the anxious symptoms.

I have found that it would be beneficial for the client if the therapist could pause the session before going into the playing out/working through the role stage. This is due to ethical guidelines, as Whitman et al. (2004) states, in letting the client take breaks between VR engagements. At this moment, the therapist can ask the client effective questions about their various choices, as Patterson (1985) emphasizes the importance of effective questioning in allowing the client to make connections around their choices.

Once the recess is done, the session can continue with the exploration stage of the session. Here the client can embody and take the role of the avatar. Landy (2009) states how the enactment deepens the role for the client. I envision the therapist engaging with the client as another avatar in the virtual space to instigate an interaction by having the therapist log into the Rec Room application using a smartphone. This form of interaction incorporates the Drama Therapeutic core principle of interactive audience and witnessing (Jones, 2008). The level of engagement in witnessing and being with the client in the virtual space speaks to the purpose of creating safety for the client. The therapist can further ensure that there is an establishment of a relationship between the client and witness and the client with the role they are engaging with. With VR having the capabilities of recording and displaying the avatar as a separate entity to the client, it allows the client to witness themselves (the avatar) in the space and observe their reactions during the engagement. This could also take the form of the client viewing themselves in the mirror within the virtual environment that Rec Room offers and using the feature of

changing the avatar's facial expressions. This can give the client a vast array of ways to discover how their behaviour towards their thinking patterns when in anxiety symptoms, can hinder them from achieving their ideal coping mechanism. This means that the client may identify triggers and their instinctive reactions towards those triggers so that they may potentially develop ways to deal with the anxiety symptoms should they arise through objective engagement with the therapist as the witness. By potentially using the Wander app where clients are able to teleport their avatars to accessible parts of the world. it can give them a level of exploration where the therapist and client could find ways to consolidate the client's feelings towards that environment and look to change how the client views it through continual interaction.



Figure 10 VR users visiting different parts of the world using the Wander VR application

If the therapist is to engage using HMD gear with the client, an alternative to ensuring safety could be to demarcate the space where both parties can manoeuvre such as the *Meta Quest 2's* (which is one of the more advanced HMD gears) option to set up a play space boundary by physically "drawing" a boundary around the play space. This is similar to the *Oculus*'s guardian system which shows users the limits of the area they are being tracked in.

In the following stage, the exploration of sub-roles and alternative qualities, the therapist encourages the client to engage with sub-roles by adding customizations and modifications to the avatar using the customization feature included in Rec Room. By following Landy's (2009)

modification following the form of a mask, the avatar could wear a mask that represents an alternative sub-role. The sub-role could also take the form of miniature pets or totems that are as fully customizable as the main avatar that the client would be using. In essence, the enabling by Rec Room for clients to create little objects or animals using the Maker pen could symbolize different aspects of their sub-roles. Landy's (2009) modification follows the incorporation of a mask. The mask represents an alternative quality of a specific role that the client is engaging with in order to bring a distinction between the roles. An example of this could be the role of a lover craving intimacy coupling with a role of a ruler who wants to control all that happens around them. This would represent the shadow of the role which is one of the empirical archetypes that represent one's 'dark side' that represents the side we choose to omit others from seeing (Landy, 2009). It has the possibility to provide an in-depth engagement for the client to explore how the role could be molded to serve the client's anxiety symptoms.

After the exploration and role play with the avatars, the therapist and client can then de-role[7] to come back to themselves. This can happen through a dramatic ritual where the client and therapist exit the VR space in order to return to the real world[8]. This would then transition into the seventh step of the nine-step VRDT session, which is the identification of the best outcome/reflection stage. Here, the client reflects on the session's proceedings, speaking to what emerged for them, what their thought process was, what they would have done differently, and their connections.

This stage occurs concurrently with the fifth stage of the Role Method which is the reflection on the role stage. In this stage, there is closure for the client as they encounter and acknowledge the role that was engaged with. The therapist can consolidate all they have observed in the VR session while referring to the avatars in the third person. This ensures that the distancing is maintained, even outside of the virtual world, so that the client may not find moments of transference between themselves and the avatar character. Perhaps one of the important points in this frame is the specificity in which clients can be asked to expand on the various aesthetic qualities of the avatars/roles ranging from intellectual, moral, physical, emotional and social qualities. Effective questions in this regard, can be directed to the individual or the role interchangeably. Examples of questions stemmed from an engagement in either the Wander,

[7] De-roling is when the client "takes off" the role in which they were engaging with and come back to their actual selves.

[8] A dramatic ritual in drama therapy is a technique in which the establishment of the therapeutic space is either entered or exited to signify the beginning/end of the drama therapy session.

Rec room or Amelia virtual care environments could be, “how does ‘Sam’ feel about this environment?” or “what came up for ‘Sam’ when he was moving in the environment that made him feel anxious?”, and lastly, “could how he engaged in the virtual world help him when he’s anxious?”. This could help the client to draw connections between what occurred in the virtual environment and how it could be applicable in their real-life context as a possible coping mechanism.

