THE EFFECTIVENESS OF PROLONGED EXPOSURE THERAPY FOR THE TREATMENT OF PTSD AND SUICIDE IDEATION: A CASE STUDY

Submitted by

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Declaration

I, Zuziwe G. Mhlane, hereby declare that this submission is a result of my own work, and that, to the best of my knowledge, it contains no material previously published or written by another person, except where due acknowledgment has been given in the text. This study has not been submitted before for any degree or examination at any university.

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"For I know the plans I have for you, declares the Lord, plans to prosper you and not to harm you, plans to give you hope and the future." (Jeremiah 29 v 11)

Abstract

Post-Traumatic Stress Disorder (PTSD) is regarded as a public health burden in South Africa (SA) (Atwoli et al., 2013; Kagee, Bantjies & Saal 2017; Koenen et al.; 2017; Williams et al., 2007). According to McGowan & Kagee (2013), young adults in SA are a high-risk group of trauma. Exposure to trauma is also associated to comorbid conditions such as depression, anxiety suicidal ideation (SI) experienced by a large population (Bantjes, McGowan, Kagee & Steel, 2016).

Prolonged Exposure (PE) is empirically supported and evaluated trauma therapy for PTSD (Foa, Hembree, & Rothbaum, 2007). However, there has been limited to no studies conducted to evaluate the effectiveness of PE in SA. Therefore, this study investigated whether PE is effective treatment for PTSD symptom reduction and suicide ideation in South Africa. Three participants were recruited from Focus on the Family SA (FOTF SA SA) through purposive sampling, and single-case experimental design (SCED) was utilised. PE was implemented online through zoom for 6 sessions on each client.

At baseline, all the participants met the criteria for PTSD as per the Post-traumatic stress disorder symptom scale interview for DSM-5 (PSSI-5): Participant 1 (PSSI-5 - 63), Participant 2 (PSSI-5 - 53), Participant 3 (PSSI-5 - 63) and the clinical cut off score is 23. Furthermore, all participants were screened for suicide ideation (SI) using the Beck Suicide Inventory (BSI). All participants' BSI score ranges were mild to moderate. Participants were also screened for depression using the Beck Depression Inventory second edition (BDI-II) and anxiety using the Beck Anxiety Inventory (BAI). The score ranges for both BDI-II and BAI were moderate to severe. The Clinical Outcomes in Routine Evaluation-Outcome Measure (CORE-OM) was also used to assess general psychological distress. The CORE-OM scores for all the participants for trauma, depression and anxiety were severe. However, the risk to self/SI for all the participants was minimal.

During the intervention phase, all the participants scores showed a downtrend of PTSD symptomology, as per the Post-traumatic Stress Disorder Checklist for DSM-5 (PCL-5). The PCL-5 scores went down from PCL-5 score of 58 to final session PCL-5 score of 3. The clinical cut off score is 31-33. They were also screened using the BSI, BDI and BAI and the score ranges were mild. The CORE-OM scores for trauma, anxiety, depression, and risk to self/SI were also minimal.

Overall, the preliminary result of this study supports the notion that adults with symptoms of PTSD and SI had improved at the end of a brief 6-session PE intervention. The comorbid depression also showed a downtrend.

Keywords: Post-traumatic stress disorder, exposure therapy, prolonged exposure therapy, online prolonged exposure therapy, emotional processing

List of abbreviations

APA	American Psychological Association
BEP	Brief Eclectic Psychotherapy
CBT	Cognitive Behavioural Therapy
CPT	Cognitive Processing Therapy
CT	Cognitive Therapy
CORE OM	Clinical Outcomes in Routine Evaluation Outcome Measure
DSM	Diagnostic and statistical manual for mental disorders
DV	Dependent variable
EBT	Evidence-based therapy (EBT)
EPT	Emotional processing theory
ESTs	Empirically supported treatments
EBTs	Evidence-based treatments
EMDR	Eye movement desensitisation
GBV	Gender based violence
FOTF SA SA	Focus of the Family SA
HPCSA	Health Professions Council of South Africa
ICD	International Classification of Mental and Behavioral Disorders
ICT	Information and Communication Technologies
ISTSS	International Society for Traumatic Stress Studies
IVF	In vitro fertilization
IV	Independent variable
LMIC	Low- and middle-income country
NET	Narrative Exposure Therapy
NICE	United Kingdom's National Institute for Health and Care Excellence
PCL-5	Post-traumatic stress disorder checklist for DSM-5
PCT	Present-Centered Therapy
PE	Prolonged exposure therapy
PSSI-5	Post-traumatic stress disorder symptom scale interview for DSM-5
PTSD	Post-traumatic stress disorder

RCT	Randomized controlled trial
RPERC	Rhodes University Research Projects and Ethics Review Committee
RT	Reprocessing Therapy
RU-HREC	Rhodes University Human Ethics Committee
SA	South Africa
SAHRC	South African Human Rights Commission
SAM	Situationally accessible memory system
SASH	South African Stress and Health Study
SCED	Single case experimental design
SI	Suicide ideation
SUD	Subjective units of distress
TBI	Traumatic Brain Injury
USA	United States of America
VAM	Verbally accessible memory system
VT	Vicarious trauma
WHO	World Health Organization
WMH	World Mental Health Survey

Brief glossary

Effectiveness	The degree to which something is successful in producing a desired result
Imaginal exposure	Imaginal exposure is a process during which the client visualizes and recounts trauma events aloud.
In-vivo exposure	In-vivo exposure entails real life exposure to safe situations, activities, places, and objects that the client is avoiding.
Habituation	The gradual process of symptom reduction within and across sessions due to imaginal exposure.
Over-engagement	A client's difficulty maintaining a sense of safety and grounding during imaginal exposure.
Under-engagement	A client's difficulty in accessing the emotional components of the trauma memory.
Effectiveness	The effectiveness of treatment, i.e., how well it works, is determined based on the client's symptoms or adaptive functioning over time.
Feasibility	Whether or not treatment can be done performed relatively easily or conveniently given the existing resources and circumstances.

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Chapter 1

Introduction

1.1 Psychological trauma in South Africa

South Africa (SA) has a unique history that plays a role and contributes to witnessing trauma causing post-traumatic stress disorder (PTSD). This is due to the political history of apartheid and criminal violence common in public settings of SA (Atwoli, 2015). An estimation of 78.3% in total sample (n=4351) for the modern-day SA is exposed to trauma according to the South African Stress and Health Study (SASH) (Booysen & Kagee, 2020).

PTSD is a mental health condition that is triggered by a terrifying or life-threatening event, either experiencing it or witnessing it (American Psychiatric Association, 2013). It can also be described as a multifaceted cognitive, behavioural, somatic, affective effect of psychological trauma (Zungu, 2013). Symptoms may include intrusive thoughts about the event, heightened anxiety, nightmares and flashbacks. Symptoms of PTSD may get worse, and have a negative impact on day-to-day functioning, which may result in a diagnosis of PTSD if they persist beyond four weeks (American Psychiatric Association, 2013). Getting effective treatment for PTSD is critical to reduce symptoms and can improve functioning (Rees & Hopkins, 2008).

Suicide ideation (SI) is defined as cognitions and thoughts relating to suicidal behaviour and intent. This may involve ideas, thoughts and plans of taking one's life and self-injury (Strijdom & Rothmann, 2002). Evidence suggests that there is high risk for suicidal ideation of clients diagnosed with PTSD (Krysinska & Lester, 2010). Exposure to trauma is associated to comorbid conditions such as depression, anxiety and suicide ideation experienced by a large population (Bantjes, McGowan, Kagee & Steel, 2016). Depression usually occurs with PTSD and is also associated with suicidal behaviour (Bantjes, et al., 2016). PTSD clients are most likely to report suicide ideation (SI) and suicide attempts (Gradus, 2013). Therefore, there is high correlation and noticeable impact on clinical practice based on the correlation between PTSD and SI (Krysinska, 2010).

1.2 Psychological interventions for PTSD

Singla et al. (2017) maintains that treatment for common mental illnesses like anxiety, PTSD and depression are limited in low- and middle-income countries. The psychological

interventions include cognitive processing therapy (CPT) (Resick, Monson, and Chard, 2016), cognitive therapy for PTSD (CT-PTSD) (Ehlers & Clark, 2000), and prolonged exposure therapy (Foa, et al, 2019).

Prolonged Exposure (PE) according to Foa, Hembree, & Rothbaum (2007), is an empirically supported trauma therapy for PTSD and has been evaluated in countries such as the USA, Japan, Poland, and Israel (Rothbaum et al., 2000). Empirical evidence suggests that psychoeducation and social support are critical elements during PE intervention (Rothbaum, Meadows et al., 2000). Furthermore, the research by Foa, Hembree, & Rothbaum (2007) found that PE is effective for those diagnosed with PTSD and helps them to reclaim their lives. In a study conducted by Brown et al., (2019), PE was found to reduce symptoms of SI among persons diagnosed with PTSD.

1.3 Problem statement and rationale

PTSD and its comorbid conditions such as increased levels of suicidal thoughts and behaviours remain to be a public health concern in SA (Williams et al., 2007). Yet there is limited intervention research on empirically supported treatments such as PE for PTSD in countries such as SA. Furthermore, SA is a low to middle-income country with limited resources, which exacerbates access to effective treatments for conditions such as PTSD and SI. Yet considering the development of effective psychological treatments for PTSD over the last three decades, such as PE, it is critical to assess the effectiveness of PE for the treatment of PTSD and SI in countries such as SA.

1.4 Aims of study

The broader aim of this study was to explore the effectiveness of prolonged exposure therapy for the treatment of PTSD and SI among adults in the South African context. Therefore, the aim of the current research study was to report on the effectiveness of a brief PE intervention for trauma survivors at the Focus on the Family, South Africa (FOTF SA SA).

1.5 Research hypothesis

The proposed research was guided by the following hypothesis:

Adults who present with symptoms of PTSD and SI will have reduced symptoms of PTSD and SI post 6 sessions of PE.

1.6 Significance of research

As previously mentioned, there is still limited research on the implementation and effectiveness of PE for PTSD in countries such as SA. As a result, the present study is the second online PE study conducted in SA and the first time with a focus on improving symptoms of PTSD and SI among adult trauma survivors (Slabbert & Booysen, under review). In addition to accruing data on the treatment outcomes, the study also adds to the dissemination of PE via online platforms. Overall, the study contributes to the empirical evidence-base of PE as PTSD treatment in SA.

1.7 Thesis outline

Chapter 1 is an introduction of the research context, problem statement, aims of the study, and research hypothesis. It further states the research questions and concludes with the significance of the study.

Chapter 2 predominantly provides a description of EPT that underpins PE. Lastly, the challenges posed by PE treatment and limitations are discussed.

In Chapter 3 the focus is on the definition of PTSD, its prevalence, and the PTSD psychological treatment, with special focus on PE based on the available literature.

Chapter 4 describes the methodology and research designs used in the study. The latter half of the chapter provides the assessment measures used in the study, data collection points, treatment fidelity, research site overview and the study's ethical considerations.

Chapter 5 will be the discussion of PE case conceptualisation; study results and analysis will be presented.

Chapter 6 concludes the research study with a reflection of the study limitations and provides recommendations of the study.

1.8 Chapter summary

Chapter 1 is an introduction of the research context, problem statement and the aim of the study, which is to investigate and explore the effectiveness of prolonged exposure therapy for the treatment of PTSD and SI among adults in the South African context. The chapter also highlights the significance and scope of the study, which contributes to the enhancement of mental health services using evidence-based treatment for PTSD in SA.

Chapter 2

Theoretical Framework

2.1 Introduction

This chapter provides an elaborate overview of different earlier psychological theoretical models of PTSD as well as more recent theories. Emphasis will be placed on emotional processing theory (EPT) which forms the core theoretical framework of this study.

2.2 Brief history of psychological theories of PTSD

Psychological theories provide an explanatory understanding of the development and maintenance of PTSD and its treatment. These psychological theories also explain trauma survivors' emotions, thoughts, and behaviours which the survivor may be aware of or may not be aware of. They further explain and guide how psychotherapy improve symptoms of PTSD (Nijdam & Wittmann, 2015).

Cahill and Foa, (2007) identified several theories of PTSD. These theories include schema theories (Harowitz's (1976), and cognitive experiential theories), Horowitz, (1976), cognitive theory (classical cognitive theory and Ehlers and Clark cognitive model), theories invoking multiple representation structures such as dual representation theory (Brewin Dalgleish and Joseph, 1999) and the schematic, propositional, analogical and associative representational systems (SPAARS) model, (Dalgleish,1999), conditioning theories (Mowrer's two factor learning theory of fear and Barlow's Theory); and lastly the emotional processing theory (EPT). According to Foa and Rothbaum, (1998) the two-factor theory is known to have provided the basis of exposure therapy.

2.3 Conditioning theories

There are two theories that have been identified by conditioning theories as follows: **Mowrer's (1960) two-factor learning theory's** initial phase involves Pavlovian or classical conditioning theory. Pavlovian or classical conditioning theory entails learning through association. Through classical conditioning fear develops through association with the unconditioned stimulus. Fear results after the traumatic experience (Brewin & Holmes, 2003). Classical conditioning theory also explains how fear could be deteriorated through exposure (Foa & Rothbaum, 1998; Servatius et al., 2015).

The two-factor learning theory, describes fear as attained through classical conditioning. The exposure to the reminders of the traumatic experience automatically arouses

the fear response (Brewin & Holmes, 2003). Avoidance of the exposure to the feared memories of the traumatic experience or behaviours will temporarily reduce fear but maintain the PTSD symptoms which could also be seen as operant conditioning (Brewin & Holmes, 2003). Therefore, the repeated exposure to the traumatic memories assists in eliminating the automatic arousal of fear related to the traumatic memory.

Barlow's theory - Brewin & Holmes, (2003), states that at the centre of Barlow's theory (1988), is the two generalized vulnerabilities to psychopathology i.e., biological vulnerability and psychological vulnerability. Biological vulnerability is the genetic trait to experience feelings of panic and depression. The fight flight (also freeze) reaction is related to this (Brewin & Holmes, 2003). The psychological vulnerability is the reduced sense of control of anxiety and hypervigilance and cognitive biases towards internal and external threat (Brewin & Holmes, 2003). PTSD develops after an individual with biological or psychological vulnerabilities experiences trauma because of an alarm during trauma (Brewin & Holmes, 2003).

2.4 Classical Cognitive theories

2.4.1 Ehlers and Clark cognitive theory

Ehlers and Clark cognitive theory (2000) places much emphasis not only on learning but also on the cognitive psychological perspective on the PTSD development and how it is maintained (Brewin & Holmes, 2003). Information processing is at the centre of Ehlers and Clark cognitive theory. According to Ehlers and Clark cognitive theory PTSD results due to cognitive distortions, thoughts and beliefs that exist before the traumatic experience (Brewin & Holmes, 2003). For example, persons with PTSD have negative appraisals, for example, "what happened to me was a punishment that I deserved" and view the world as a dangerous place. They also have internal threats and view themselves as incapable for example, "I will never be able to heal from this". In this way, situations will be misinterpreted, the memory of a traumatic experience will lead to feeling threatened as the negative appraisals are promoted, and the PTSD will develop (Bisson, 2009).

2.4.2 Classical Cognitive theory

This theory originates from the assumption that events themselves can be understood in different ways and so give rise to different emotions.

Dysfunctional interpretations may lead to emotional responses that are exaggerated. The role of a therapist therefore is to challenge the client so that they become aware of their

exaggerated unhelpful interpretations and ultimately adopt functional ones (Cahill & Foa, 2007).

2.5 Schema-based models

Interpersonal trauma can violate basic needs such as the need for affection, guidance and safety and therefore cause early maladaptive schemas (EMS). These schemas are Abuse/Mistrust, Vulnerability to Harm and Shame/Defectiveness (Young et al., 2003). People with interpersonal trauma history present psychological disorders such as depression and adult anxiety. According to Price (2007) dependency, enmeshment, failure, and defectiveness predict PTSD.

In addition, schema-based models explain how the traumatic events affect the schemas or core beliefs. This is because schemas are judgements about one's safety, self-worth and trust in other people. The traumatic event invalidates the existing schema and therefore traumatic stress will result (Epstein, 1991; Janoff-Bulman, 1992).

2.5.1 Horowitz's theory

The focus of this theory is on avoidance and re-experiencing which are great determining factors of PTSD. It also takes into account the integration of information processing and psychoanalytic concepts for PTSD. People have basic need to match old information and information related to trauma. According to this theory repeatedly revising both sources of information until alignment with completion tendency explains symptoms observed in clients with PTSD. The theory has been criticized for no focus to clinical issues in the development of PTSD instead it focused generally on the beliefs. It also failed to recognise that not all clients that have experienced traumatic incidences develop PTSD (Bisson, 2009).

2.5.2 Cognitive experiential self-theory

Central to the person's personality is the theory of the world and self that the person creates. Four core beliefs can change after an event that has been traumatic i.e., the self is worthy, and world is meaningful and benign. The traumatic experience causes images, thoughts and emotions as they reinforce the already existing negative schemas (Bisson, 2009).

2.6 Contemporary theoretical developments

2.6.1 Theories invoking multiple representations structures

These theories identified multiple representational systems in memory e.g., short- and long-term memory, declarative and non-declarative memories, and implicit and explicit

memory. The starting point is assumption of at least two or more separable memory systems providing the content area of interest (PTSD). The therapist must identify characteristics of different representational systems and how they interact with one another. Recovery involves changing negative secondary emotions emanating from unhelpful appraisal of trauma and person's reactions during and after the traumatic experience. Avoiding the automatic activation of SAM trauma memories can be accomplished through cognitive restructuring and exposure therapy combination.

Contemporary theoretical developments of PTSD include:

2.6.2 Dual representation theory

Brewin et al., (1996) distinguishes two distinct representational systems in memory that operate in parallel during and after trauma i.e., verbally accessible memory (VAM) and situationally accessible memory (SAM) systems. These memory systems are divided into the conscious and non-conscious processing of the traumatic experiences associated to the emotional memory (Brewin et al., 1996). For example, if a trauma survivor, is exposed to an area that resembles their traumatic experience, that specific area could lead the survivor to access their situational memory (Brewin et al, 1996).

VAM is some sensory and emotional information as well as physical reactions and personal meaning of the event attended to before, during and after traumatic experience and consciously processed and stored to long term memory and can be deliberately retrieved and easily communicated to others (narrative account of traumatic experience). SAM "contains information that has been attained from far more extensively lower-level perceptual processing of traumatic scene for example sights /sounds that were briefly apprehended to receive much conscious attention" (Brewin & Holmes, 2003, p.357). It cannot be accessed deliberately nor easily altered as the more easily available to VAM. Three possible outcomes of emotional processing are: completion / integration (recovery), chronic emotional processing and premature inhibition. Recovery involves modifying negative secondary emotions resulting from unhelpful appraisal of trauma and person's reactions during and afterwards. Preventing the automatic activation of SAM trauma memories, can be accomplished through cognitive restructuring and exposure therapy combination (Brewin & Holmes, 2003).

Both the dual representation and Ehlers and Clark models are mostly similar, they differ in some predictions. In the Ehlers and Clark model, a risk factor that contributes to the development of PTSD is the data driven process (Brewin & Holmes, 2003). On the contrary,

according to the dual representation theory, the processing of sensory information will only be a risk factor if the information is overrepresented in the SAM system. If full processing of information occurs, and encoded on the VAM system, there is minimal risk for PTSD development (Brewin & Holmes, 2003).

For dual representation theory, there is no assumption that trauma memory disorganization is a predisposed risk factor for the development of PTSD as it is stated by both the emotional processing and Ehlers and Clark models (Brewin & Holmes, 2003). The critical determinising factor for the dual representation theory is the stimuli that relates to high arousal at the time when trauma is represented within the VAM system where they are allocated a context. Therefore, it is the memory content that is a risk factor as opposed to the degree of organization (Brewin & Holmes, 2003).

2.7 Emotional Processing Theory

Emotional processing theory (EPT) is a very comprehensive theory that contributes to the PTSD therapeutic processes and offers valuable suggestions on conceptualization. It takes into account the problematic and rigid positive or negative beliefs and assumptions which promote feelings of incompetence and therefore hinders successful treatment of PTSD. Foa and Kozak (1986), maintain that PE has also been proven to be very effective in treating other trauma-related mental illnesses such as anxiety, depression, anger and SI. Emotional processing theory focuses on the habituation of fear and is recognised as a highly effective treatment for PTSD. (Brewin & Holmes, 2003).

For the purpose of conceptualisation in this study, EPT by Foa and Kozak (1986) is used.

2.7.1 The Fear structure of PTSD

When a person directly experiences or witnesses a traumatic event a fear structure develops, also known as a trauma memory. According to Foa and Kozak, 1986 this fear structure, when activated, results in emotional (fear), behavioural (running away), cognitive (flashback), and physiological responses (heart racing). In addition to this fear structure, EPT also states that two cognitive schemas maintain PTSD, which is that a person will have erroneous beliefs about their competency and about their safety in the world (Foa and Kozak, 1986).

2.7.2 Modifying the fear structure

In order to treat PTSD, using PE, EPT states that the fear structure must be activated through recounting of the trauma memory and engaging in activities that are avoided yet they are safe (Foa & Kozak, 1985). For example, someone who survived rape, may avoid sleeping in the dark because of fear response to all dark places that resembles the darkness the traumatic experience took place in.

Using in vivo and imaginal exposure procedures, fear related information associated with the traumatic event is activated in the trauma memory (Foa et al., 1986; Rauch, Foa, Furr, & Filip, 2004). It is evident during imaginal exposure when the client verbally recounts the trauma memory in the present tense several times during the sessions. This is critical as anxiety and fear are rooted in the memory structures and when not precipitated through stimuli, the symptoms of PTSD are precipitated (Foa & Kozak, 1986). For fear to be reduced, firstly, fear relevant information must be presented so that the fear memory is activated. Secondly, elements that must be included in the fear information must be incompatible so that new memory can be formed (Foa & Kozak, 1986).

According to Foa and McNally (1996), it is critical to note that alteration of a fear structure means a creation of a structure that is opposing and not pathological. It is therefore imperative to evaluate the activation level and engagement during exposure (Foa & Kozak, 1986). For more effective treatment, EPT recommends that both imaginal and in vivo exposure are of great significance (Foa, et al., 1980).

2.7.3 Emotional processing and habituation

Emotional processing is ongoing and can be directly and indirectly assessed repeatedly in relation to the fear structure. It is indicated if the fear stimulus does not provoke fear. It gives the client an opportunity to evaluate thoughts and feelings relating to the trauma. The treatment outcome will illustrate emotional processing in two ways. Firstly, structural changes as noticeable on the outcome at end points to assess the new structure. Secondly, fear is decreased, and this is clearly visible as noticeable changes in day-to-day functioning such as social interactions and job performance improves. Imaginal and in vivo exposure may assist to reduce the need to avoid memories and flashbacks. Cognitive change, assist in removing the blocks that prevent processing of trauma and leads the client on a path of natural recovery.