Upon substantial discussion, the sixth stage of the Role Method is the relation of the fictional role to everyday life phase, and the ninth step in the VRDT engagement can occur. In the ninth step, the therapist focuses on giving the client tasks they can do at home to practice and reinforce so that the client can implement what they have learnt in the VRDT session in their lives. This can take the form of journaling and reflective writing so that the client concretizes what they have learned. These will be informed by the relation of the fictional character (the ideal qualities that they possess) to the client’s personal qualities. Here the client will be challenged to look at how they play specific qualities when experiencing anxiety symptoms. McMahon & Boeldt (2022) state that the client’s ability to identify when they are feeling anxious is important as it aids them to know when they can apply the coping mechanisms that they learned in the therapy session. The primary question that then comes into play in this stage for the client is how they are in comparison to the role. From the perspective of the VRDT engagement, they would think of the connections between themselves and their avatar. The key in this stage would not be the question of “how am I like Sam?” but rather “how am I different from Sam?” This becomes a crucial element as it demonstrates to the client how their single personality represented by the avatar is larger than any singular role they might play.

In essence, the ultimate goal of the hypothetical VRDT method in relation to role is to help the client construct a viable role system. This is a role system that is “able to tolerate ambivalence and acknowledge the importance of both negative and positive roles, sub-roles and alternative qualities” (Landy, 2009: 10). Looking at a client with anxiety symptoms and the gravity of how important it is for them to establish a role that can aid them in coping with their anxious symptoms, a holistic picture of their personalities becomes important in drawing the bridge between qualities that aid them and unrealistic expectations. I believe that it would be beneficial in gaining clarity for the client by having them create and save multiple avatars and assigning different personalities to each one. Each avatar would then need to be evaluated in terms of their strengths and weaknesses and perhaps explore how each of those strengths and

weaknesses can assist in different triggering situations for the client. For the sake of grounding, each avatar role would be embodied in different sessions, as to not confuse the client on overlapping qualities between each role focused on in an engagement. This correlates with Landy's (2009) viewpoint on how in order to move towards a conclusion of a successful therapeutic process, the client would need to recognize the roles they engaged with and how they can work together to the client's benefit. Fortunately in Drama Therapy, long-term therapeutic engagements are applicable and the therapist can use their discretion to assess how many VRDT sessions the client will need, before concluding (Jones, 2008).

Recommendations and Limitations

Hennink et al. (2020) highlight that the recommendations need to be supported by the findings of the study. "Generally, the challenges identified by the study serve as a foundation for further research and hence, need to be listed in the recommendations section" (Hennink et al., 2020: 125). The first recommendation is that the training of therapeutic practitioners is vital to the incorporation of VR in a Drama Therapeutic context. This is because it is vital to incorporate VR safely and ethically. I advise the therapist to first test the VR simulation and identify possible fatigue or comfort issues, looking for hand, arm and shoulder fatigue, before engaging with clients. A limitation in the training of therapeutic practitioners may be a resistance to change, as described by Tun et al. (2015). The South African mental health industry has not fully adopted VR for therapy for various reasons, including the resistance to change and the costs that could occur.

I believe that there should be an increment in the budget allocated to mental healthcare. With South Africa moving into an era of the global movement toward technology (Zhane, 2020), It is important to adapt as a country to emerging technologies. This could be achieved with an increment in the budget allocated towards technological interventions and, most importantly, mental healthcare in South Africa. One of the limitations that I note is the commercial implementation in the therapeutic field due to the high cost of VR technology. According to Javaid & Haleem (2020), VR is time-consuming during sessions and requires extensive software and hardware support. Another limitation to incorporating VR in a Drama Therapeutic context is that the client would first need to be orientated on how to use VR as the technology is complex in usage. Therefore, I would recommend that the therapist ensure that they are always engaging in the same space as the client as McMahon & Boeldt (2022) stress the

importance of providing a safe space for the client, which includes the therapist constantly guiding the client.

Another limitation that is prevalent in using VR is that a VR headset covers limited areas, and there is a further limitation in the body movements of clients (Javaid & Haleem, 2020). “However, extensive research and its integration with other technologies are going to make this quite helpful to the masses” (Javaid & Haleem, 2020). I acknowledge that not all the challenges to VR adoption within a Drama Therapeutic context were investigated due to time constraints. Because of this, I recommend that there should be a further in-depth investigation of additional factors that may influence the adoption of VR within a South African perspective and application. As previously mentioned, I could not engage with human participants from a Master's level as part of the guidelines of the HPCSA. I would however like to recommend that the VRDT method be broken up into a series of Drama Therapy sessions as this could give insight into the stage in which the client is in like in Emunah’s (2018) integrative five-phase model where the client engages on a continuum of their development across several sessions. This level of engagement would also aid the client in avoiding the experience of emotional and physical fatigue in a VRDT exploration. It would thus be beneficial for the drama therapy community if the findings could be put into practice and an adoption of a methodological approach could occur.

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