When trauma survivors repeatedly engage in imaginal and in-vivo exposure, habituation takes place as the initial reactions of fear is elicited by a decrease in response to

feared stimulus (Benito & Walther, 2015; Foa & Rothbaum, 1998). Through habituation trauma survivors realize that the trauma memory is not as threatening as they perceived it to be before the start of treatment (Foa & Kozak, 1986). Therefore, trauma survivors realise that fear does not last indefinitely. Habituation is an indicator of treatment efficacy (Foa & Kozak, 1986). Once habituation has taken place, trauma survivors feel empowered as they regain their lives (Foa et al., 2019).

2.7.4 Treatment challenges and limitations

A few challenges of emotional processing have been identified. Therefore, emotional processing theory has been criticized for a number of reasons. Incorporation of new information during therapy may not change memories of trauma but they may be repressed. The fear memory including stimulus and response information as well as meaning will be retrieved. It is also regarded as an associative network model which provides an explanation of a contradictory phenomenon, and this brings Foa & Rothbaum (1998) also further explained that through repeated reliving used in PE habituation of fear is promoted and the level of fear in relation to the trauma memory elements and the belief related with it is reduced. Through the client narrative, an opportunity of reflection about the full details is afforded and previous negative evaluations may be rejected with inconsistent evidence. The severity of the event frequently disturbs the thought processes of memory and attention during the time of trauma and results in dissociative states (out-of-body experiences). As a result, through this disruption the fragmented and disconnected fear structure resistant to trauma memory and alteration that are short, simple and poorly articulated (Brewin & Holmes, 2003). Through recurrent reliving experience, a more orderly memory is recorded which is much simpler to incorporate into the memory (Brewin & Holmes, 2003).

Cognitive avoidance may involve strategies to distract focus during treatment. Distractions help to move away the concentration on fearful elements so that emotional processing does not take place. Severe depression has an impact on emotional processing to an extent that habituation is slow. Depressed clients also struggle to deal with fear because of their preoccupation with their emotional state of hopelessness that comes with depression (Foa & Kozak, 1986).

Over engagement and under engagement during treatment prevent habituation and treatment. Over engaging clients lead to lower habituation (Foa & Kozak, 1986; Foa et al., 2019). Lower engaging clients do not engage with the traumatic experience and corrective

information of fear structure and so habituation does not occur, and treatment outcome may be negative (Foa & Kozak, 1986; Foa et al., 2019).

Lastly, overvalued ideation, is a challenge as it creates complications for the treatment. Clients may put great value on erroneous thoughts to counteract against justified information (Foa, 1979). The emotional processing theory highlights the importance of integrating information that disconfirms what is already stored in the trauma memory, but it fails to set apart the automated trauma memory changes at a theoretical level through habituation and exposure and changes brought about deliberately through cognitive appraisal (Brewin & Holmes, 2003). On the other hand, the dual representation and Ehlers and Clark models is able to address the trauma memory changes that are brought about through appraisals and more specifically explaining which conducive circumstances might be conducive for exposure so that cognitive restructuring occurs optimally (Brewin & Holmes, 2003). Furthermore, Ehlers and Clark model suggests that reappraisals might have to be included into reliving sessions (Brewin & Holmes, 2003).

All three theories (Ehlers and Clark, dual representation and EPT) put strong emphasis on the need and advantages of reliving. However, the three theories (Ehlers and Clark, dual representation and EPT) hold differing views on how PTSD may be treated (Brewin & Holmes, 2003). Dual representation theory states that PTSD treatment must present supplementary notion that must compete with the original representation to be retrieved by trauma cues (Brewin & Holmes, 2003)**.**

Both Ehlers and Clark and dual representation theories are in favour of exposure that facilitates cognitive change where trauma survivors are able to handle intrusions. Cognitive change empower the client to selectively relive some traumatic experiences and in the process prevent avoidance of flashbacks and suppression. In this way, emotional procession takes place as the trauma survivor slowly moves to recovery (Brewin & Holmes, 2003).

2.8 Chapter summary

A number of psychological theories pertaining to PTSD have been developed as discussed in this chapter. PTSD is well grounded in scientifically proven theory. For the purpose of this study, EPT will be the basis of conceptualisation to guide the treatment of PTSD during the intervention stage.

Chapter 3

Literature Review

3.1 Chapter Introduction

This chapter reviews relevant empirical literature with regard to the definition, history, development and prevalence of PTSD and SI. The chapter will further elaborate on the need for PE implementation for PTSD and SI in SA.

3.2 Development and history of PTSD

For centuries there has been great interest and curiosity about trauma and its long term physiological and psychological effect. Originally trauma was only understood as a physical damage to the nervous system (Ray, 2008). As time went by it was slowly understood in the psychiatric and medical field as damage to the mind more than the physical damage to the body. Ray (2008) reported that the PTSD characteristic symptoms were experienced and described by Charles Dickens after he was involved in a train crash in 1865 as involving a weird sense of reality feeling at times as if he was dreaming whilst awake (Ray, 2008).

In the early 1800s, medical doctors in the military diagnosed soldiers with fatigue due to trauma (Ray, 2008). During the late 19th century, traumatic neurasthenia, hysteria, and neurosis and PTSD history was explored. These major types of neuroses were described during this time. Sigmund Freud (1856 to 1939) and Pierre Janet (1859-1947) raised the questions as to whether environmental factors were precipitating factors of hysteria (Ray, 2008). Pierre Janet confirmed that some of the hysteria, witnessed after the railroads accidents was somehow psychotic and that shock could just be imagined (Ray, 2008). The first study of dissociation which is an important process in reacting to overwhelming stress and related symptoms was conducted by Pierre Janet (Kipper, 1977; Trimble, 1985; Ray, 2008).

Ray (2008) indicates that the evolution of PTSD is historical. It originated in 1981 where Trimble Erichsen (1866-1886), the English surgeon discussed railway accident case studies (1700s) survivors who suffered head injuries having post-concussion syndrome which resulted symptoms of PTSD. The psychological abnormalities after the railway accidents were due to the damage of the spinal cord. This was termed “railroad spine syndrome.”

Jesse Page (1883) indicated that the nature of nervous shock has a psychological and physiological impact that results in the malfunctioning of the nervous system. Page further

argued that injuries to the spinal cord were unlikely, and that fear contributed to the disorder. He introduced the concepts of “nerve shock” and “functional disorders” (Ray, 2008).

Putnam (1883) provided an opposing view stating that railroad spine syndrome cases are identified as “hysterical neuroses” (Ray, 2008 p.218). The surgeon Page (1885) opposed to the phrase “concussion of the spine” (Ray, 2008 p.218). He argued that the origin of the nervous shock is psychological, and subsequently results in physiological malfunctioning of the nervous system (Ray, 2008).

Hermann Oppenheim (1858–1919) was the first to come up with the term ”traumatic neurosis” meaning the disturbance to the cerebrum (Holdorff & Dening, 2011). For the first time the term trauma which has always been used specifically in surgery within the medical field was now used in psychiatry (Ray, 2008). Freud, (1986) explained that early childhood sexual trauma is the cause of hysteria. Repetitive traumatic dreams make clients to regress to previous situations in contradiction with pleasure principle as unpleasurable experiences dominate the mind. When Freud’s theory (Aetiology of Hysteria) was rejected, he decided to minimize the external factors and focused more on premorbid problems, such as intrapsychic conflict (Ray, 2008).

When Freud’s theory (Aetiology of Hysteria) was rejected, he decided to reduce the external factors and focused more on premorbid problems, such as intrapsychic conflict (Ray, 2008). Then, during World War II, Cannon (1932) defined person's reaction to looming danger as the fighting and escaping principles in both the psychological and physiological sense. There was an ongoing debate in the 19th to the mid-20th century, as to the cause of traumatic disorders (Ray, 2008).

After the World War II, Krystal (1969) reported Massive Psychic Trauma of Nazi Germany's concentration camp survivors. Harry S. Abram (1970) edited Psychological Aspects of Stress, and this is the major contributor in the evolution of PTSD. The examination of reacting psychologically to stressful events, threatening illness, emergency situations, and life in general was done (Ray, 2008). Many authors described physical and physiological factors as a chronic symptom “Stress Response Syndrome” was recorded in the Diagnostic and Statistical Manual of Mental Disorders (DSM-I) and this is what is called PTSD today (Ray, 2008).

3.3 PTSD in the Diagnostic and Statistical Manual of Mental Disorders

The inclusion of PTSD in the Diagnostic and Statistical Manual of Mental Disorders (DSM-III) was influenced by the Vietnam War and the work by Horowitz (1976). Horowitz classified post traumatic symptoms due to stressful life experiences which has intrusive and avoidance effects as originally described by Freud. PTSD diagnoses include symptoms of intrusiveness or re-experiencing the trauma, avoidance and hyper arousal. The overall spectrum commonly occurs with psychomatic and psychic symptoms after one has experienced a traumatic event (Ray, 2008).

In addition, PTSD has undergone a few but significant changes since its introduction in 1980 in the DSM-III (American Psychiatric Association, 1980). Then it was characterized by three clusters i.e., a) reexperiencing symptoms (recollection and events dreaming, b) numbing and avoidance symptoms (avoidance of reminders, blunted emotions, and loss of interest in activities and lastly c) hyperarousal symptom (hypervigilance and startle). A few further changes were introduced in DSM IV (American Psychiatric Association, 1994), In DSM-V more critical changes were introduced.

PTSD has also been criticized for being a socially constructed, culture bound syndrome (Young,1995). The influence of culture has an influence on how people will react psychologically to traumatic experiences. Therefore, people in diverse culture will react differently to traumatic events (Silva,1993). Therefore, the treatment of PTSD may also be diverse in nature (Silva,1993).

3.4 Clinical definition of PTSD

Since DSM-III, PTSD has been part of the classification of anxiety disorders until DSM-IV-TR (American Psychiatric Association, 2000). DSM-5 introduced significant changes to the nosology and symptomology of PTSD. A significant change in DSM-5 was removing PTSD from the anxiety disorders and the increase of 17 symptoms to a total of 20 (American Psychiatric Association, 2013). The diagnostic features of PTSD require persons to report to have endured prolonged exposure to trauma. Furthermore, the person should have directly experienced, witnessed, or learned about the violent traumatic death of a close family member or close friend. Consequently, persons should report to re-experience the traumatic event (i.e., intrusive thoughts, nightmares, or flashbacks) which is subjectively experienced as distressing. The effect of memory dysfunction is a salient feature of the psychological sequelae of PTSD, which is different from the symptomology of other anxiety disorders such as phobias

(Brewin & Holmes, 2003). The presence of intrusive thoughts and flashbacks is distinct to PTSD, which is largely dependent on arbitrary sensory stimuli that activate vivid mental imagery (Brewin & Holmes, 2003).

In response to the distress of re-experiencing, persons exhibit behavioural and cognitive strategies of avoiding internal (thoughts or emotions) and external (objects, places, or conversations) stimuli to cope with the traumatic stress is present. Noticeable changes in cognitions (blame of self, others, or the world) and emotions (intense feelings of fear, anger, guilt, or shame) are present, and alterations in arousal and reactivity (hypervigilant of environment and easily startled) are observed over a period of six months or longer (DSM-5; American Psychiatric Association, 2013). As a result, PTSD is commonly found among groups such as military combatants, survivors of sexual violence, physical assaults, refugees and asylum seekers, persons who have endured prolonged abuse, among others.

Horwitz (2018) indicates that PTSD has 4 central components: PTSD indicates a relation between past negative valued disruption and some current valued disruption. Firstly, external trauma that the individual is overwhelmed and has no capacity to cope with the experience, some traumas involve human agency such as rape, accidents or assaults. Others may stem from natural disasters such as earthquakes or floods. Secondly, some clients cannot remember details of the traumatic experience as they are overwhelmingly disturbing. Suppression makes it impossible to access the conscious mind (Horwitz, 2018). Sounds and sights activate memory of earlier trauma with disturbing intensity, so clients do not only remember the trauma but relive it (past memory interferes with the present). Clients cannot push traumatic events away from consciousness because the trauma images are very intrusive (Horwitz, 2018). Thirdly, Horwitz (2018) indicates that social/emotional/ behavioural impairment events causes stress that comes from experiences of traumatic events. PTSD is a memory related disorder as defined by the statistical and diagnostic manual. Dreams of the traumatic events, stressful symptoms, and disturbing and intrusive memories, deliberate avoidance as well as feeling upset because of traumatic experience reminders are symptoms of PTSD. Anxiety, depression and PTSD symptoms are sometimes very hard to separate. It is for this reason that SI is often PTSD comorbidity. Most clients diagnosed with depression will sometimes experience SI (Horwitz, 2018). Symptoms of PTSD and those of anxiety and depression are sometimes hard to separate. It is therefore not surprising that SI is often PTSD comorbidity as most people suffering from depression will sometimes experience SI (Horwitz, 2018). **Lastly**, PTSD assumes that the symptoms resulting after the traumatic exposure are not

natural but pathological. Therefore, symptoms are classified under medical discourse. Persons diagnosed with PTSD are not responsible for their distress and have a right to treatment.

PTSD is defined as a memory related disorder by the statistical and diagnostic manual. Traumatic experiences, events or recollection of social, behavioural, and emotional events that lead to stress and psychological and daily impairment (Horwitz, 2018). Historically, the diagnosis of PTSD has been controversial because of the discrete clinical condition existence linked to trauma. In the DSM-5, PTSD is the most multifaceted psychiatric disorder (Brewin, 2013).

3.5 Prevalence of PTSD

Trauma exposure is common globally and cross-nationally, distributed unequally, and there is different predisposition to risk to different types of trauma (Koenen et al., 2017). PTSD is the most common psychopathological result of traumatic events that has far reaching consequences (Shalev et al, 2019). PTSD affects social, physical, financial and mental well-being of an individual (Kessler et al., 2017). Trauma exposure for example due to crime is higher in lower-income countries compared to high-income countries according to recent community studies (McNally, 2015).

PTSD lifetime prevalence differs across the World Mental Health (WMH) surveys when assessing prevalence using a randomly selected traumatic event (Atwoli et al., 2015). 73.8% of lifetime traumatic event was reported by The South African Stress and Health (SASH) Survey. This is higher than surveys conducted in Japan and Europe where the reported prevalence was between 54–64%. Exposure to trauma in Spain was reported to be at 54%. Italy was at 56,1% and lastly Japan at 60%. The highest in surveys conducted in Europe was Northern Ireland's rate of 60.6% (Atwoli et al., 2015). The South African survey, SASH reported that sociodemographic factors related with traumatic event exposure and PTSD in high-income backgrounds, but not in low-income and post conflict context such as SA (Atwoli et al., 2015). This also differs significantly when compared to findings by Japanese and European surveys. Female sex was linked with higher PTSD risk in all the countries surveyed except SA where sociodemographic factors showed very little correlation with PTSD risk. The unique history in SA characterised by violence and trauma witnessed during the apartheid era, has contributed to the lack of association between sociodemographic factors and PTSD risk (Atwoli et al., 2015).

The studies conducted internationally regarding the prevalence of trauma, reveal the differences in history, culture and political landscape (Atwoli et al., 2015). SA for instance has a high rate of trauma exposure due to the political history of apartheid that was characterised by violence and crime in comparison to Europe and Japan (Atwoli et al., 2015).

Research suggests that most South Africans experience trauma, or traumas, in their lifetimes (Williams et al., 2007). A recent South African study (n = 4315) indicated that the most common traumas were the unexpected death of a loved one and witnessing a trauma occurring to another individual (Atwoli et al., 2013). Furthermore, people are not eager to report the details of traumatic events since they carry high predisposition to PTSD (Atwoli et al., 2015). In the case of SA, social determinants such as the above-mentioned have found to increase the likelihood of PTSD with augmented levels of traumatisation in resource-constrained settings (Atwoli et al., 2013). This is significantly different when compared to Europe, where the biggest source of traumatic event exposure is the death of a loved one and in Northern Ireland where the biggest contributor is long history of civil conflict (Atwoli et al., 2015).

The study conducted by Dückers et al. (2016a) reported that individuals who are socioeconomically disadvantaged have high risk for developing PTSD because of exposure to trauma. The study further indicated that PTSD in countries scoring high on an index reflecting cultural and socioeconomic disadvantage showed lower rates of PTSD when responding to trauma (McNally, 2018). The greater a country's vulnerability index, the lower its lifetime prevalence of PTSD ($r = -0.49$). Countries with low-vulnerability such as Canada and United States of America (USA) had higher prevalence of PTSD rates compared to high-vulnerability countries like SA and Mexico regardless of the same level of trauma (Dückers et al., 2016a).

According to Kessler (2017) the WHO World Mental Health Surveys reported that 70.4% of respondents experienced lifetime traumas. The highest risk trauma involves interpersonal violence such as rape and this accounts for 42.7% of people with PTSD. Previous trauma history predicted both future trauma risk and future PTSD exposure (Kessler, 2017). Luz et al. (2016) reported that in a study of a Brazilian urban population the lifetime prevalence was 87% of the sample including US (up to 91.9%) and Sweden (80.8%). The prevalence was much lower in countries like Switzerland (34.9%), South Korea (33.3%), Germany (21.4%) whereas it was higher in American countries like Mexico (76%) and Chile (39.7%). Brazil has high exposure to violence and so the development of PTSD is high (Koenen et al., 2017).

Accidental or natural events have lower risk of PTSD development than interpersonal violence. Furthermore, Brazil has low income and low educational level which promotes conditional PTDS risk (Koenen et al., 2017).

In Low- and middle-income countries (LMICS) where the prevalence of anxiety, depression which are comorbidities of PTSD and where environmental stressors, poverty and civil conflict, PTSD is reported to have high prevalence. However, not much research has been conducted on LMICs especially on youth and adults with regards to anxiety, depression, and PTSD (Yatham, 2018). It is for this reason that this current study seeks to investigate the effectiveness of prolonged exposure therapy for the treatment of PTSD and SI among adults in SA.

3.5.1 Prevalence of PTSD and SI

One million people die by suicide according to the WHO and 1.53 million was predicted for 2020 (Bantjies & Kagee, 2013). Although global suicide rate vary globally, WHO global suicide prevalence rate is 14:100,000. South African reliable statistics on the prevalence of suicide is vague but a huge public concern as it is widespread as the prevalence is continuously increasing (Bantjes & Kagee, 2013). A variety of problems contribute to challenges hindering collecting accurate quantifying statistics in SA. Some of the challenges include, misreporting and underreporting of death causes, absence of national research programmes and unreliable surveillance system of the mortuary (Bantjes & Kagee, 2013). Records have shown an incomplete picture of suicide prevalence.

Participants with PTSD were most likely to report SI (Calabrese, 2011). Those who have two additional conditions, were highest risk of SI than those with depression only (Calabrese, 2011). Clients diagnosed with PTSD and comorbidity of depression were most likely to also screen for SI and suicide attempts (Fogle et al., 2020). Literature has found that PTSD is a risk factor for suicide attempts and SI (Cougle, Resnick and Kilpatrick, 2009). Panagioti et al., (2012) found that there was increased SI when PTSD has a comorbid depression. Army soldiers with comorbid PTSD or MDD were more likely to report a suicide attempt compared to those diagnosed PTSD only (Nichter et al., 2019).

3.5.2 Psychotherapy for PTSD using PE

Research around PTSD treatment has developed to the extent that there are a variety of good treatments to reduce symptoms and problems related to it (Hamblen et al., 2009). The

first-line treatment for PTSD is Cognitive-behavioral therapies (CBT) which has demonstrated efficacy in PTSD treatment (Hamblen et al., 2009).

Evidence based treatments such as PE are regarded as first line psychotherapies and are highly recommended treatments for PTSD (Watkins, Sprang and Rothbaum, 2018). Exposure therapy treatment is for treatment of pathological fear that relates to emotions e.g., guilt that presents itself in PTSD and anxiety disorders such as obsessive–compulsive disorder. (Brown et al., 2019). Clients are exposed to stimuli (i.e., a picture of dog) that precipitates pathological anxiety and fear, yet this is done in a safe environment during exposure therapy.

Through deliberate confrontation of the stimuli (situations, objects, sensations, thoughts and memories) related to trauma, the goal of PE is the promotion of emotional processing. Emotional processing is discussing thoughts and emotions that come up during exposure (Brown et al., 2019). For example, persons might feel distressed during exposure, yet they also learn that they are able to tolerate the distress and that it becomes more tolerable the more they are exposed – they habituate. Through PE, which is the empirically validated psychotherapy, clients are exposed to safe reminders of their trauma objectively and encouraged to review memories of trauma until habituation is achieved. When habituation occurs, learned fear responses are extinguished (Markowitz, 2015).

According to Brown et al., 2019 empirical evidence suggests that trauma-focused treatments contribute to significant reductions in SI. Evidence of SI reduction was reported in active-duty military personnel, civilians and veterans after receiving PE treatment for PTSD especially during the treatment phase (Gradus, Suvak, Wisco, Marx, and Resick, 2013). A naturalistic study was also conducted on Veterans Health Administration where veterans received PE treatment for PTSD and reduction in SI was reported (Brown et al., 2019). Similar results were noticeable in a naturalistic sample of veterans receiving PE treatment for PTSD in the Veterans Health Administration (VA) medical centres, in which significant but small reductions in SI were detected (Cox et al., 2016). Research findings suggest that PTSD PE treatment contributes to major reduction in depression and ultimately reduction in SI (Cox et al., 2016).

Hamblen et al., (2009) maintains that all exposure-based treatments involve having survivors repeatedly re-experience their traumatic memory. For example, PE includes both imaginal exposure and in vivo exposure to safe situations that have been avoided because they elicit traumatic reminders. Cognitive therapy according to Ehlers and Clark have three goals:

(a) rectifying autobiographical memory disturbances, (b) eliminating problematic behavioral and cognitive strategies and (c) altering excessively negative appraisals (Hamblen et al., 2009). PTSD affects many people physically and mentally internationally (Koenen et al., 2017). Therefore, it is important that treatment is holistic, and attention should focus on mental, psychological aspects and effect of PTSD. It is expected that much more future research will be conducted to further improve PTSD psychotherapy (Hamblen, et al., 2009).

3.6 The need for PE implementation for PTSD and SI in SA

PTSD is a global issue and an added public health concern. (Williams et al., 2007; Kessler, 2000). Most research studies have been conducted in countries like Western-European and Anglo-Saxon, East Asia, as compared to African countries like SA. Majority of studies that have been conducted were western (Asukai, et al., 2010;). As a result, PE for PTSD in LMICs is scarce (Booysen & Kagee, 2020a). There is minimal or no research done in LMICs in the global South on the implementation and effectiveness of PE for PTSD (McLean & Foa, 2013). Foa, et al., (2013) emphasized the need to extend PE treatment in developing countries with higher levels of traumatic stress symptoms such as SA. Continuous assessment of PE in developing countries like SA with higher levels of traumatic stress symptoms is highly encouraged (McLean & Foa, 2013; Schnyder et al. 2015). There is a great need for implementation of PE in a country like SA which is low resourced as it is characterized by ongoing challenges of limited resources and heightened levels of trauma exposure. This study will therefore assess the effectiveness of PE is in treating PTSD and SI. Online platforms present an opportunity to increase implementation and access to effective treatments such as PE in low resourced settings such as SA. The findings of the present study will highlight aspects of effectiveness of PE to reduce symptoms of PTSD at a primary care level. It will further contribute to the literature on the dissemination and implementation of PE for PTSD in the South African context.

3.7 Chapter summary

The context of SA is characterised by violence which leads to physical and psychological injuries which is one of the escalating public health crises. South African citizens are generally known as a traumatised society as there is wide exposure to traumatic events on a daily basis and through media. This has serious psychological consequences. PTSD diagnosis is also mostly associated with SI as a comorbidity. Even though of PTSD treatment has advanced over the years, PE has been recommended as an effective treatment for PTSD.

Furthermore, PE is flexible and can be used during difficult times of the COVID-19 pandemic. The challenge is, there has been sparse implementation in the LMICs including SA. There is a growing need for South African practitioners to implement evidence-based approaches that can be adaptable and contextualized to the local diverse South African population for the treatment of PTSD and SI.

Chapter 4

Methodology and Research Design

4.1 Introduction

This chapter describes the methodology and research design used to investigate the research hypothesis. The chapter will further provide an overview of the methodology chosen for the study. Lastly, the research site is described and the ethical considerations relating to the study are discussed.

4.2. Single case experimental design (SCED) overview

SCED has a long history in experimental and behavioural psychology (e.g., Honig, 1966; Sidman, 1960; Skinner, 1953). It has played a significant role in psychological interventions to establish the scientific basis (Horner et al., 2005; Kratochwill, 2007). SCED are experimental designs focusing on assessing the effect of an intervention on usually one to three clients. Administering screening measures repeatedly at baseline, intervention and post intervention phases is done. Data collected during the SCED is analysed using visual analysis and specific statistics (Krasny-Pacini & Evans, 2018).

The use of SCED for this study was to establish a causal relationship between PE, PTSD and SI after treatment. SCED uses evidence criteria to ascertain whether there is a functional relation between the independent variable (IV) (prolonged exposure) and dependent variable (DV) (PTSD and SI). A conclusion is then made whether the study shows that there is strong evidence, moderate evidence, or no evidence at all (Kratochwill et al., 2013). Quantitative is the main type of data in SCED informed by the assessments instruments and interventions used. Data analysis must be statistical models, traditional visual inspection or a mixture of both (Barlow et al., 2009).

Horner et al., (2005) reports that one of the critical features of single-case research is carefully specifying contextual features of the experiment as well as the setting, participants and selection characteristics. Single-case research designs involve selecting one or more outcome measures. These will form the basis of comparison between intervention and nonintervention conditions from baseline to intervention phase and from one phase to the other within the study (Kratochwill & Levin, 2014). The first step involves defining the outcome measures for variable measurement validity and for duplication of the assessment process in future research studies.

Secondly, according to Kratochwill & Levin, (2014) the outcome measures are assessed on an ongoing basis throughout the phases of the experiment. The main aim is to figure out and compare the preintervention (baseline) and secondary performance from one phase to the other. In so doing the performance of participants is compared from baseline to intervention phase. Valid inferences are also drawn accordingly from the experiment.

Thirdly, the interobserver consistency are assessed from the outcome measures. This practice has been a norm in behavioural research when single-case designs are implemented. Lastly, outcome measures are basically selected based on their social validity as with regard to applied and clinical research in education and psychology (Wolf, 1978). Two characteristics of social validity are important i.e., social comparison which entails comparison of the participant with peers perceived to be functioning normally in the research. Subjective evaluation is the judgement by significant others of the participants problematic behaviour/performance before the performance and the improvement thereof post intervention (Kratochwill & Levin, 2014).

Two important considerations are critical when using single-case research investigations since it is defined by systematic manipulation of some independent variable during the course of the experiment (Kratochwill & Levin, 2014). Firstly, definition of the intervention must be clearly outlined on the basis of meaningful constructs representing the area of intervention focus. Secondly, an assessment of the treatment fidelity to ascertain whether the implemented intervention was in line with the intended purpose throughout the experiment. When both considerations are met, then a single-case intervention study has the validity of inferences in as far as the researcher's interpretation and analysis of the effects observed is concerned (Kratochwill & Levin, 2014).

Single-case intervention designs are structured to consider the major threats to internal validity in the study. Replication is the fundamental characteristic of single-case designs through which researchers ensure internal validity (Horner et al., 2005).

4.3 Rationale for using and A-B-A design

The specific SCED design used for the proposed study was A-B-A design which is the use of the withdrawal strategy to demonstrate treatment effectiveness when change in behaviour is noticeable post treatment (Hersen & Barlow, 1976).

SCEDs can be used in different settings such as neuropsychology, psychotherapy, rehabilitation context as well as for modification of behaviour (Kratochwill & Levin, 2010). In

the current study, A-B-A design was a relevant and feasible option because ethical consideration is at the centre of psychotherapy since the effectiveness of PE for the treatment of PTSD and SI was assessed. Standard psychotherapy research requires that screening assessments are used to effectively establish diagnosis. The A-B-A design consists of a pre-assessment or baseline phase (A), followed by an intervention phase (B), and finally, a post-assessment phase (A), during which the effectiveness of intervention is demonstrated (Byiers, Reichle, and Symons, 2012). During all the three phases of this study, the screening assessments had to be used to monitor the PTSD symptomology. Therefore, the use of an A-B-A design gave the researcher/therapist the opportunity to use a SCED to uphold the standard practice of PE and ethical consideration necessary for psychotherapy research (Foa & Meadows, 1997).

4.4 Research site

Figure 4.2 Focus on the Family South Africa, Hillcrest, KwaZulu- Natal

The research study was conducted at a Non-Profit Organization known as Focus of the Family Africa (SA) in Hillcrest, Durban, KwaZulu Natal (See figure 4.2). It was established in 1992. It provides advice, care and support to families by providing practical guidance to many issues faced by families at any stage of life. Based on Christian principles, they offer conferences, seminars, resources, and outreach programmes and counselling services to help families thrive in line with their mission of strengthening families with knowledge, care and support. They employ registered counsellors and psychologists to offer counselling services through a multi-dimensional platform such as telephone, online and face to face sessions. Their counselling services include psychotherapeutic counselling to individuals, couples, groups and families. They specialize in counselling, couples, children and families, career assessment, emotional problems, grief, trauma and HIV/Aids, Covid19 related psychosocial challenges.

The research site, (FOTF SA) was chosen based on the counselling services that they offer at the primary care level to the surrounding communities, part of which included trauma related therapy. FOTF SA was the only site that responded to my request for data collection and therefore was ultimately the only site chosen for data collection. The other sites such the trauma centre around Durban did not respond to the request for data collection.

A meeting was held between the Director of the FOTF SA counselling centre, psychologists, counsellors and the researcher to explain the purpose and the procedure of the study. This was to prevent any confusion relating to the study and to facilitate the relevant referral. An agreement was reached on how the relevant trauma clients will be referred for screening and possible intervention of the study.

The staff of FOTF SA informed the researcher of potential clients about the project and if they would like to be contacted by the researcher to set-up a screening interview. Once clients agreed to be contacted by the researcher, a screening session was scheduled to determine if the referred persons met the inclusion criteria. A baseline assessment was scheduled with a researcher, and treatment commenced.

4.5 Participants

A purposive sample was used to recruit the participants, where the sample was chosen with a purpose in mind (Alvi, 2016). Because SCED focuses on a small sample, six (n = 3) participants were recruited online from FOTF SAA. Three adult persons participated in the study. They were all South Africans who were older than 18 years of age. All participants referred to the researcher met the inclusion criteria. They reported to have directly experienced/ witnessed a traumatic event at least one month prior to starting treatment and have had a total score of 33 or more on the PTSD Checklist-DSM5 (PCL-5) (all measures are further discussed under the section for assessment measures). Participants were required to speak isiZulu/ isiXhosa/English. Participants recruited at the FOTF SAwere required to live anywhere in SA since the study was conducted virtually. They needed to have access to WIFI or have sufficient data to be able to connect online for all their sessions.

4.6 Data points

The study had a total of four data points. All eligible participants were screened by the researcher to assess eligibility to participate in the study. During the screening interview which was provided by the researcher, each participant was also provided with information about the research study and the intervention. All the prospective participants received an information

sheet which provided information about the study. All prospective participants were informed about the inclusion and exclusion criteria. To ascertain participants eligibility, specific questions based on the inclusion and exclusion criteria were asked for example, participants were asked if they had either witnessed or directly experienced a traumatic event in their lifetime. If the answer was yes, then a PCL-5 assessment measure was used to screen for PTSD diagnosis. If the score was above cut-off score of 33, which is indicative of PTSD (Blevins et al., 2015), the participants were informed of their inclusion in the study and baseline assessment and when they were scheduled to attend.

4.7 Assessment measures

An integral part of the intervention phase is the use of reliable and valid assessment measures. These assessment measures such as the:

4.7.1 Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5)

The PCL-5 (Weathers et al., 2013) is a self-report tool that has 20 items. It is aligned with the DSM-5 PTSD criteria. It assists in evaluating PTSD symptoms. The PCL-5 has multiple purposes that include PTSD screening, making a PTSD provisional diagnosis, monitoring the change of symptoms during and after treatment. It has good convergent and discriminant validity, test-retest reliability (r = .84), and internal consistency (α = .96) (Bovin et al., 2015). During the intervention phase before every treatment session, each participant completed the PCL-5. To check if participants met the PTSD diagnosis and inclusion criteria, participants were asked questions based on the PCL-5 as a screening tool (Weathers et al., 2013).

4.7.2 The Posttraumatic Symptom Scale Interview – DSM5

The (PSSI-5) (Foa et al., 2015) is a flexible semi-structured interview for the diagnosis of PTSD and it assist to estimate the severity of the symptoms. It is also aligned with the DSM-5 PTSD criteria. The PSSI-5 has good internal consistency (alpha coefficient =.89) and test–retest reliability (r .87), as well as excellent interrater reliability for the total severity score (intra-class correlation .98) and interrater agreement for PTSD diagnosis (.84)

4.7.3 Beck Depression Inventory-II (BDI-II)

The (BDI-II) (Beck, Steer, & Brown, 1996) is a 21-item self-report measure to assess the symptoms of depression. It has been tested for reliability in the context of SA (Makhubela & Mashegoane, 2016). The BDI-II has an internal consistency of α=.91, reliability of r = 0.71, the test-retest reliability is r = 0.93, and (Beck et al., 1996).

4.7.4 Beck Anxiety Inventory (BAI)

The (BAI) (Beck & Steer, 1993; Beck, et al., 1988) measures trait for anxiety. It is a 21- item inventory measure. BAI has been translated and adapted for optimum utilization in the context of SA (Kagee, Coetzee, Saal, & Nel, 2015; Steele & Edwards, 2008). Furthermore, the BAI is reported to have good internal consistency, test re-test reliability, and good concurrent and discriminatory validity (Beck et al., 1988).

4.7.5 Beck Scale for Suicide Ideation Scale (BSI)

The BSI is a self-report 19-item scale preceded by five screening items. It is intended to assess a patient's cognitions and intentions to commit suicide (Cochrane-Brink, Lofchy and Sakinofsky, 2000). It has a reliability coefficient of .89 (Milleret al., 1986).

4.7.6 The Clinical Outcomes in Routine Evaluation-Outcome Measure (CORE-OM)

The CORE-OM is a self-report which compromises of 34- item generic of psychological distress. It assesses the generic aspects of psychological wellbeing health such as depression, anxiety, physical problems and trauma. It has been normed for use in the South African context.

4.8 Data collection

Data collection consisted of three time points:

Time 1. Baseline

This was the first data collecting point. The measures comprised of the PSS-I-5; BDI-II; BAI and BSI. The CORE OM was also used to assess general psychological distress in addition to the more aforementioned measures. A profile of participant's psychological functioning was informed by the data collected before the intervention started.

Time 2. Intervention

The intervention was the second data collecting point. Before each session, the participants had to complete the PCL-5. This assisted in monitoring the traumatic stress symptoms during the intervention phase. If clients did not understand the questions the researcher clarified any confusion. Data collected highlighted how PTSD symptoms reacted to the treatment during the intervention phase.

PE was used for the treatment of participants diagnosed with PTSD. The intervention had a minimum of 6 sessions that focused on psychological symptoms post exposure to a

traumatic event. During intervention the following processes were used: (a) To normalize experience and psycho educate about post-trauma reactions was provided; (b) 2 to 1 /Calm breathing techniques; (c) To gain perspective, trauma memory recounting was done (d) Approaching safe situations that have been previously avoided due to the trauma; (e) Emotional processing was done, to process thoughts and feelings in relation to the memory of trauma (Booysen & Kagee, 2020).

Time 3. Post-intervention assessment

After the last session of the six-week programme, all participants were assessed using PSS-I 5; BDI-II; BAI, BSI and CORE-OM to assess the effectiveness of PE treatment intervention on the participant's psychological functioning after the PE treatment. Clients were given a choice of doing the assessment on the same day of the last intervention session or on another preferred day.

All quantitative data collected during the baseline, intervention and post-intervention were scored and captured by the researcher on a Microsoft Excel document and stored in a password protected Dropbox account owned by the researcher. To ensure that scores were accurately and correctly captured, the accuracy of data captured was checked by reviewing the captured data against the existing document.

4.9 Brief PE overview

4.9.1 Session 1

The researcher used the first session to present the overview and the rationale of the treatment programme. Imaginal and in vivo exposure as the main treatment tools of therapy was also explained to the clients. PTSD symptoms were also discussed with the clients which allowed the clients to have an open discussion about their own experiences of PTSD symptoms. Important trauma information was collected. The Rogerian basic counselling skills were used to create the rapport between the researcher and the clients. At the end of the session the 2 to 1 breathing technique was introduced to help the clients to relax and calm down. This was to be practiced between the sessions by the clients. Homework was given to the participants including reviewing the treatment rationale and practicing breathing retraining daily.

4.9.2 Session 2

At the beginning of this session, the researcher asked the clients how they have been doing for the past week, how they experienced the breathing technique and if there were any

difficulties experienced. During the session the clients were psycho educated about common reaction to traumatic events. This was done through the clients sharing their own experiences of the traumatic event that they have experienced. The clients' own experiences of PTSD symptoms were normalised and validated in line with the common symptoms of PTSD. The relationship among the traumatic event, physiological reactions, distressing feelings, thoughts, and avoidance responses were also discussed. Fina et al., (2021) explains that in environments such as in the residential context, conducting PE is possible. The therapist must be careful during in vivo exposure that the client is not avoiding activities that trigger fear and hide behind COVID-19 restrictions. The pandemic may also bring about new fears and avoided situations or worsen existing ones. Situations that are brought about by the pandemic should be added to the hierarchy.

The rationale for the in vivo exposure procedures and the SUD's scale was explained. Furthermore, the in vivo hierarchy was constructed. Two or more situations that were regarded as low risk and safe were chosen by the participants and the researcher for homework. Participants were also instructed to continue daily breathing practice.

For many individuals diagnosed with PTSD, in vivo exposures may involve going to crowded places, such as malls, restaurants, departmental stores, stadiums, etc., many of which have been closed during the pandemic. PE therapists should consider alternative situations that are appropriate to address the fears. Some recommendations may include participating in virtual exposures, such as watching videos with picture and sounds of large, crowded events instead of going to crowded places such as malls (Fina et al.,2021).

According to Fina et al., (2021) when creating the hierarchy, the therapist and patient should not limit items based on COVID-19 restrictions, but instead allow some flexibility that incorporates safety element within the hierarchy. Later when COVID-19-related restrictions are lowered, arrangements can be made to tackle and complete exposures. In this study in Vivo Exposure activities and situations that were done by participants included going to the mall, hospital, restaurant. These were done successfully in line with the COVID-19 restrictions.

4.9.3 Sessions 3 – 6

Imaginal exposure is another important component of PE treatment that begins in session 3. In this session the therapist explained the rationale of imaginal exposure and helped the client to recount the memory of trauma in detail in the present tense. This seeks to help clients to directly experience their feelings about the trauma and thereby process the meaning

of the trauma and ultimately reduce anxiety regarding the trauma memory (Fina et al., 2021). The therapist discussed how the trauma narrative was going to be audio recorded as the recordings were to be listened to by the client in between the sessions as part of the homework. This discussion was held before imaginal exposure started. Clients were to listen to the recorded audio until habituation occurred. The clients were warned that listening to the recorded imaginal exposure audio was not to be done before bedtime to prevent nightmares and disturbance in sleep. They were also told not to let others listen to the recorded audio.

Furthermore, the clients were asked to record the SUD levels before, during and after the listening of the imaginal exposure recorded audio on the homework recording form. Clients had to come early to each session to complete self-report forms.

Telehealth allows for sessions to be split into two. During the first session the rationale was explained and then the second session was solely for the narration of the traumatic experience. There may be concerns by some clients about adjusting back to their normal life receiving treatment through telehealth. This may be due to lingering thoughts about the trauma as most activities occur at home and there are no physical and emotional buffers that normally occur e.g., driving to work or back home (Fina et al., 2021).

Throughout the course of the last 3 sessions the clients were given positive feedback and acknowledgement for the courage and ability to face distressful memories. Clients were asked to give feedback regarding their feelings and thoughts about imaginal exposure homework.

Furthermore, the clients were made to understand that their behaviour and reactions are normal. Support and calming techniques was provided whenever necessary.

Comments about habituation observed were done across the sessions. The last session involves a brief reflection on the treatment process. During the last session, the clients were asked to focus on the entire trauma memory. The last step was to terminate therapy and say goodbye. Terminating therapy is not always easy but because the clients were made aware right from the beginning and during therapy that treatment was going to be short term, it was manageable.

4.10 Treatment fidelity

This is an integral element of reliable and credible intervention research (Kratochwill & Levin, 2014). All treatment sessions were video recorded. Sessions were stored on an

external hard drive and uploaded to a password protected Dropbox account owned by the researcher. The researcher was supervised by Dr Duane Booysen to secure treatment fidelity and to monitor any adverse events. For example, we had consultations about the PE treatment and to discuss any challenges encountered.

4.11 Ethical considerations

The research study required ethical clearance, permission to conduct research online from Rhodes University and gatekeeper permission from FOTF SAA. Ethical clearance was obtained from Rhodes University Human Ethics Committee since I am a registered master of art in counselling psychology student (RU-HEC): 12 April 2021 - Reference number: 2020-1354-3579) and permission to conduct research online. Gatekeeper permission was obtained from FOTF SAon 14 April 2021 (see Appendices E to G). The psychological safety of participants was always a priority throughout the study research process as demanded by the nature of the research study. The ethical principles of confidentiality, beneficence, nonmaleficence, anonymity and discontinuance were maintained throughout the research project. For transparency and access to personal information, participants were advised that they could ask for a copy of video recordings for their trauma therapy session. No participant requested a copy of their trauma therapy session.

4.12 Adverse events and mitigation

It was the responsibility of the researcher to mitigate any potential emotional and psychological harm in line with the ethical principle of nonmaleficence. This was monitored throughout the course of the study by finding out from participants during the intervention phase how they were experiencing PE. Clients were also monitored using the PTSD checklist for DSM-5 (PCL-5). Clients were informed that if they feel that they were treated unfairly, they were also allowed to exit the study and could continue to use services within the counselling centre. One participant who was diagnosed with PTSD declined participation in the study. He was advised that despite his refusal to participate in the research study, he is still welcome to access counselling services at the FOTF SA.

4.13 Chapter summary

In this chapter SCED of the research study was discussed as a quantitative methodology used for this study. In keeping with the research aim of this study, an overview of SCED and procedure of the intervention phase in the context of SA was also discussed. The observation of PE as an effective empirically tested PTSD treatment was observed for its effectiveness. PE

is both a rewarding and challenging experience for both the client and the therapist. Many clients report feeling much better after PE treatment.

Chapter 5

PE Case Conceptualisations, results and analysis

5.1 Chapter Introduction

This chapter discusses the results of the brief PE intervention. Firstly, the cases that received PE treatment are introduced together with their presenting problems. Each case is then conceptualised using the EPT. The procedure followed for the research study is also outlined. Using visual analysis, the results of each participant who completed treatment is presented. Results are then discussed to ascertain the level of symptom improvement.

Furthermore, a summary of the brief PE intervention results will be presented. The chapter will also provide a contextualised discussion of the treatment process with a special focus on obstacles that took place during the intervention. In conclusion, the chapter will present a therapist's reflection regarding the nature of using PE as therapy for PTSD.

5.2 Procedure

Three participants (n = 3) participated in the study, and all were female adults recruited from Focus on The Family Africa (FOTF SA SA), a non-profit organization in Hillcrest, Durban in KwaZulu Natal in South Africa. All the participants were South Africans whose ages ranged from 31 to 65 years old. They were all females from Zulu origin and were fluent in both IsiZulu and English language. Personnel at the FOTF SA SA were required to inform the researcher/therapist of any potential participants. All participants were reported to have directly experienced/ witnessed a traumatic event at least one month prior to starting treatment and have had a total score of 33 or more on the PTSD Checklist-DSM5 (PCL-5).

A total of six referrals were received and three agreed to be screened for inclusion. Participants were only considered for a screening meeting and/or participation if the index trauma had occurred more than 4 weeks prior to the screening meeting (Foa et al., 2019). Three referrals could not be screened due to several reasons, namely, (a) no response when contacted; (b) did not attend a scheduled screening session; and (c) not interested in participating. All three referrals were eligible for participation, and they all completed the intervention.

Initial screening meetings were done by the researcher, and it involved providing each participant with information about the study, establishing participant eligibility, and obtaining written consent. Due to COVID-19 regulations, the study was conducted virtually through

Zoom, which is an online videoconferencing system. Therefore, all participants needed to have access to WIFI or have sufficient data to be able to connect online for all their sessions.

5.3 Case introduction

In this study, 3 trauma survivors participated. The participants were all females from middle socio- economic background in KZN. All the participants were predominantly from the African Zulu cultural background. All participants reported symptoms of traumatic stress, SI and co-morbid depression, and anxiety.

For confidentiality purpose, all three participants names will not be revealed, and pseudonyms are used to refer to the three participants.

Participant 1 (Nomvula) was a 38-year-old female. Nomvula endured an emotional and verbally abusive relationship with her ex-boyfriend who was also unfaithful by having additional romantic relationships with other persons. She ended the relationship. She also has a history of multiple traumas involving gender-based violence (GBV) and financial abuse from her family.

Participant 2 (Zonke) was a 65-year-old female who experienced the sudden death of her son-in-law whom she was very close to after being diagnosed with a rare condition called Paroxysmal Nocturnal Haemoglobinuria (PNH). She also had a history of being sexually abused by her husband, as well as psychologically and emotionally abused by both her husband and father-in-law.

Lastly, participant 3 (Buhle), was a 31-year-old married female who had no children. She reported as having no children and her trauma history of struggling to conceive for 5 years and had five unsuccessful in vitro fertilization (IVF) treatment, to assist her with the conception of a child as she was struggling to conceive the conventional way. She also reported that she was self-employed and managed a family business. She and her husband experienced a robbery at their family business office. Buhle, her husband and staff were held at gunpoint by four men and her husband was shot dead.

5.4 Presenting complaints

Participant 1 (Nomvula) reported that she was emotionally and verbally abused by her boyfriend. They have been together for 3 years. She was physically assaulted by him when they broke up and he labeled her as a failure said that she was a and highly controlling woman and will never succeed in any relationship. She reported to be feeling worthless, abused, angry,

aggressive, betrayed and had experiences of insomnia. Every time she spoke to her boyfriend, she would have anger outbursts. She also did not communicate about the relationship break up to both her sons who had a very close relationship with him. She is highly avoidant and would avoid all people that were associated with him. She is very aggressive, and her anger outbursts shows in all aspects of her life including at work. She also experienced suicide ideation due to feelings of anger, hopeless and helplessness. The researcher was the first one to be told about how the breakup happened as she was highly avoidant of thoughts and feelings that brought back memories of the stressful traumatic experience.

Participant 2 (Zonke) reported a tragic loss of her eldest son-in-law who was diagnosed with a rare condition (PNH). Even after 3 months of his passing, Zonke was still struggling with intense symptoms of traumatic grief (Jacobs et al., 2000) as she could not stop thinking about him. She was preoccupied with persistent feelings of shock and disbelief to an extent where she sometimes imagined she will see him walking through the door. She struggled to find life more meaningful without the deceased and lost some sense of security as she was very attached to him. She further reported feeling helpless, hopeless, confused, irritable, lacked concentration and sleep. She would avoid talking about her late son-in-law. She also avoided cooking her son-in-law's favourite meals, looking at his photos, talking about him, going to the hospital where he passed on, or to a restaurant, sitting or sleeping on his bed. Zonke has never been in therapy before, and her biggest fear and doubt was whether therapy will help her heal from all the pain after the traumatic passing of her son-in-law.

Participant 3 (Buhle) lost her husband when they were robbed by four young men at gun point in their family business office. She had tried to save his life by stopping the bleeding before taking him to hospital. She ultimately rushed him to hospital and witnessed him gasping for air when he was struggling to breath in the car. When she reached the hospital, the doctors confirmed his death. Buhle reported that this traumatic experience left her angry, confused, anxious, humiliated, guilty, helpless and hopeless and experiencing insomnia. She also reported that she is extra cautious when she is amongst young men as she feels unsafe. She further reported that she feels she was unfairly treated by the robbers and that after her husband's death she feels empty. She avoided spending time alone as she felt very unsafe or going to the office or the hospital where her husband ultimately lost his life.

5.5 Case conceptualizations

The case conceptualisation for all three of the participants will be discussed:

5.5.1 Participant 1

Nomvula is a 38-year-old female who is formally employed as a clinical nurse practitioner from Pietermaritzburg (KZN). She reported a traumatic history of repeated exposure to GBV within her family. Her father occasionally assaulted her. She further reported that her father ultimately abandoned her family. Over and above taking care of her two sons as a single mother, she now had to financially take care of her family as she took over her father's financial responsibilities.

Nomvula was self-referred to FOTF SA SA for repeated physical assault by her ex-boyfriend causing serious injuries. Nomvula reported that her index trauma occurred seven months prior to treatment. She also reported that when she met her ex-boyfriend, he was initially very loving, caring, supportive and very close to her sons. They started a business together and she was hoping they will have a future and build a family together. As the relationship progressed, she found out that he was cheating on her, and had to endure constant physical and verbal abusive tendencies. She further reported that she was highly traumatised and angered by her ex-boyfriend using her traumatic family history to judge and label her as a failure and a control freak. Sometimes she had to cover her bruises on her face with make-up.

Her index trauma was reported by her as enduring prolonged experiences of emotional and physical abuse. The pathological fear structure developed after the traumatic event of physical and emotional abuse. This pathological fear perpetuated her avoidance such as avoiding speaking to him telephonically and listening to any voice note messages from him. This avoidance maintained her PTSD. The pathological fear contributed to her low self-esteem and negative belief about herself (i.e., she was incapable of protecting herself) and others (for example that others cannot be trusted). This also further maintained her anger towards her boyfriend.

The elements of her erroneous fear structure were activated by using imaginal exposure and in-vivo exposure (Foa & Kozak, 1986). For example, when she finally listened to the voice note abusive messages that she had avoided for some time on her mobile phone during in vivo exposure. These messages were sent by her ex-boyfriend. She presented with strong psychological and emotional reactions (heightened emotions of anger, tearfulness), when revisiting the trauma memory. This was evident when she reported her high SUD score of 90 during the initial imaginal exposure.

Imaginal and in-vivo exposure provided a platform where she deliberately confronted the feared situations, thoughts and memories. The aim was to reduce any other negative reactions to the trauma related stimuli and promote habituation (Brown et al., 2019). Even though negative beliefs about the world and herself were highly challenged, the breathing technique was instrumental in helping her manage her negative emotional reactions and anxiety. Corrective information was provided during intervention and ultimately habituation occurred (Foa & Kozak, 1986; Foa et al., 2019). At post intervention phase she reported that she could now listen to all the voice note messages sent by her ex-boyfriend with minimal emotional reaction. She was also able to have a telephonic conversation with her ex-boyfriend.

5.5.2 Participant 2

Zonke is a 65-year-old married female. She is a retired educator from Umlazi Township in Durban. She was self-referred from the FOTF SA SA. Zonke reported her trauma history of being in a very emotional, verbal and financial abusive marriage for many years. She never shared her abusive marriage history with anyone, not even her 5 children but suffered in silence. As a result, she has low self-esteem (poor decision-making skills) and needs validation all the time. She further reported that her eldest daughter married a very loving and responsible husband who she was very close to as he was an epitome of true love and healthy marriage that she never experienced in her own marriage. Her son in law was diagnosed with a rare condition, PNH in October 2020 which left the family highly traumatised. Further than that, she was repeatedly exposed to the overwhelming and aversive experience of the slow death of her son-in-law when visiting him in hospital. She ultimately witnessed her son in law take his last breath in hospital which was overwhelmingly traumatizing for her.

Zonke presented elements of low self-esteem and incompetence. For example, one of her biggest fear was whether PE will help her recover from all the pain, fears and bring her healing after the traumatic passing of her son-in-law. She reported feeling devastated, anxious, helpless and in great denial after her son-in law passed on. Zonke also reported experiencing insomnia and wished her son-in-law will come back to life again. The pathological fear structure that Zonke had developed after the traumatic event perpetuated her avoidance, which inevitably maintained her PTSD (Rauch & Foa, 2006). Her pathological fear structure (trauma memory i.e. death of her son-in-law) resulted in maladaptive cognitions that she was incompetent as she doubted that she will be healed from negative feelings and thoughts associated with loss of her son in law and be able to face the avoided reminders of the traumatic death. She also believed that the world cannot be trusted as her son-in-law's family mistreated

her daughter during the funeral arrangement preparation. Hence, she avoided communicating with them. EPT as applied to PTSD (Foa & Riggs, 1993) maintains that the fear structure of a PTSD client contributes to dysfunctional cognitions leading to the development and maintenance of PTSD.

She further reported to be avoidant of going to the hospital where he passed on as this brought reminders of her traumatic experiences. For Zonke, the hospital was believed to be a dangerous place of traumatic death. Through exposure therapy, the pathological fear structure needed to be modified and activated. This was achieved by presenting and integrating information incompatible with the pathological fear structure with realistic one in a safe environment during therapy (Rauch & Foa, 2006). In this way pathological elements of fear were corrected through exposure activities for example Zonke had to visit the hospital so that her pathological fear can be modified. Zonke reported heightened SUD levels of 85 when she visited the hospital. The use of breathing techniques helped her to manage her heightened emotional responses during the intervention phase. Through repeated exposure of the feared stimuli/feared traumatic memories during both imaginal and in vivo exposure, greater reduction in thoughts of incompetence and the belief that the world is dangerous were greatly reduced. At post intervention, there was noticeable reduction of PTSD symptoms (Foa and Rauch, 2004) as she subjectively reported "it feels like magic" due to reduced feelings of fear and incompetence. This was also evident in all her PCL-5 and PSSI assessment scores.

5.5.3 Participant 3

Buhle is a 31-year-old businesswoman who ran a family business with her husband. She reported that her index traumatic experience was witnessing her husband brutally shot dead by four young men during a robbery in one of their family business offices. The index trauma occurred six months prior to treatment.

Buhle's pathological fear and dysfunctional cognitions included fear of going to the hospital where her husband ultimately lost his life. Because of her dysfunctional cognitions of the unsafe world, she avoided going to the office where the traumatic incident happened and being around young men as she felt incompetent to manage her fear/anxiety around these situations and places. These automated negative thoughts (ANT's) maintained the symptoms of PTSD (Rauch & Foa, 2006). However, through the PE psychosocial intervention, modification of the pathological elements of the fear structure needed to occur. The fear structure was activated through imaginal and in vivo exposure therapy, as she was repeatedly

exposed to the avoided daily activities such as going to the hospital and the office where the robbery and the death happened (Rauch & Foa, 2006). In this way, as she confronted the traumatic memories, the fear structure was activated, and new realistic information was presented to disconfirm the pathological elements of the fear structure (Foa and Rauch, 2004). Habituation took place and the PTSD symptoms were eliminated, as Buhle reported that she no longer feels overwhelmed by fear for instance when she visited the hospital. This was evident as well based on her assessment results, i.e., PCL-5 and PSSI-5 at post intervention phase.

5.6 Results

The description of cases provide a case summary of the basic demographics, a description of the index trauma and of the social context. In the present study, each participant who completed the baseline assessment and received at least one session was included in the reporting of the intervention.

Table 5.1 reports on the sample characteristics. Once again, pseudonyms (Nomvula, Zonke and Buhle) are used to protect all participant's identities.

Table 5.1

Sample characteristics of trauma survivors

Name	Sex	Age	Race	Marital Status	Nationality	Trauma Type	Trauma History	Education	Employment
Participant 1 - Nomvula	F	38	Black African (Zulu origin)	Single	RSA	Verbal and physical Abuse	Multiple	College	Formal Employment
Participant 2 – Zonke	F	65	Black African (Zulu origin)	Widowed	RSA	Tragic loss of son in law	Multiple	University	Retired
Participant 3 - Buhle	F	31	Black African (Zulu origin)	Widowed	RSA	Witnessed injury, death, dead body of husband	Multiple	University	Self Employment

5.6.1 Visual Inspection

Visual inspection is a systematic method of understanding and analysing data (Lane & Gast, 2014). Its use can be seen in clinical contexts where end functioning is determined after treatment intervention using graphical presentation where measures were used at baseline, intervention and post intervention phases (Lane & Gast, 2014). According to Kratochwill and Levin (2014), its usefulness is observed where stability or variability of data and to show decrease and increase of data.

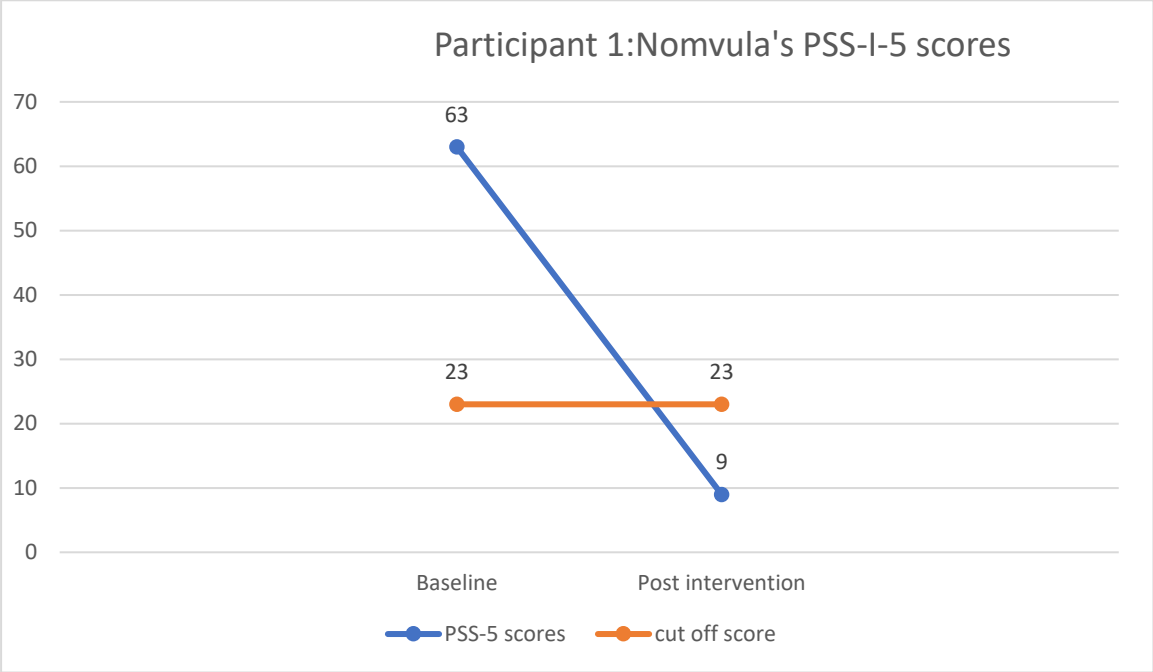
To examine within condition data, analysis of single case data was used (Lane & Gast, 2014). Within-condition analysis examines data in each phase. For example, during intervention phase, conditions such as application of level, trend, and stability is observed. Observations during each phase was limited and so the PCL-5 was used for multiple observations. When symptom reduction is observed in a single participant, it can be claimed that a positive downtrend is observed. When a similar reduction is observed in other participants, the trend is therefore strengthened.

In the section that follows below, the results of all the participants (n=3) who participated and completed the intervention will be described.

5.6.1.1 Participant 1

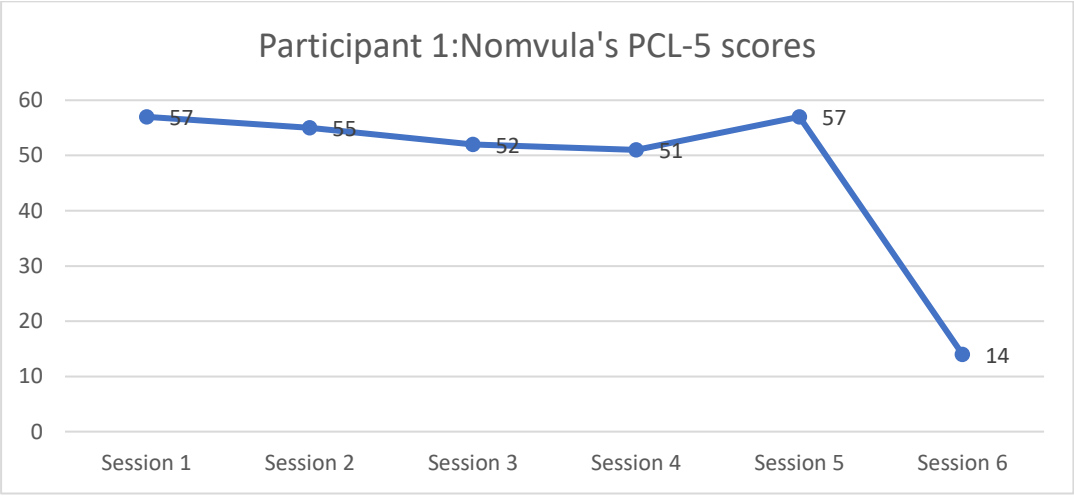
The index trauma for Nomvula occurred seven months prior to treatment. She met the criteria for PTSD (PSSI-5 = 63, cut-off is 23). Her depression symptoms were moderate to severe (BDI=35, BDI-II = clinical cut-off is **16**), moderate to severe anxiety (BAI = 22, clinical cut off 20) and moderate to severe suicide ideation score (BSI=30, clinical cut-off is 41). The CORE OM was also conducted and the scores for depression were also found to be severe (32,5), severe anxiety (32,5), severe trauma (40) and risk to self was at a healthy level (0). For the CORE OM score to be considered significant it should be >= 17.

Figure 5.1



Throughout the PE intervention, she presented as tearful. However, at session 2 to 4, there is a significant downward trend in trauma symptoms. However, the researcher noticed a drastic increase of PTSD symptoms between session 5 and 6 based on the PCL-5 assessment scores (see figure 5.2). This was attributed to her intense anger that escalated towards her ex-boyfriend during in vivo exposure. She was therefore referred to FOTF SA SA for anger management during the last session.

Figure 5.2 Nomvula's during treatment PCL-5 scores



Overall, during the post intervention phase, Nomvula appeared to have reduced symptoms of PTSD (PSS-I-5 = 9) as represented by figure 5.1. She also had reduced symptoms of depression (BDI-II =3) as represented by figure 5.3 and anxiety (BAI =0) as represented by figure 5.4 and reduced score for suicide ideation (BSI=10) as represented by figures 5.5. Furthermore, the CORE OM assessment also reported negative symptoms of depression (0), anxiety (0), trauma (0), and reduced risk to self (5) as represented by figure 5.6 Overall, Nomvula' s scores on all five assessment measures show a slow downward trend during treatment phase and reduction at post assessment phase. Nomvula did not meet the diagnostic criteria for PTSD at the end of session 6.

Figure 5.3

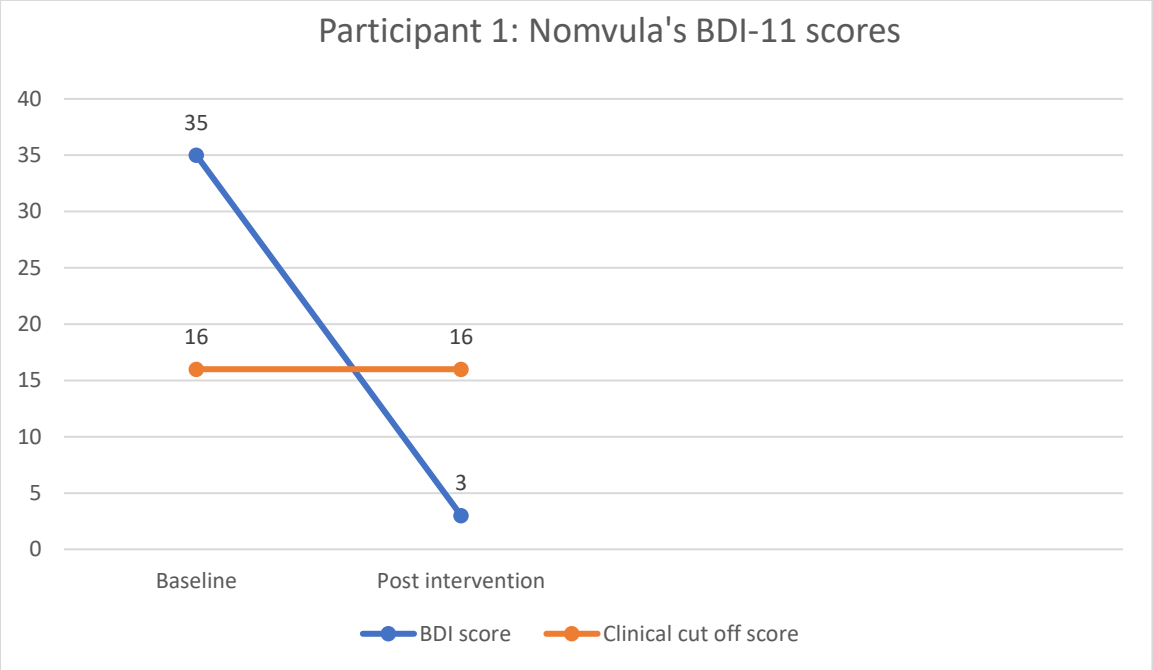


Figure 5.4

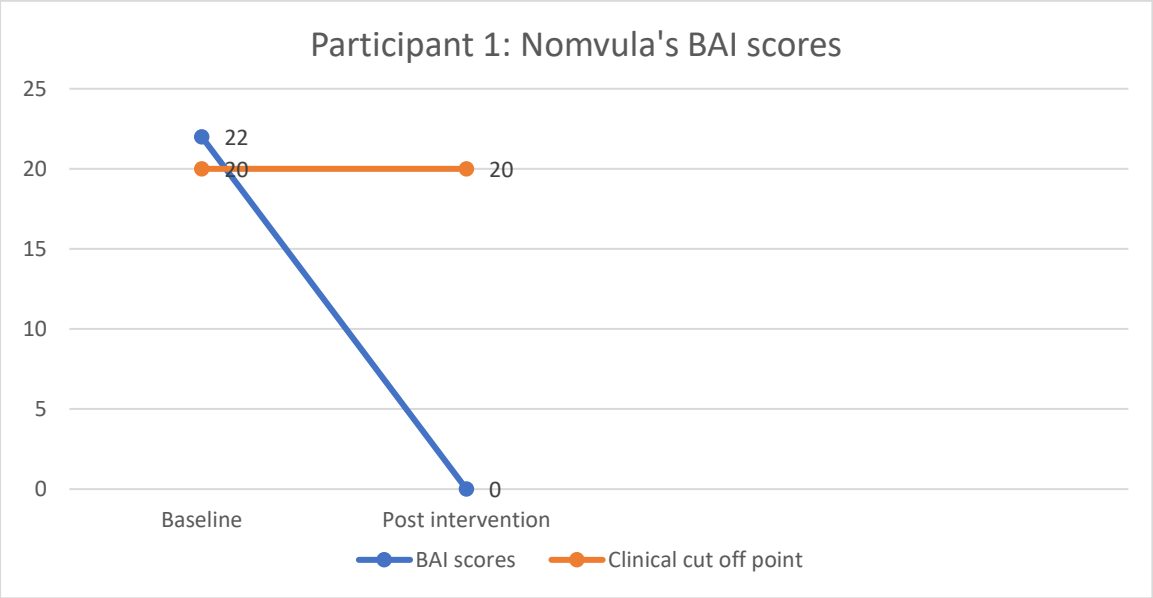


Figure 5.5

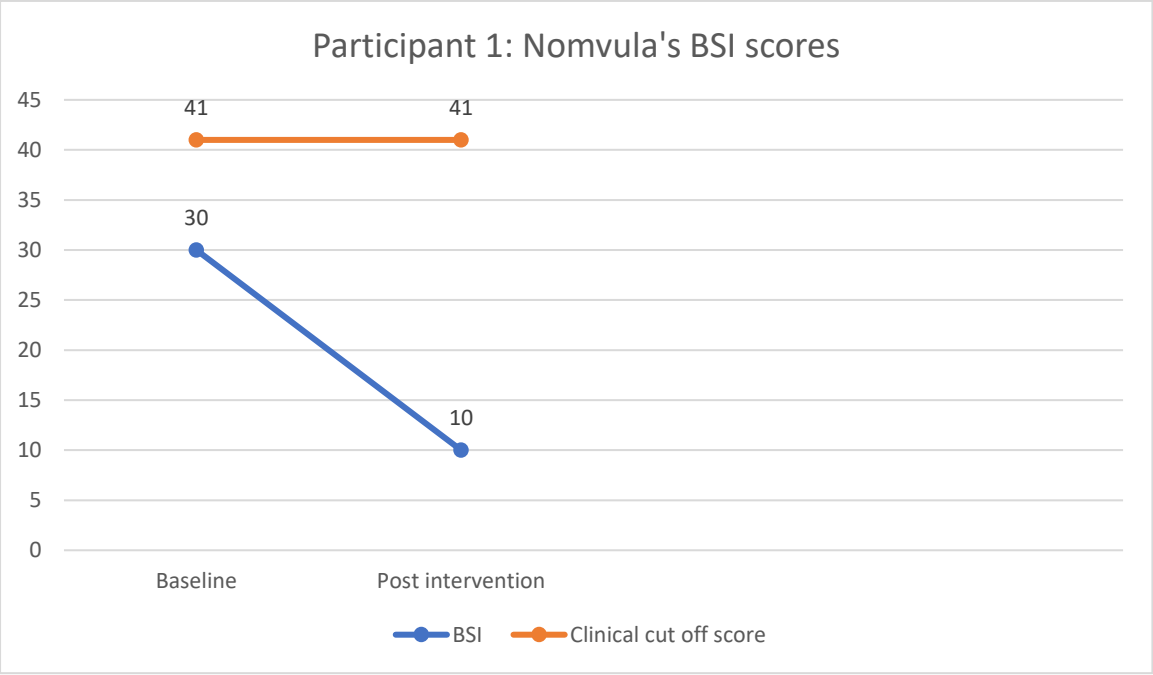
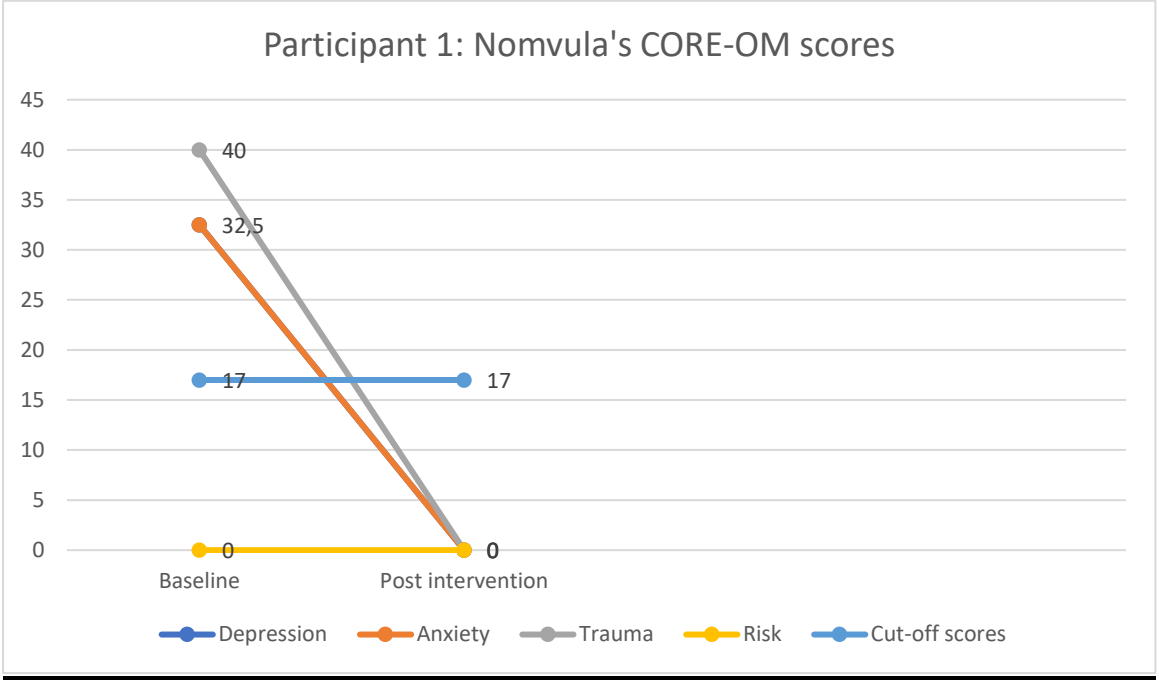


Figure 5.6

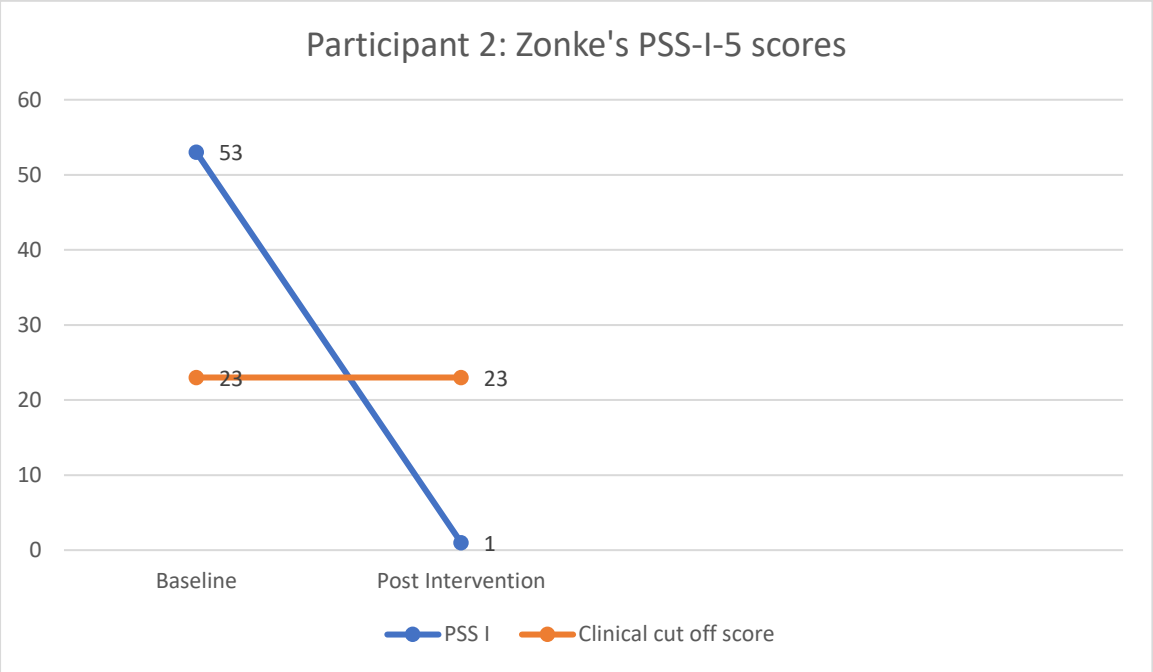


5.6.1.2 Participant 2

At baseline, Zonke reported feeling helpless, hopeless, tense, confused, insomniac, lacks concentration and experiencing self-blame issues. She avoided anything to do with memories of his son-in-law e.g., talking about him looking at his photos, sitting/sleeping on his bed and had a strong wish that he could come back to life.

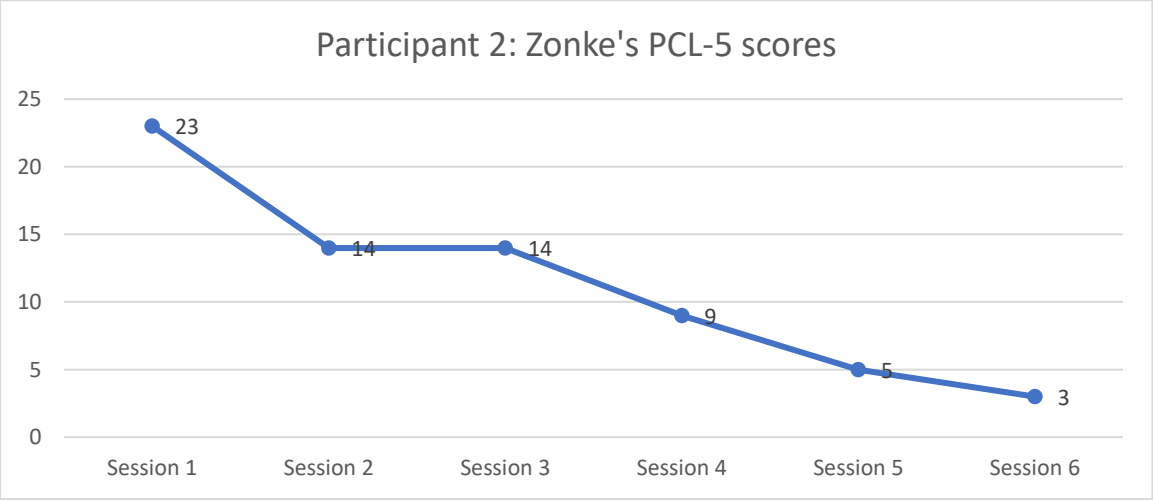
She met the criteria for PTSD (PSSI-5 = 53, cut-off is 23) Her depression symptoms were moderate to severe (BDI=25, BDI-II = clinical cut-off is 16), moderate to severe anxiety (BAI = 22, clinical cut off **20**) and moderate to severe suicide ideation score (BSI=15, clinical cut-off is 41). The CORE OM was also conducted and the scores for depression were also found to be severe (30), severe anxiety (27,5), severe trauma (35) and risk to self was at a healthy level (7,5). For the CORE OM score to be considered significant it should be >= 17.

Figure 5.7



During the treatment phase, in session 2, there is a significant downward trend in PTSD symptomology and continues until session 6 as represented by her PCL-5 Zonke's assessment scores (figure 5.11).

Figure 5.8 Zonke's during treatment PCL-5 scores



At post-assessment phase, Zonke had reduced symptoms of depression (BDI =0) as represented by figure 5.7, negative score for anxiety (BAI = 0) as represented by figure 5.8 and reduced score for suicide ideation (BSI= 4) as represented in figures 5.11. Furthermore, she had a negative diagnosis of PTSD symptoms as represented by her PSS-I-5 assessment. The CORE OM assessment also reported reduced symptoms of depression (5), anxiety (17,5), trauma (10), and negative symptoms for risk to self (0) as represented by figure 5.12. Overall,

Zonke's s scores on all five assessment measures show a downward trend during treatment and drastic reduction at post assessment. Zonke did not meet the diagnostic criteria for PTSD at the end of session 6.

Figure 5.9

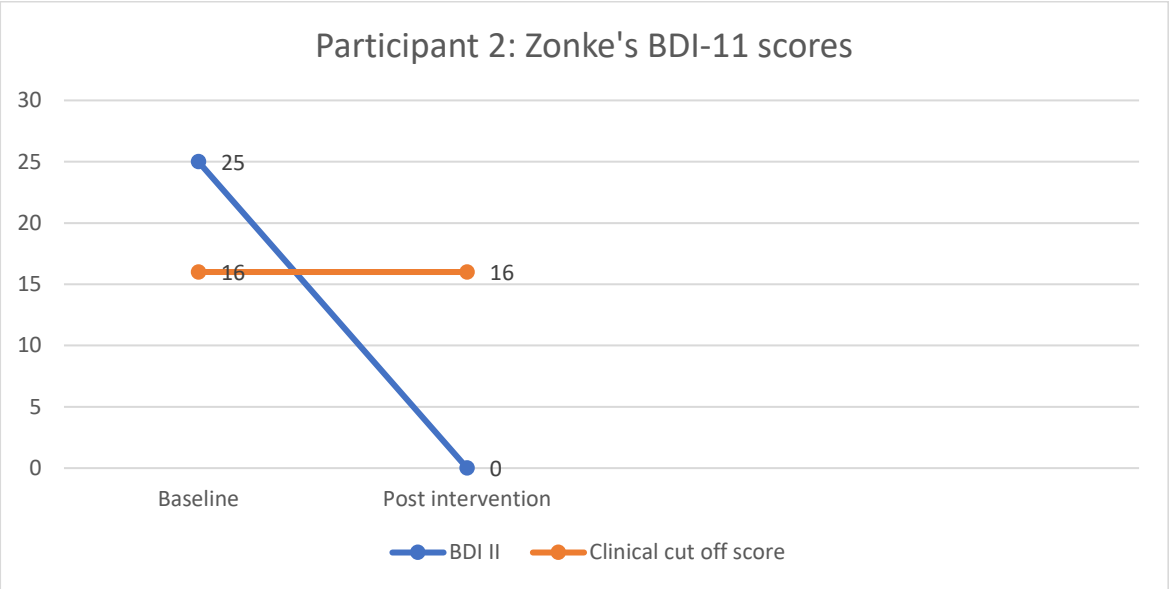


Figure 5.10

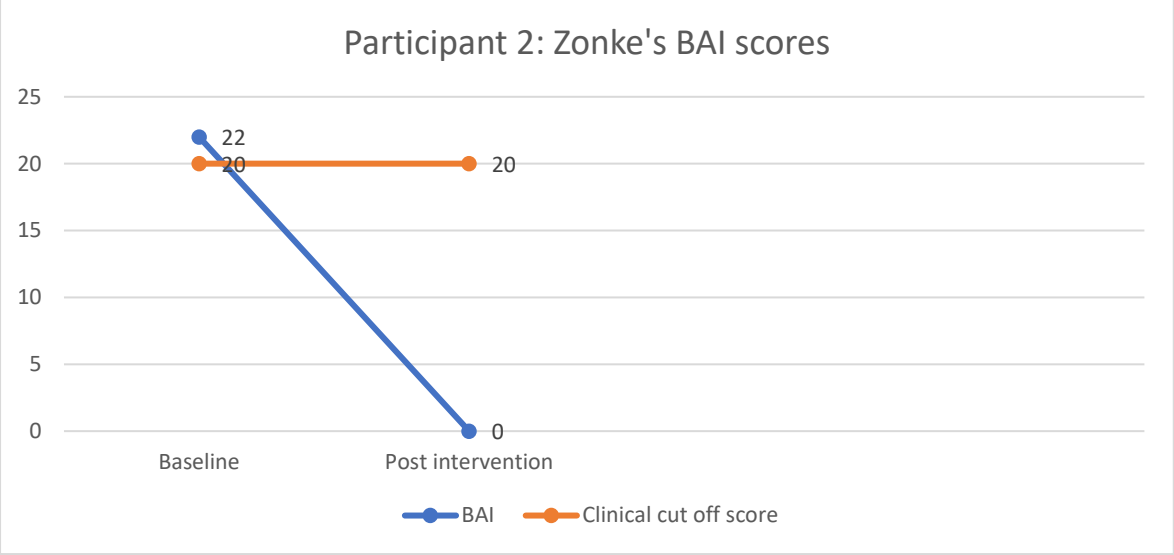


Figure 5.11

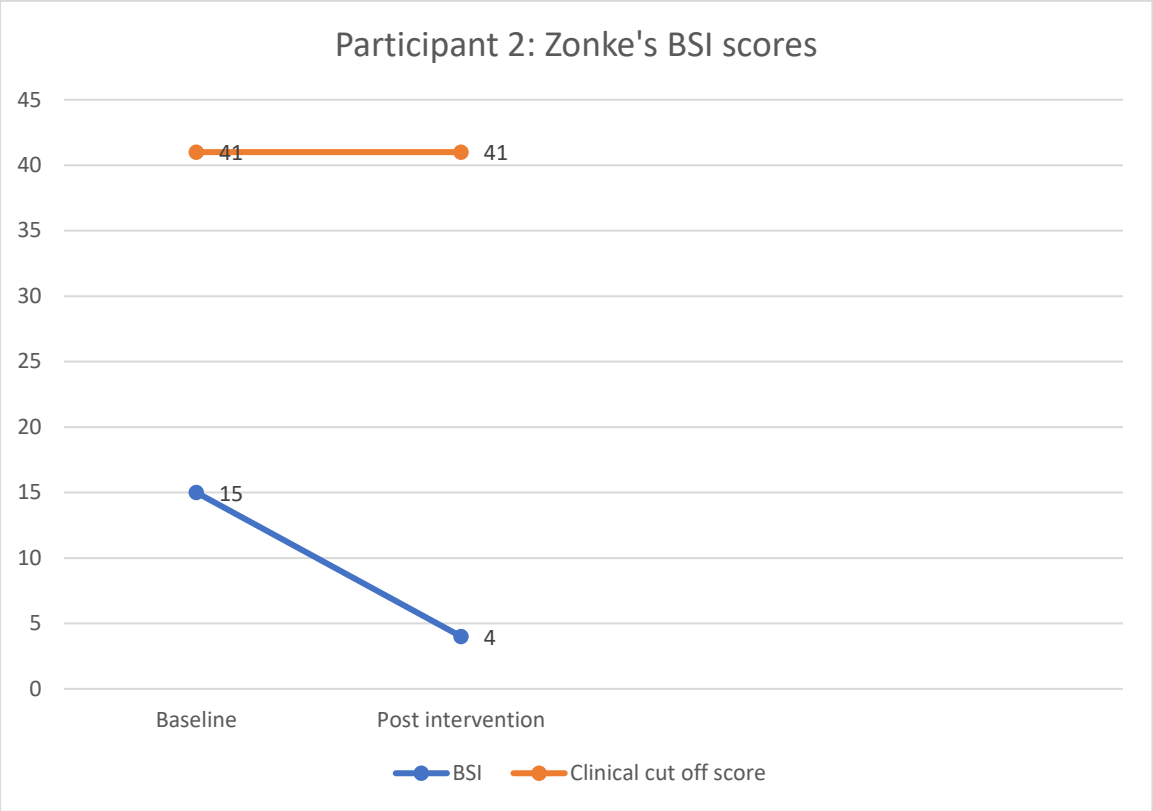
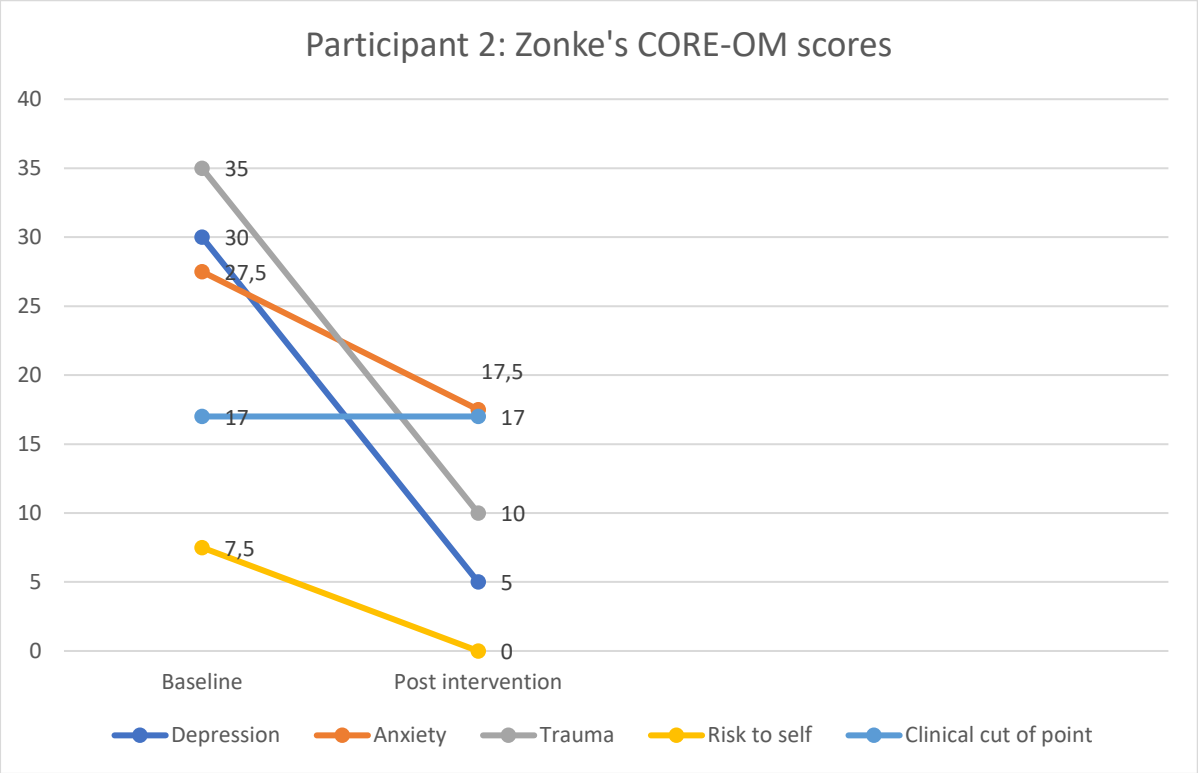


Figure 5.12

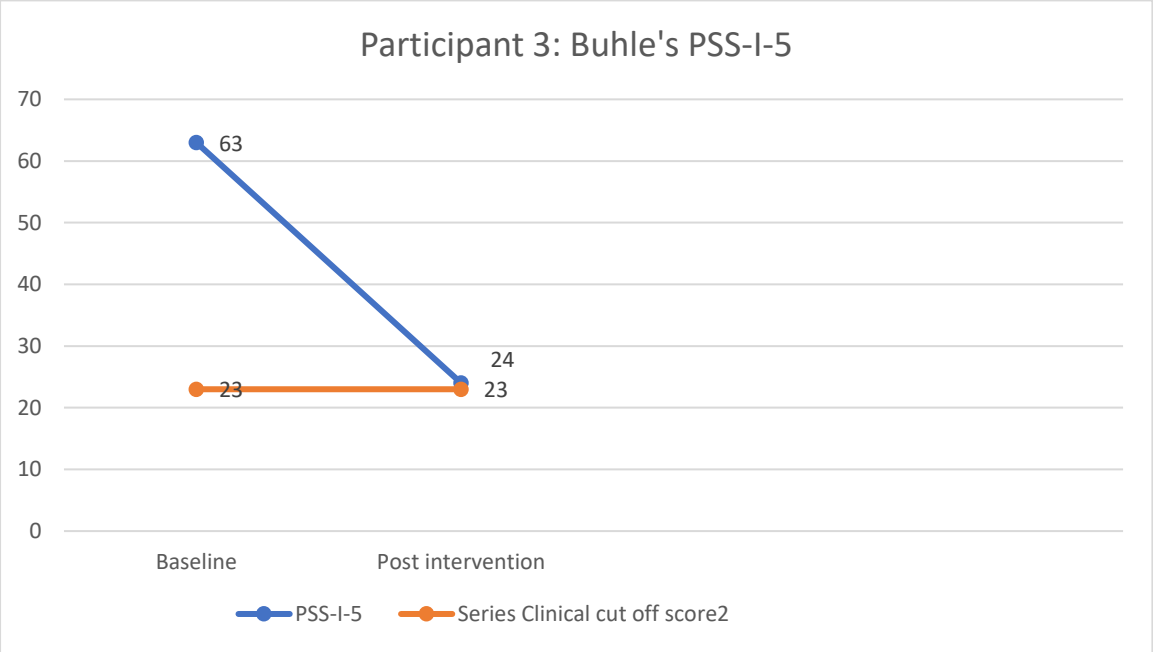


5.6.1.3 Participant 3

During baseline, Buhle reported that the death of her husband left her feeling angry, confused, anxious, humiliated, guilty, helpless, hopeless, hypervigilant, intense feelings of emptiness and feelings that she was treated unfairly by the robbers. She also reported experiencing insomnia. The pathological fear structure developed as she avoided spending time alone as she felt very unsafe or going to the office, church or the hospital where her husband ultimately lost his life. She was highly uncomfortable among young men as she felt very unsafe. The index trauma occurred six months prior to treatment. At intake, she met the criteria for PTSD (PSSI-5 = 63, cut-off is 23) as represented by figure 5.13.

Her depression symptoms were moderate to severe (BDI=23, BDI-II = clinical cut-off is 23), moderate to severe anxiety (BAI = 28, clinical cut off **20**) and moderate to severe suicide ideation score (BSI=17, clinical cut-off is 41). The CORE OM was also conducted and the scores for depression were also found to be severe (30), severe anxiety (32,5), severe trauma (40) and risk to self was at a healthy level (5). For the CORE OM score to be considered significant it should be >= 17.

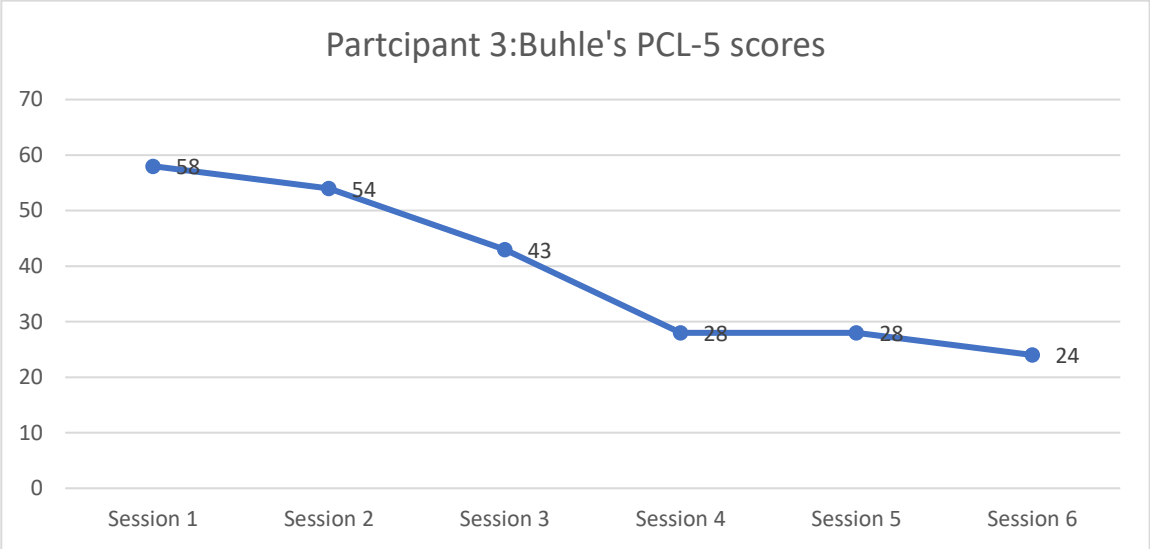
Figure 5.13



During imaginal and in-vivo exposure at treatment phase, her anxiety was highly elevated. During treatment phase she reported that she could not complete her first activity for in-vivo exposure. The rationale for the PE therapy was revisited during treatment as facilitated by the researcher/therapist to normalise and validate her feelings of elevated anxiety. Through

this activation of trauma memory, habituation took place as Buhle showed decline of symptoms from session 3 and continuously until 6 as per her PCL-5 scores (see figure 5.14). Buhle had reduced symptoms of PTSD, depression, and anxiety at the end of treatment.

Figure 5.14: **Buhle's during treatment scores**



At post-assessment, Buhle had reduced symptoms of PTSD. Her PSSI score was 24 for PTSD as represented by figure 5.13. She also had significant reduction of symptoms of depression (BDI =11) and anxiety (BAI =15) as represented by figure 5.16 and reduced score for suicide ideation (BSI=9) as represented by figure 5.17. The CORE OM assessment also reported reduced symptoms of depression (22,5), anxiety (20), trauma (25), physical (20) and risk to self (2,5) as represented by figure 5.18. Overall, Buhle's scores on all four measures show a downward trend and reduction of PTSD symptoms. Her PTSD symptoms were minimal at the end of session 6.

Figure 5.15

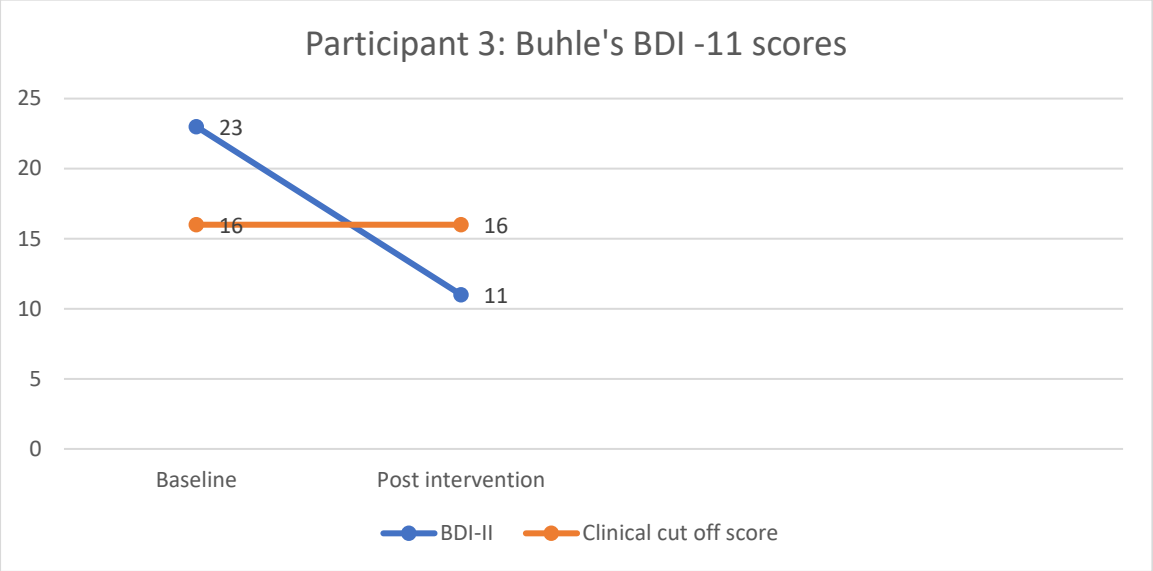

Participant 3: Buhle's BDI -11 scores
25
20
15
10
5
0
23
16
16
11
Baseline
Post intervention
BDI-II
Clinical cut off score

Figure 5.16

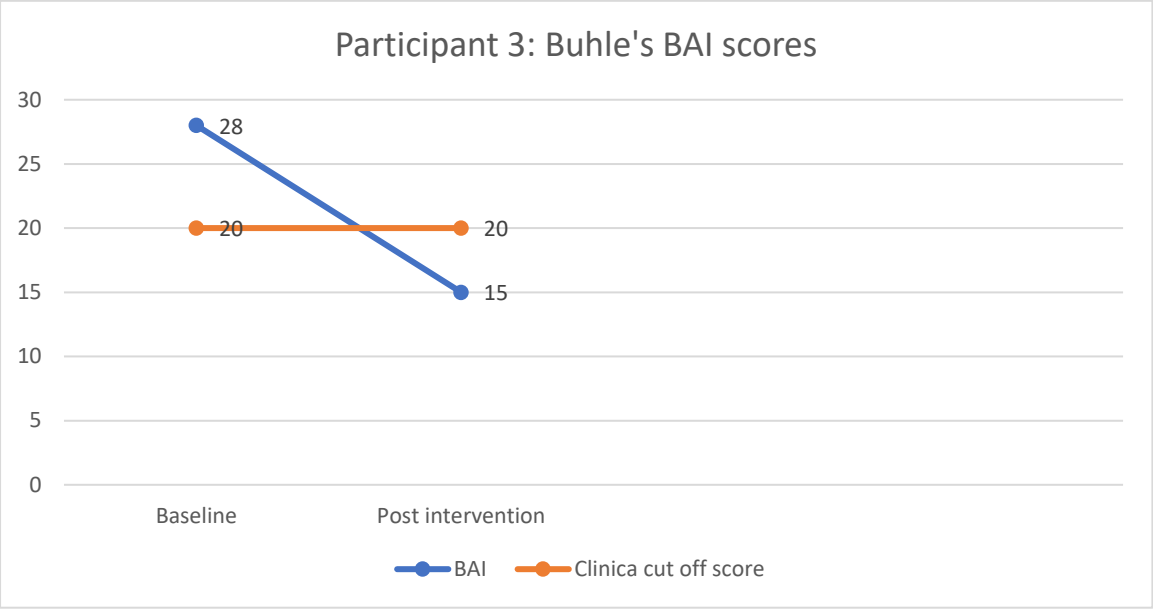


Figure 5.17

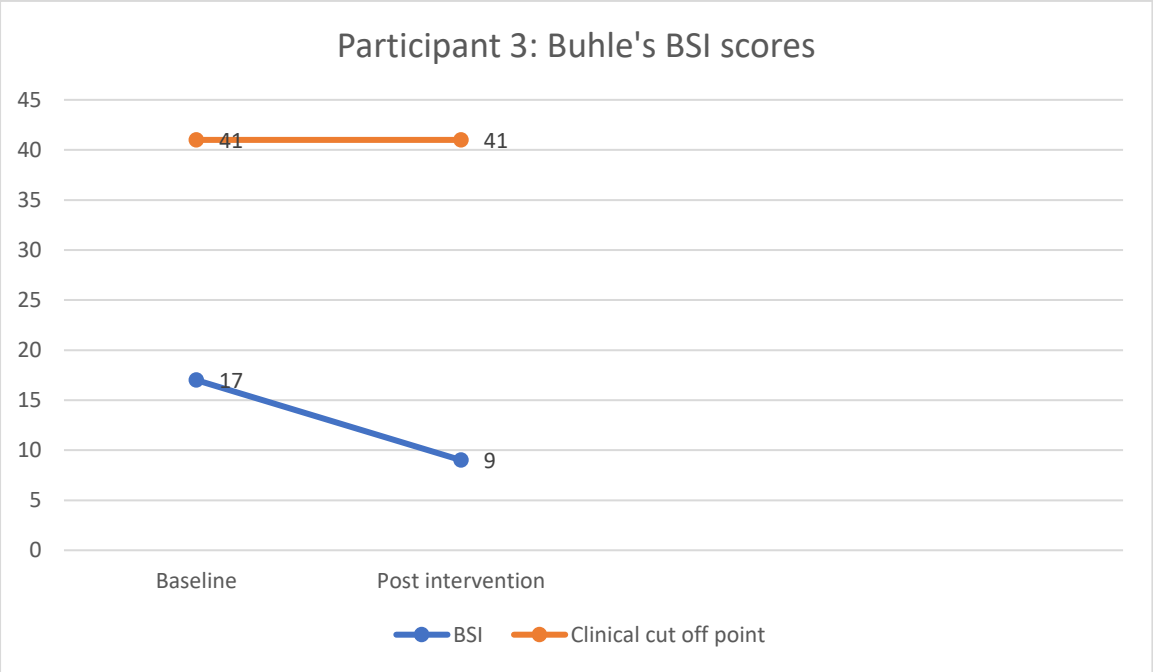
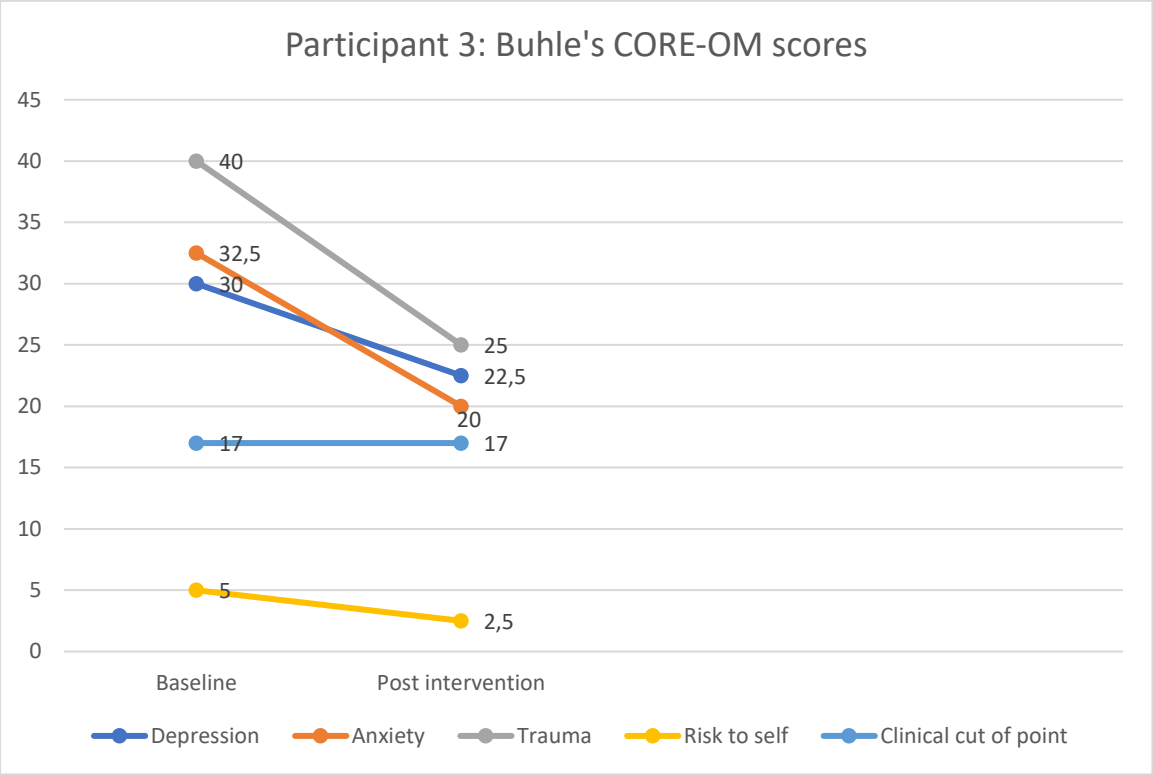


Figure 5.18



5.7 Descriptive analysis

5.7.1 Across participant trends

Combined trends across the three participants were observed who demonstrated a downward trend in PTSD symptomology as evident on all their PSSI-5 scores represented by figure 5.19. There was also a reduction in SI symptoms across all participants as illustrated by figure 5.20. The reduction of PTSD symptoms and SI was observed from pre intervention to post- intervention.

Figure 5.19

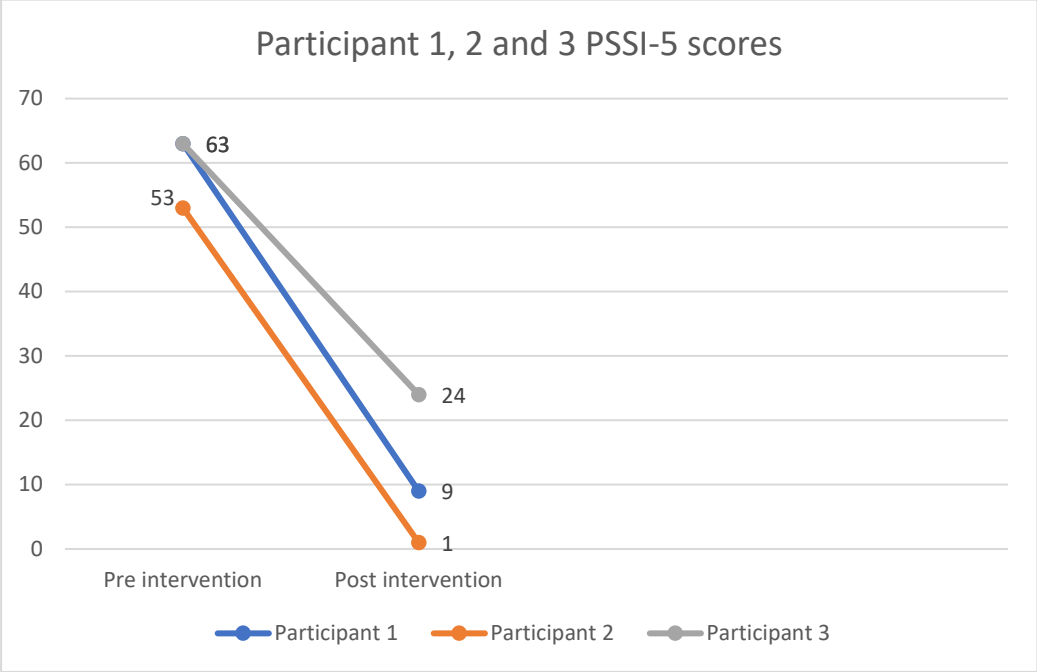
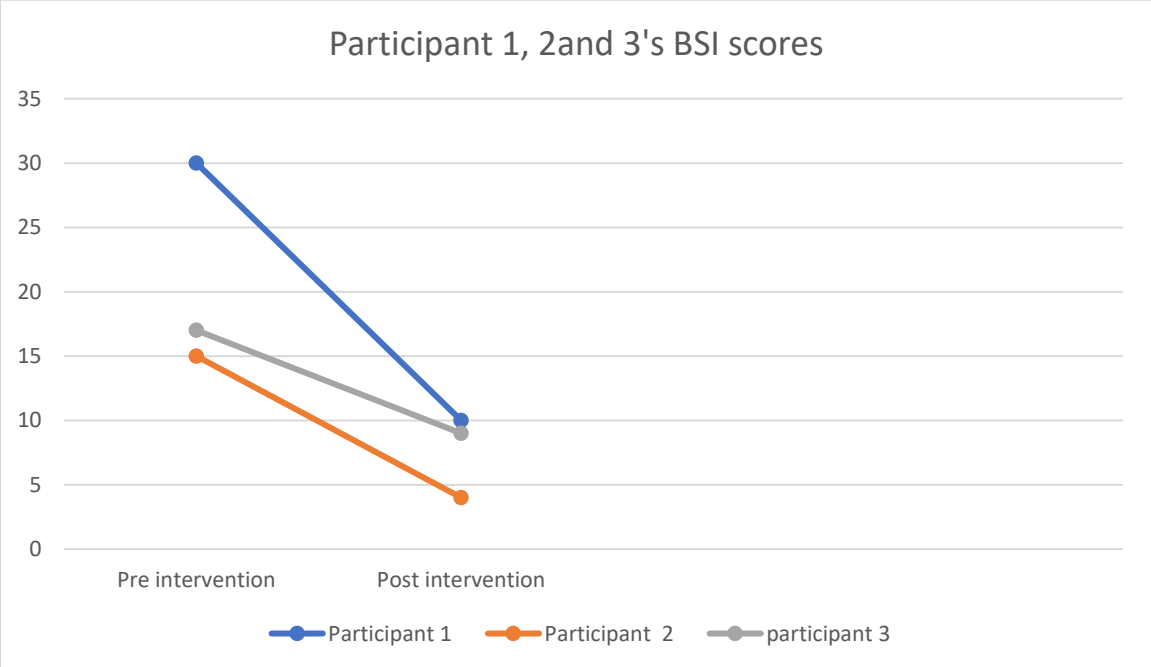


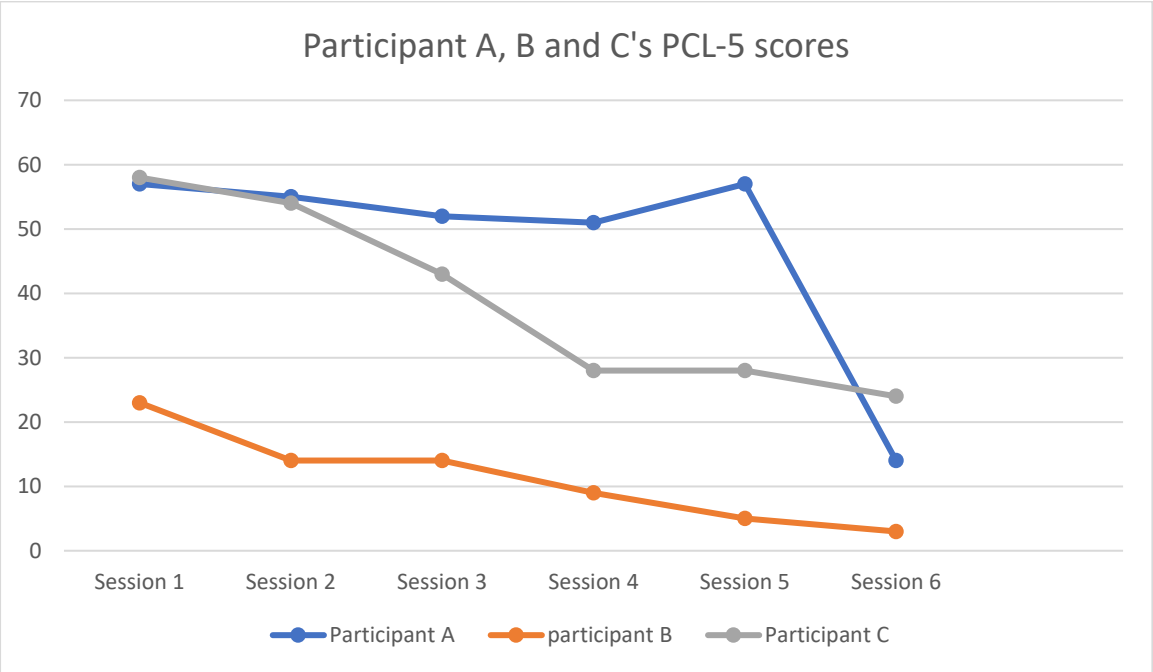
Figure 5.20



Lastly, figure 5.21 illustrates the three participants' PCL-5 scores across all the 6 sessions. All participants scores were lower than 31. Scores lower than 31-33 indicate the client either has subthreshold symptoms of PTSD or does not meet criteria for PTSD. All the three participants

showed a downward trend in scores. This is an indication that habituation took place and PE treatment was effective.

Figure 5.21



5.8 PE Fidelity

This is a vital element of credible intervention research (Kratochwill & Levin, 2014). Treatment fidelity ensures construct validity in the study, for example, the stated treatment was truly administered and not an unreported treatment. All treatment sessions were video recorded. All the sessions were conducted via Zoom and securely saved on Google drive and only the researcher and supervisor has access to this information.

The researcher-maintained fidelity to the PE treatment manual and had frequent discussion with her supervisor regarding intervention. The treatment process was supervised to maintain treatment fidelity and to monitor any adverse events.

5.9 Discussion

Various studies have been conducted internationally regarding the use of PE for PTSD and its comorbidities such as SI. PE has large evidence base to support its efficacy and effectiveness and is also safe treatment in reducing PTSD and its comorbidities (van Minnen et al., 2012). PE is a highly preferred treatment in PTSD patients. Its efficacy has been proven in many randomized controlled trials and several reviews that it is an efficient treatment for PTSD (Powers et al., 2010). The findings of the current study not only support some of the existing findings of the effectiveness of PE therapy for the treatment of PTSD and SI in SA but adds to our understanding of the effectiveness of PE treatment through teletherapy not only for PTSD and SI but also for other related comorbidities such as anxiety and depression.

Privacy was maintained in the current study by locking the room in the zoom platform so that third parties have no access to the sessions expect the researcher and the therapist. In this way confidentiality was maintained. The research participants were informed about the risk and benefits of participation in the research project as per the information sheet that was emailed to them. The therapist managed to establish rapport through teletherapy. This was observed when the clients were able to be vulnerable during the sessions for example, Zonke mentioned that her challenges around her marriage were only shared with the researcher. This was a sign that the therapeutic alliance was developed.

Eftekhari et al., (2013) conducted a study that evaluated the effectiveness of PE as implemented with veterans returning from Iraq and Afghanistan with PTSD in large health care system which showed to be highly effective in reducing levels of PTSD. His sample consisted of female veterans, most of whom had experienced sexual trauma (Eftekhari et al., 2013). This is however partially different from the current study whose sample was limited to only women within the South African context, but it also showed a downtrend in PTSD symptoms and SI. Just like the current study, Eftekhari et al., (2013) study's results also indicate that PE effectiveness in reducing depression symptoms, even though depression is not a direct target of the treatment.

Foa et al., 2018 conducted a PE study whose objective was to assess the effects of massed prolonged therapy on PTSD symptoms on military personnel who returned from Iraq, Afghanistan, or both. Clinical trials were on military personnel with PTSD at Fort Hood, Texas, from January 2011 through July 2016. At posttreatment, there was a decrease in PTSD symptoms on military personnel. Furthermore, a similar study by Brown et al., 2019 also on military personnel examined the mediators of change in SI in PE. This study further confirmed

that PE provides a safe space for the reduction in PTSD and SI. (Brown et al., 2019). Both these studies are convergent with this present study in as far as the PTSD symptom reduction is concerned but different in the duration of the study. The present study was short term as it was not spaced over a period.

A pilot study by Tuerk, et al., (2010) was conducted on combat-related PTSD diagnosed veterans. PE treatment was provided via telehealth technology to the 12 veterans who reported a significant decrease in PTSD and depression pathology at post treatment. The results also showed that PE treatment via telehealth was acceptable and safe (Tuerk et al., 2010). This finding is parallel to the results of the current study. However, the difference is with the pilot study conducted by Tuerk et al., 2010, there was high sample noncompletion rates which is not the case with the sample of the current study where there was 100% sample completion rate. Tuerk, et al., 2010 further recommended for a large-scale randomized controlled trial in future.

The Telehealth PE treatment of PTSD and related comorbidities such as stress, depression, anxiety and general psychological impairment was also proven to be effective in a large trial conducted by Gros, et al., (2011). PE delivered via telehealth was effective in reducing the symptoms of PTSD, anxiety, depression, stress, and general impairment with great effect. This data provides primary support for the effectiveness of EBT delivered via videoconference. Therefore, the current study is convergent with the trial done by Gros, et al., (2011) but differs in sample size.

Turgoose, Ashwick, & Murph (2018) also conducted a trauma-focused study on veterans with PTSD. PTSD treatment was provided through tele-therapies. Even though there were technological challenges experienced during treatment intervention, there were high levels of satisfaction and acceptability reported by veterans since teletherapy provided the most feasible and effective option to access therapy (Turgoose, Ashwick, & Murph, 2018). This converges with the findings of the current study at hand. The difference is that the current study focused on any adults in SA whereas the study by Turgoose, Ashwick, & Murph, (2018) focused on veterans as participants.

Furthermore, a randomized controlled trial (RCT) study was further conducted by McLean (2021) where a comparison of in person PE Present-Centered Therapy (PCT) and "Web-PE," was done. The sample of this study comprised of 40 military personnel who were diagnosed with PTSD. Similarly, to the current study, PTSD, depressive symptoms, and health functioning was assessed at baseline. However, with the study by McLean (2021), the posttreatment was done after one and three months which is different from the current study,

where post treatment was done within a month after 6 sessions. However, the results of both studies showed a significant reduction in self-reported PTSD symptomology.

In response to the aim of the current research study to explore the effectiveness of prolonged exposure therapy for the treatment of PTSD and SI among adults in SA, a few challenges, observations and findings were also worth noting especially because the study took place online during the challenging times of the COVID-19 pandemic. People with PTSD showed elevated COVID-19-related stress as compared to people with mood disorders and those without any mental health disorders (Shafran, 2021). Therefore, the need of mental health intervention in this regard was deemed to be of great need and importance (Asmundson et al., 2020).

Anxiety and depression were elevated during the COVID-19 era (Shafran, 2021). Anxiety provoked by the COVID- 19 also made not just the PE treatment but also the recruitment of participants challenging and delayed the current research study. For instance, the researcher was challenged with finding the targeted participants in 2020. This was attributed to people's anxiety towards accessing teletherapy (Fina et.al, 2020). This was further confirmed by Zonke and Buhle's anxiety which was above the cut of score (Figure 6.9 and 6.15). According to the results of the BDI-11 and CORE-OM, all the 3 participants had clinically significant scores of depressions which is also a comorbidity for PTSD (figure 5.3, 5.9 and 5.15).

The use of breathing techniques is affective in helping clients to manage anxiety during PE treatment (Foa, 1997). In this current study, the researcher exposed the participants to 3 various breathing techniques. These breathing techniques included the audio recorded, the written format and the pictorial breathing techniques. This was in line with the understanding that some people will prefer and respond differently to a particular technique. For example, Nomvula preferred the audio recorded option. She reported that it is effective in managing anxiety and inducing sleep as she reported insomniac.

The significance of comprehensive approach to PE treatment of PTSD was also noted as contributing positively to the PTSD client prognosis. A mental disorder is characterised by a disturbance that is clinically significant regarding not just emotion but cognition behaviour or regulation. This reflects biological, psychological and developmental processes at the root of mental functioning (APA, 2013). It is for this reason that Buhle was referred to the physiotherapy when the COVID- 19 regulations were adjusted to lower levels, as she reported experiencing chronic muscle tension on her shoulders and back due to depressive symptoms.

During the intake interview, Buhle reported that she was insomniac. The comprehensive treatment approach i.e., both the treatment from the physiotherapy together with 4-2-4 breathing technique used in PE treatment, also promoted enhanced sleep for Buhle. This further contributed to Nobuhle positively responding well to PE therapy.

PE might be considered the PTSD treatment of choice (Minnen, Arntz, & Keijsers, 2002). Furthermore, PE is also a feasible option for treating PTSD (Hunter, 2010). It is of paramount importance that therapist has enhanced insight of the prognostic features and to understand factors attributing to exposure treatment failure. This knowledge assists in having a better view of exposure treatment adaptation in the procedures, to improve the patients' prognosis (Foa et al., 1999).

Even though Buhle showed drastic reduction in PTSD symptomology at post intervention phase, she still had traits of PTSD symptoms as a result of her intense sense of grief and loss of her husband. She was therefore referred to a support group at FOTF SA SA for extra continuous support. If this was left unattended it had the potential of causing regression and maintenance of the PTSD symptoms.

Clients often want their significant others to be part of their PE treatment. This may increase engagement, enhance prognosis and decrease in dropout (Wells, at al., 2020). For example, Nomvula took her two sons with her, during the in-vivo activity of going to the mall after her first attempt where she went alone and felt overwhelmed with anxiety. During the second attempt, she managed to stay in the mall despite the elevated anxiety until her SUD level was at a lower score of 20.

Zonke experienced another traumatic experience as a result of the death of her sister and learnt of her daughter's cancer diagnosis between session 2 and 3. As a researcher/therapist I initially thought that both these traumatic experiences will affect the prognosis of PE treatment. The therapist/researcher observed that her BAI scores remained stagnant (Figure 6.12). However, Zonke reported that she managed not to use avoidance as a coping mechanism as learnt through the in-vivo and imaginal exposure. Her BAI scores showed a downward trend during session 4 and continued thus to termination session 6. She also reported that she will teach other people about exposure versus avoidance. Therefore, prognosis was good as indicated by the consistent downward trend from all her screening assessments scores.

Zonke's determination and consistency assisted her to respond well to PE treatment. Zonke bravely did two in-vivo activities successfully during session 3. Even though all the 3 clients were triggered and distressed during intervention phase, they remained consistent in

attending their respective sessions. For example, Nomvula reported that she almost terminated at during imaginal exposure but pushed herself as she noticed a steady decline in PTSD symptoms between session 1 to 4 (See figure 5.8). Any participant that had a challenge in attending their scheduled sessions, they reported and cancelled on time.

PE reignites the coping mechanism that they used successfully before and teaches life skills e.g., Nomvula reported during the termination session that she learnt to give herself permission to be vulnerable. This was possible through self-awareness and self-acceptance. She slowly radically accepted that some things can't be controlled but needed to be accepted. The in vivo and imaginal exposure taught her to accept that her son-in-law had passed on.

According to Kokaliari, Catanzarite & Berzoff (2013), it is common that bilingual clients prefer to use mother tongue language in therapy. However, they may switch between mother tongue and secondary language. Clients reported that mother tongue language helps them to express intense affect relating to their dreams, trauma or when dealing with grief (death of a loved one) (Kokaliari, Catanzarite and Berzoff, 2013). Furthermore, the use of any language particularly the mother tongue language strengthens the therapeutic alliance (Kokaliari, Catanzarite and Berzoff, 2013).

All the participants of this study were isiZulu speakers from KZN. The use of vernacular language, isiZulu by the researcher had a noticeable impact especially during psycho education of PE treatment and the intervention phase. The researcher observed that the participants had great insight when psychological terms were explained in isiZulu. They could also deeply express their feelings and thoughts. This experience strengthened the therapeutic relationship between the researcher and the participants.

Based on the studies cited in the discussion above, the present study converges with previous studies that evidence-based PTSD treatments such as PE, are effective in PTSD and SI reduction (Post et al., 2021). Furthermore, Telehealth PE treatment of PTSD is not only an effective treatment for PTSD and SI but also assist in dealing with obstacles encountered during the COVID-19 era to PE treatment dissemination (McLean et al., 2013).

5.10 Chapter Summary

In this chapter, the 3 participants were introduced together with their history, presenting complaints and their baseline screening assessments scores. Each participant's case conceptualisation was also presented and discussed followed by the presentation of the participant's progress in response to PE therapy during treatment and post assessment phases. The screening assessment results were also reported. Lastly the results of the research study

was reported through the visual analysis and statistical analysis. The downtrend of PTSD and depression symptoms observed were presented.

Chapter 6

Conclusion, limitations and recommendations

6.1 Chapter overview

6.2 Summary

One of the high public health burdens in SA is PTSD (Williams et al., 2007). The WHO guidelines stipulate how trauma and stressor-related disorders can be managed. It also critically highlights aspects related to PTSD the treatment in low- and middle-income countries (LMICs) such as SA.

According to McGowan & Kagee (2013), young adults in SA are a high-risk group of trauma. Exposure to trauma is also associated to comorbid conditions such as depression, anxiety and SI (Bantjes et al., 2016). Individuals diagnosed with PTSD are most likely to report SI (Gradus et al., 2013). SI is defined as cognitions and thoughts relating to suicidal behaviour and intent. This may involve ideas, thoughts and plans of taking one's life and self-injury (Strijdom & Rothmann, 2002). There is a high clinical association and implications between PTSD and SI (Bantjes et al.,2016).

The emergence of COVID-19 in SA in 2020 affected the lives of many people. There has been a rise in a variety of psychological disorders such as loss and grief, depression and anxiety and post-traumatic stress, which can even lead to suicide ideation (Yahya et al., 2020). Those who experience PTSD may be at risk for negative consequences during the pandemic (Foa & Kozak, 1986). On the other hand, the SA government was forced to introduce regulations which restricted movement. This means there has been a greater need and demands for psychosocial support.

Since face-to-face interactions was limited, PE therapy on this research study was provided virtually through online platforms like Zoom. PE is a highly effective treatment for trauma-exposed populations (Cusack et al., 2016), including those with comorbid depression, anger problems, guilt, and alcohol use disorder (Powers et al., 2010). PE is also highly effective and flexible individualized treatment for PTSD through teletherapy (Acierno et al., 2017). Furthermore, PE is empirically supported and evaluated in USA, Japan, Poland, and Israel (Rothbaum et al., 2000) but little is known in SA about young adults' experiences of teletherapy and its effectiveness and acceptability in low-resource settings, like SA (Gericke et al., 2021).

To adhere to the COVID-19 regulations while still providing the much-needed psychotherapeutic support during this challenging time of COVID-19, it was deemed critical

to conduct this study to investigate the effectiveness of PE therapy for the treatment of PTSD and SI among adults in SA. According to Kazdin (2019), the effectiveness of treatment is determined based on the client's symptoms or adaptive functioning over time.

In order to determine effectiveness, the current study recruited three female adults from FOTF SA SA who presented with PTSD. First, these participants were assessed at baseline using the PSSI-5, as well BDI 11, BAI, BSI and PSS-I and CORE-OM. During intervention phase each participant had to complete the PCL-5 to evaluate to monitor the progress of PE treatment. Post-intervention, participants were requested to complete the same screening assessment as completed at baseline.

Fidelity was maintained in this study for validity purposes. Several practices were used to ensure that a researcher observed fidelity. These included supervision by the research supervisor on a continuous basis, to secure treatment fidelity and to monitor any adverse events, and therapy session recordings were securely stored and saved on a Google Drive account.

As stipulated by Foa and Meadows (1997), credible intervention research requires treatment fidelity. All in all, the results of the present study indicated a downward trend in symptoms of both PTSD and SI.

6.3 Limitations of the study

Due to the changes and challenges of Covid-19, this research study was challenged in as far as recruiting participants. This was right at the beginning of the COVID-19 pandemic in 2020. The study took a turn as we could not really work with students. The researcher had to recruit adults and at other sites than the university. Therefore, there are a number of limitations pertaining to the current study. Firstly, the use of small sample (3 participants) across all three phases may have some impact on the external validity. Although the initial plan was to recruit participants that met the criteria for PTSD and SI, the researcher ended up recruiting participants with only elevated symptoms of PTSD due to recruitment difficulty during COVID-19 era.

All the 3 participants were adult females and therefore homogenous. Gender differences in far as the pathological, physiological, or mechanisms underlying, the PTSD may have an impact for research reliability (Pineles, Hall, Rasmusson, 2017). Therefore, these factors may suggest that women are vulnerable to risk of developing PTSD (Christiansen, & Berke, 2020). Furthermore, according to Booysen and Kagee, 2021 a small sample limits exposure to with different levels of education, sociocultural and economic status.

The sample was homogeneous as adults who have the earning capacity and from the same urban geographical area of KZN, limits the study. The easy access to a variety of resources such as mobile devices, internet, laptops, and this may not be the case for the broader SA population. Furthermore, there was no consideration for South African diversity e.g. culture, disability, race to explore any cultural mediating factors for PE treatment intervention (Schnyder et al., 2015). Considering this insight in hindsight, the sample should have included males too as the current findings limit the generalisability of results.

Another limitation is that the current study did not include a long-term follow-up post-intervention strategy. This could have assisted in ascertaining any regression in symptom for PTSD clients. Follow up initiatives may also contribute to assessing the long-term effectiveness of PE through telehealth. Long term follow-up initiatives could have strengthened the reliability and validity of the current research study.

Eskom loadshedding and technical issues in SA may unnecessarily elevate anxiety for PTSD clients due to abrupt end of the session. This may also cause disruption to the flow of the sessions for PE treatment. Secondly, as much as it was convenient to consult from home during the pandemic, however the flip side of it was the issue of confidentiality where sessions could be disturbed by family members coming into the room. For future research alternative means of online connection and confidentiality should be considered.

6.4 Implications of the study

The current study has been successful and has added value as one of the cognitive behavioural modalities that effective for the treatment of PTSD. This is significant for PTSD symptom reduction as well as SI reduction in a South African context (Booysen & Kagee, 2020). Despite the COVID-19 pandemic, online teletherapy using Zoom platform provided effective PTSD and SI treatment through this current research study. Based on the results of the current study, The reduction of PTSD has been observed from all the three participants having a downward trend especially during the COVID-19. Therefore, the results of this study, PE treatment was effective not only in treating PTSD but also related comorbidities such as depression and anxiety.

6.5 Treatment implications

The PTSD comorbid depression can be a stumbling block for the online PE treatment. Behavioural activation is useful in dealing with depression. There are numerous behavioural activation activities that can be done at home in line with the requirement of social distancing (Fina et al., 2020). These activities include but not limited to doing physical exercise at home,

doing chores around the house that are both therapeutic and aligned with in-vivo exposure e.g., gardening, cooking that was done by Zonke.

The current study also contributed to the three participant's mental health and wellbeing as they were empowered by attaining the necessary life skills that they can utilise in their life for any trauma provoking events. All participants of this study reported multiple trauma experiences. Even though the PE treatment targeted one index trauma, Zonke reported that she will apply skills learnt in therapy to other experienced traumas and further share them with significant others who may experience trauma.

Referral of clients to other practitioners may also contribute to effective and sustainable PE treatment. During the current study, Buhle was referred to the grief support group so that she can provide herself with further psychological support and maintain the skills during PE treatment (Booysen & Kagee, 2020). This will further assist in preventing severe PTSD symptom regression. Nomvula was referred for anger management counselling which may prevent PTSD symptom regression.

6.6 Therapist's reflections and insight

6.6.1 Establishment of therapeutic alliance

The establishment of the therapist – client relationship is an important initial step for any successful therapeutic relationship (Leach, 2005). Good rapport helps in facilitating and improving communication, assessment, and treatment outcome. Some of the building blocks of a good therapeutic alliance is based on trust, respect, honesty and openness (Leach, 2005).

The essential building block of building rapport between the researcher/therapist and the participant/ client was maintained in the current study. The empathetic approach which is also another basic principle in any therapeutic relationship assisted in honestly discussing any challenges encountered. For instance, Nomvula reported during treatment that she initially struggled with listening to the recorded clip for the imaginal exposure. This was resolved by validating the participant's feelings and thoughts. Psycho education about the rationale of PE particularly the imaginal exposure, for the client also assisted to resolve the participant's fear of the imaginal exposure activity.

6.6.2 Online PE therapy during the COVID-19 pandemic in SA

SA's National Institute of Communicable Diseases (NICD) reported its first confirmed case on March 5, 2020. SA was declared one of the countries with high risk by the World Health Organization (WHO) (Staunton, Swanepoel, & Labuschaigne, 2020). The national State

of Disaster was declared on March 15, 2020, and numerous measures were imposed which limited movement through COVID 19 regulations measures limiting the rights of South Africans were announced (Staunton, Swanepoel, & Labuschaigne, 2020). As SA was required to respond to an outbreak, mental health disorders also escalated as well and had to respond appropriately.

In response to the treatment of mental health illness, including PTSD, PE was proven to be highly effective for PTSD (Staunton, Swanepoel, & Labuschaigne, 2020). However, adherence to the COVID-19 regulations as stipulated under the COVID-19 regulations, informed by the State of Disaster in 2020, deemed to be important (Staunton, Swanepoel & Labuschaigne, 2020). That is the reason that in this study, some in vivo exposures were done at home on Zoom in align with COVID-19 regulations of observing social distancing. The advantage of providing PE therapy online allowed participants and the therapist/researcher to experience therapy in the comfort of their homes. This maximised the instant availability of continuous support from significant others (Staunton, Swanepoel, & Labuschaigne, 2020). For example, Zonke was assisted by her daughter to log in on Zoom before the session could commence as she is not computer savvy. She also could use the daughter's laptop during her sessions. However, in some instances the challenge was availability of the private space for participants to maintain confidentiality during therapy sessions. This was evident when Buhle had to consult in her car for session 3. This however was observed by the researcher as determination and belief in online PE therapy as treatment for PTSD.

6.6.3 Imaginal exposure

There are general considerations to be mindful of during PE treatment especially via Zoom. However, imaginal exposure is less likely to be affected by COVID-19 (Staunton, Swanepoel, & Labuschaigne 2020). The researcher needed to be more psychologically present to observe under engagement or over engagement. This is of critical importance as the observation of non-verbal cues is challenging during online therapy (Staunton, Swanepoel, & Labuschaigne, 2020). The researcher needed to effectively respond to network connection challenges due to loadshedding and any other technological issues. This was resolved by switching to the use of telephonic consultation. The use of SUD's were also helpful for the researcher to effectively observe any elements of under engagement or over engagement.

6.6.4 Vicarious trauma

Vicarious trauma (VT) is defined as trauma exposure to the trauma experiences of other people. This is dire occupational challenge for all professions dealing with trauma (Beth et al,

2017). However, empathic engagement may also therapists vulnerable to the detrimental effects of VT, with consequent negative effects on individual counsellor effectiveness and dynamics of the organisational in the workplace (Palm, Polusny, & Follette, 2004).

Therapists go through an internal process as they both try to make sense of the stories that their clients share with them as they try to integrate these stories into their own existing cognitive schemas (Sexton, 1999). This is how secondary trauma occurs which impacts the treatment process negatively (Sexton, 1999).

VT was also experienced by the researcher in this study. Debriefing session from the research supervisor played a critical role in debriefing session with the researcher after an intense depressive session. This allowed confidential space to vent, unpack, and reflect on any emotions what would have transpired during the session. If there were any issues of transference and counter transference, they were discussed during these sessions. This contributed to a manageable facilitation of PE treatment by the researcher.

6.7 Value of the study

This study suggests that PE treatment can improve symptoms of PTSD and comorbid condition via teletherapy, therefore, clinicians can explore the use of PE for PTSD clients who also have a comorbidity. Even though this study did not aim to investigate depression as a PTSD comorbidity, this current study proved that PE is also effective for depression treatment for adults in SA. This is true based on the downward trend observed during the intervention and POST intervention phase and the use of BDI-11 and CORE-OM.

As per the results of this study, PTSD treatment does not have to be confined to face-to-face mode but can also be conducted online if needs be. The researcher/therapist has added value for literature for other therapists or any other practitioners within the South African context online PE treatment of adults with PTSD and its SI and depression comorbidities through telehealth.

6.8 Recommendations to clinicians and students

A handful of recommendations pertaining from the current study is important. It is recommended that therapists and other practitioners note that online PE treatment can be provided effectively in SA despite roadblock impeding face to face interaction and uncertain circumstances brought about by COVID-19 (Fina et al., 2020). This is evident from the current study where online PE treatment was provided despite an international public health threat period in SA.

PE psycho education is critical throughout the process to keep the clients grounded and committed to the PE treatment process. During the current study, the rationale behind high anxiety provoking in-vivo and imaginal exposure for clients was repeatedly cited. The assurance that participants are in a safe space during online imaginal exposure assisted in containing the participants. This was proof for participants that PE indeed clearly distinguishes the trauma memory versus reexperiencing the trauma experience as reported by Nomvula when reflecting on her progress during the termination session.

The essential building block of building rapport between the researcher and the client was also maintained. The empathetic approach which is also the basic principle in any therapeutic relationship assisted in honestly discussing any challenges encountered. For instance, Nomvula reported during treatment that she initially struggled with listening to the recorded clip for the imaginal exposure. This was resolved by validating her feelings and thoughts. Re psycho educating the client about the rationale of PE particularly the imaginal exposure also assisted to resolve the participant's fear of the imaginal exposure activity.

6.9 Conclusion

As the challenges of the online PE treatment in SA were discussed in current research study, it is useful to note that the overall results of this research study yielded good results as all three recruited participants responded well to treatment by showing reduced PTSD treatment and comorbid SI, anxiety and depression.

Therefore, overall, the study found that the effectiveness of online PE therapy for the treatment of PTSD and SI among adults in SA was effective. Furthermore, the study yielded good results to the treatment of other comorbidities such as anxiety and depression.

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Appendices:
Appendix A: Ethical Clearance

RHODES UNIVERSITY
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Human Ethics Committee
Rhodes University Ethical Standards Committee
PO Box 94, Makhanda, 6149 South Africa
Email: ethics-committee@ru.ac.za

www.ru.ac.za/research/research/ethics
NHREC Registration No. REC-241114-045

12th April 2021
Zuziwe Gloria Ndebele
Email: g20n8917@campus.ru.ac.za
Review Reference: 2020-1354-3579

Dear Mr. Booysen
Title: The effectiveness of prolonged exposure therapy for the treatment of PTSD and Suicide Ideation among university students

Principal Investigator: Mr. Duane Booysen
Collaborators: Mrs. Zuziwe Gloria Ndebele

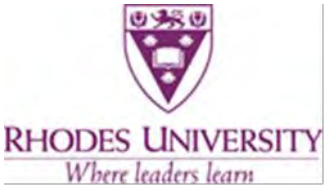
This letter confirms that the above research proposal has been reviewed and **APPROVED** by the Rhodes University Human Ethics Committee (RU-HEC). Your Approval number is: 2020-1354-3579

Approval has been granted for 1 year. An annual progress report will be required in order to renew approval for an additional period. You will receive an email notifying when the annual report is due.
Please ensure that the ethical standards committee is notified should any substantive change(s) be made, for whatever reason, during the research process. This includes changes in investigators. Please also ensure that a brief report is submitted to the ethics committee on the completion of the research. The purpose of this report is to indicate whether the research was conducted successfully, if any aspects could not be completed, or if any problems arose that the ethical standards committee should be aware of. If a thesis or dissertation arising from this research is submitted to the library's electronic theses and dissertations (ETD) repository, please notify the committee of the date of submission and/or any reference or cataloguing number allocated.

Sincerely,

Prof Arthur Webb
Chair: Human Ethics sub-committee, RUSEC-HE

Appendix B: Permission to conduct research study online



Human Ethics Sub-Committee
Rhodes University Ethical Standards Committee
PO Box 94, Makhanda, 6149 South Africa
Email: ethics-committee@ru.ac.za

www.ru.ac.za/research/research/ethics
NHREC Registration No. REC-241114-045

1st February 2021

Ms. Zuziwe Gloria Ndebele
Email: g20n89917@campus.ru.ac.za

Dear Ms. Ndebele

Re "The effectiveness of prolonged exposure therapy for the treatment of PTSD and Suicide Ideation among adults in South Africa"

Research Ethics Approval No.: 2020-1354-3579

I have noted your request for the need to change your research technique from the current approach of face-to-face interviews in terms of your baseline and intervention psychotherapy data collection, to the use of online platforms for this purpose.

In consideration of the prevailing conditions and, on condition that the same principles will be reflected in the questions posed to your research participants, I see no reason to withhold approval for this change.

Sincerely,

Prof Arthur Webb
Chair: Human Ethics sub-committee, RUSEC-HE

Appendix C: Gatekeepers letter

Helping Families Thrive

Private Bag X7023, Hillcrest, 3650
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14 April 2021

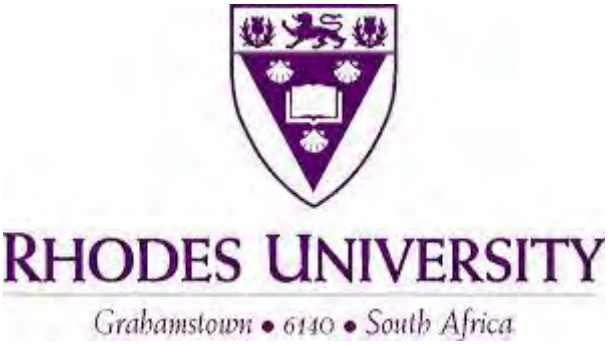
To whom it may concern

RE: Ms. Zuziwe Gloria Ndebele: RESEARCH

This letter confirms that Focus on the Family gives permission to Ms. Zuziwe Gloria Ndebele to conduct her research on the following:
Title: The effectiveness of prolonged exposure therapy for the treatment of PTSD and Suicide Ideation among adults in South Africa.

Anthea Nagoor
Counselling Centre Director
Focus on the Family Africa

Appendix D: Client information sheet



CLIENT INFORMATION SHEET

Title: The effectiveness of prolonged exposure therapy for the treatment of PTSD and Suicide Ideation adults in South Africa

You are asked to participate in a research study conducted by Zuziwe G. Ndebele master's in counselling psychology candidate at Rhodes University. The results of the study will contribute to a master's mini thesis, academic publication(s), and conference presentation(s). The data collected in the project may also be used in future research projects.

You were selected as a possible participant in this study because you present at Rhodes University Counselling Centre seeking counselling for traumatic stress.

1. PURPOSE OF THE STUDY

The purpose of the study is to investigate whether Prolonged Exposure (PE) can reduce symptoms of traumatic stress and suicide ideation among university students.

2. PROCEDURES

If you volunteer to participate in this study, I would ask you to do the following things: Complete a brief screening questionnaire to determine if you meet the criteria to participate in the study. Attend six weekly sessions of 60 – 90min duration. You will be assessed before the counselling begins, during the counselling period and when you complete the counselling. All counselling sessions will be video recorded to ensure that the student counselling psychologist (principal investigator) adheres to the treatment guidelines of the PE treatment.

3. POTENTIAL RISKS AND DISCOMFORTS

The research obtained ethical clearance by the Rhodes University Research Ethics Proposal Review Committee (REPRC), and permission from Counselling Centre Manager and Director: Student affairs and Registrar.

The study will prioritise the rights and dignity of all clients involved. Firstly, you have the right to decline and/or exit the study at any time. Secondly, if you decide to opt out of the study you can still use the services of the counselling centre. Thirdly, if you decide to decline or withdraw from the study you will not be treated unfairly. Lastly, you will be allowed to continue treatment at the counselling centre based on your psychological functioning.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

You will receive six sessions of counselling, which is based on an evidence-based psychological treatment for trauma. You will also have an opportunity to talk about how you experienced the counselling. The research will contribute to the literature on evidence-based practices in South African psychology, with a specific focus on treating traumatic stress at a counselling centre in South Africa.

5. CONFIDENTIALITY

Any information that is obtained about this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of removing your personal details from documents and use a participant number for each person. All paper documents will be safeguarded at the personal office of the principal investigator, and electronic data will be encrypted and stored on Dropbox storage. These storage spaces will have controlled access. The principal investigator and research supervisor will have access to the Dropbox stored data. Counselling sessions will be video recorded, and interviews will be audio recorded, transcribed, and analysed. The principal investigator will oversee that these recordings are stored on a password protected Dropbox account. The information will also be encrypted and protected and only accessible to the principle investigator (Ms. Zuziwe G. Ndebele), research supervisor (Mr. Duane D. Booysen).The results of the research will be prepared for a master's degree thesis, academic publication and presentation at conferences. Your identity will remain anonymous.

6. PARTICIPATION AND WITHDRAWAL

You can choose to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and remain in the study. The investigator may withdraw you from this study if circumstances

arise which warrant doing so. You may be asked to withdraw from the study if your well-being is at risk during the study, not attending sessions, if you are a risk to any of the staff at the counselling centre.

7. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact Zuziwe G. Ndebele (Principal investigator) on 083 7000 277/ zgndebs@gmail.com or Mr. Duane D. Duane (Supervisor) on 046 603 8507 / d.booysen@ru.ac.za

8. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Prof Roman Tandlich at r.tandlich@ru.ac.za or Mr. Siyanda Manqele at s.manqele@ru.ac.za or 0466037727

Regards,

Ms. Zuziwe G. Ndebele (Principal Investigator)

Appendix E: Client Screening Questionnaire
Client Screening Questionnaire

Name of Screener: _____

Name of Prospective Participant: _____

Date & Time: _____

Referral Source: _____

Please invite the prospective participant to complete the following brief questionnaire to be considered for participation in the Prolonged Exposure Trauma research study. If the participant meets the criteria to participate, he/she must complete the PTSD Checklist for DSM-5 to screen for symptomology; this must only be done after the completion of the demographic questionnaire.

	Item	**Yes**	**No**
Section A			
1	Are you 18 years or older?		
2	Can you speak English, IsiXhosa and/or IsiZulu?		
3	Have you directly experienced or witnessed a traumatic event in your lifetime?		
4	Are you a student at Rhodes University?		
Section B			
5	Have you experienced hearing voices outside of your head/ believe that you are in grave danger/ people can hear your Thoughts in last 4 weeks?		

6	Have you experienced symptoms of increased energy/ had a decreased need for sleep/ your thoughts or mind is racing in the last 4 weeks?		
7	Are you experiencing current/on-going sexual or physical abuse with your partner?		
8	Have you ever had a traumatic brain injury? (been unconscious and in hospital due to a head injury)		
9	Do you have a neurodevelopmental disorder? (Autism or ADHD)		
10	Have you started using psychotropic medication in the last two months?		
11	Have you terminated psychotherapy for trauma in the last three months?		

*If you have answered **yes** to all questions in **section A** and **no** to all questions in **section B**, please complete the PTSD Checklist for DSM-5 for the final screening. If you have not obtained the required answers as stated above, please speak to the available principal researcher or administrator for further assistance at Rhodes University Counselling Centre.*

Appendix F: Client Screening Questionnaire

PTSD Checklist for DSM5 - PCL-5

Instructions: Below is a list of problems that people sometimes have in response to a traumatic experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month. **In the past month, how much were you bothered by:**	**Not at all**	**A little bit**	**Moderately**	**Quite a bit**	**Extremely**
1. Repeated, disturbing, and unwanted memories of the traumatic experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the traumatic experience?	0	1	2	3	4
3. Suddenly feeling or acting as if the traumatic experience were actually, happening again (as if you were actually back there reliving it)?	0	1	2	3	4
4. Feeling very upset when something reminded you of the traumatic experience?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the traumatic experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the traumatic experience?	0	1	2	3	4
7. Avoiding external reminders of the traumatic experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4

8. Trouble remembering important parts of the traumatic experience?	0	1	2	3	4
9 Having strong negative beliefs about yourself, other . people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	0	1	2	3	4

10. Blaming yourself or someone else for the traumatic experience or what happened after it?	0	1	2	3	4
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
12. Loss of interest in activities that you used to enjoy?	0	1	2	3	4
13. Feeling distant or cut off from other people?	0	1	2	3	4
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	0	1	2	3	4
15. Irritable behaviour, angry outbursts, or acting aggressively?	0	1	2	3	4
16. Taking too many risks or doing things that could cause you harm?	0	1	2	3	4
17. Being “super alert” or watchful or on guard?	0	1	2	3	4
18. Feeling jumpy or easily startled?	0	1	2	3	4
19. Having difficulty concentrating?	0	1	2	3	4
20. Trouble falling or staying asleep?	0	1	2	3	4

Appendix G: BDI-11

BDI-II

Name: _____ Marital Status: _____ Age: _____ Sex: _____

Occupation: _____ Education: _____

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness

0 I do not feel sad.
1 I feel sad much of the time.
2 I am sad all the time.
3 I am so sad or unhappy that I can't stand it.

2. Pessimism

0 I am not discouraged about my future.
1 I feel more discouraged about my future than I used to be.
2 I do not expect things to work out for me.
3 I feel my future is hopeless and will only get worse.

3. Past Failure

0 I do not feel like a failure.
1 I have failed more than I should have.
2 As I look back, I see a lot of failures.
3 I feel I am a total failure as a person.

4. Loss of Pleasure

0 I get as much pleasure as I ever did from the things I enjoy.
1 I don't enjoy things as much as I used to.
2 I get very little pleasure from the things I used to enjoy.
3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings

0 I don't feel particularly guilty.
1 I feel guilty over many things I have done or should have done.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.

6. Punishment Feelings

0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.

7. Self-Dislike

0 I feel the same about myself as ever.
1 I have lost confidence in myself.
2 I am disappointed in myself.
3 I dislike myself.

8. Self-Criticalness

0 I don't criticize or blame myself more than usual.
1 I am more critical of myself than I used to be.
2 I criticize myself for all of my faults.
3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes

0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.

10. Crying

0 I don't cry anymore than I used to.
1 I cry more than I used to.
2 I cry over every little thing.
3 I feel like crying, but I can't.

_____ Subtotal Page 1

Continued on Back

11. Agitation

0 I am no more restless or wound up than usual.
1 I feel more restless or wound up than usual.
2 I am so restless or agitated that it's hard to stay still.
3 I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest

0 I have not lost interest in other people or activities.
1 I am less interested in other people or things than before.
2 I have lost most of my interest in other people or things.
3 It's hard to get interested in anything.

13. Indecisiveness

0 I make decisions about as well as ever.
1 I find it more difficult to make decisions than usual.
2 I have much greater difficulty in making decisions than I used to.
3 I have trouble making any decisions.

14. Worthlessness

0 I do not feel I am worthless.
1 I don't consider myself as worthwhile and useful as I used to.
2 I feel more worthless as compared to other people.
3 I feel utterly worthless.

15. Loss of Energy

0 I have as much energy as ever.
1 I have less energy than I used to have.
2 I don't have enough energy to do very much.
3 I don't have enough energy to do anything.

16. Changes in Sleeping Pattern

0 I have not experienced any change in my sleeping pattern.

1a I sleep somewhat more than usual.
1b I sleep somewhat less than usual.

2a I sleep a lot more than usual.
2b I sleep a lot less than usual.

3a I sleep most of the day.
3b I wake up 1–2 hours early and can't get back to sleep.

17. Irritability

0 I am no more irritable than usual.
1 I am more irritable than usual.
2 I am much more irritable than usual.
3 I am irritable all the time.

18. Changes in Appetite

0 I have not experienced any change in my appetite.

1a My appetite is somewhat less than usual.
1b My appetite is somewhat greater than usual.

2a My appetite is much less than before.
2b My appetite is much greater than usual.

3a I have no appetite at all.
3b I crave food all the time.

19. Concentration Difficulty

0 I can concentrate as well as ever.
1 I can't concentrate as well as usual.
2 It's hard to keep my mind on anything for very long.
3 I find I can't concentrate on anything.

20. Tiredness or Fatigue

0 I am no more tired or fatigued than usual.
1 I get more tired or fatigued more easily than usual.
2 I am too tired or fatigued to do a lot of the things I used to do.
3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex

0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely.

_____ Subtotal Page 2

_____ Subtotal Page 1

_____ Total Score

Appendix H: BSI

BECK SUICIDE IDEATION SCALE

Name	Date	
Attitude towards living/dying	**Today**	**Time of severest crisis**
1. Wish to live: 0 - Moderate to strong; 1 - Weak; 2 - None		
2. Wish to die: 0 - None; 1 - Weak; 3 - Moderate to strong		
3. Balance of reasons for living and reasons for dying 0 - Reasons for living outweigh reasons for dying 1 - Reasons for living and dying about equal 2 - Reasons for dying outweigh reasons for living		
4. Desire to make active suicide attempt 0 - None; 1 - Weak; 3 - Moderate to strong		
5. Readiness to make passive suicide attempt 0 - Would take precautions to save life 1 - Would leave life/death to chance (e.g. careless crossing of busy street). 2 - Would avoid steps necessary to save/maintain life (e.g. diabetic ceases to take insulin)		

Characteristics of suicidal ideation/wish	Today	Time of severest crisis
6. Duration: 0 - brief, fleeting; 1 - longer periods; 2 - Continuous or almost continuous		
7. Frequency: 0 - rare, occasional; 1 - intermittent; 2 - Persistent or continuous		
8. Attitude towards ideation/wish 0 - Rejecting; 1 - ambivalent, indifferent; 2 - accepting		
9. Control over suicidal impulse 0 - Feels in control; 1 - Unsure of control; 2 - Feels out of control		
10. Deterrents to suicide attempt (e.g. family, religion, risk of surviving but with serious injury, irreversibility) List deterrents (if any) _____ 0 - Would not attempt suicide because of deterrent(s) 1 - Shows some concern about deterrents 2 - Minimal or no concern about deterrents		
11. Reason for contemplated attempt 0 - To manipuate environment, get attention, revenge 1 - Combination of 0 and 2 2 - Escape, release from distress, solve problems		

Appendix I: BAI

Beck Anxiety Inventory

	Not At All	Mildly but it didn't bother me much.	Moderately - it wasn't pleasant at times	Severely – it bothered me a lot
Numbness or tingling	0	1	2	3
Feeling hot	0	1	2	3
Wobbliness in legs	0	1	2	3
Unable to relax	0	1	2	3
Fear of worst happening	0	1	2	3
Dizzy or lightheaded	0	1	2	3
Heart pounding/racing	0	1	2	3
Unsteady	0	1	2	3
Terrified or afraid	0	1	2	3
Nervous	0	1	2	3
Feeling of choking	0	1	2	3
Hands trembling	0	1	2	3
Shaky / unsteady	0	1	2	3
Fear of losing control	0	1	2	3
Difficulty in breathing	0	1	2	3
Fear of dying	0	1	2	3
Scared	0	1	2	3
Indigestion	0	1	2	3
Faint / lightheaded	0	1	2	3
Face flushed	0	1	2	3
Hot/cold sweats	0	1	2	3
Column Sum				

Scoring - Sum each column. Then sum the column totals to achieve a grand score. Write that score here _____.

Appendix J: PSS-I-5

TRAUMA SCREEN

Many people are exposed to a disturbing or traumatic event at some point in their lives. These experiences can happen in any of the following ways:

1. Directly experiencing the event
2. Witnessing the event
3. Learning that the event happened to a close family member or close friend
4. Experiencing repeated or intense exposure to distressing details of the event (e.g. emergency workers collecting human remains)

Examples of traumatic events include: natural disasters, accidents, sexual assaults, physical assaults, combat, childhood sexual abuse, torture, or life-threatening illness.

Have you experienced such an event?

___Yes
___No

Please briefly describe the experience which is the **most distressing and the most haunting for you currently**.

If you are unsure, briefly describe the experience anyway:

_____

_____

_____

_____

Did this event included:

a. Actual or threatened death? Yes No
b. Actual or threatened serious injury? Yes No
c. Actual or threatened sexual violation Yes No

When did this event occur? _____

PSS-I-5

Questions should be about the most currently distressing trauma. Each item below should be asked in reference to the past month (if < 1 month since trauma, ask "Since the event…"). Probe all positive responses (e.g., "How often has this been happening?") following the instructions provided in the PSS-I-5 manual.

0	1	2	3	4
Not at all	Once a week or less/a little	2 to 3 times a week/somewhat	4 to 5 times a week/very much	6 or more times a week/severe

RE-EXPERIENCING (need one): [probe, then quantify]

____ 1. Have you had unwanted distressing memories about the trauma?

____ 2. Have you been having bad dreams or nightmares related to the trauma?

____ 3. Have you had the experience of feeling as if the trauma were actually happening again?

____ 4. Have you been very EMOTIONALLY upset when reminded of the trauma?

____ 5. Have you had PHYSICAL reactions when reminded of the trauma (e.g., sweating, heart racing)?

AVOIDANCE (Need one): [probe, then qualify]

____ 6. Have you been making efforts to avoid thoughts or feelings related to the trauma?

____ 7. Have you been making efforts to avoid activities, situations, or places that remind you of the trauma or that feel more dangerous since the trauma?

CHANGES IN COGNITION AND MOOD (Need two): [probe, then qualify]

____ 8. Are there any important parts of the trauma that you cannot remember?

____ 9. Have you been viewing yourself, others, or the world in a more negative way (e.g."I can't trust people," "I'm a weak person")?

____10. Have you blamed yourself for the trauma or for what happened afterwards? Have you blamed others that did not directly cause the event for the trauma or what happened afterwards?

____11. Have you had intense negative feelings such as fear, horror, anger, guilt or shame?

____12. Have you lost interest in activities you used to do?

____13. Have you felt detached or cut off from others?

____14. Have you had difficulty experiencing positive feelings?

PSS-I-5

0	1	2	3	4
Not at all	Once a week or less/a little	2 to 3 times a week/somewhat	4 to 5 times a week/very much	6 or more times a week/severe

INCREASED AROUSAL AND REACTIVITY (need two): [probe then quantify]

____15. Have you been acting more irritable or aggressive?

____16. Have you been taking more risks or doing things that might cause you or others harm (e.g., driving recklessly, taking drugs, having unprotected sex)?

____17. Have you been overly alert or on-guard (e.g., checking to see who is around you, etc.)?

____18. Have you been jumpier or more easily startled?

____19. Have you had difficulty concentrating?

____20. Have you had difficulty falling or staying asleep?

TOTAL SCORE (add items 1-20) = _____

DISTRESS AND INTERFERENCE

____21. How much have these difficulties been bothering you?

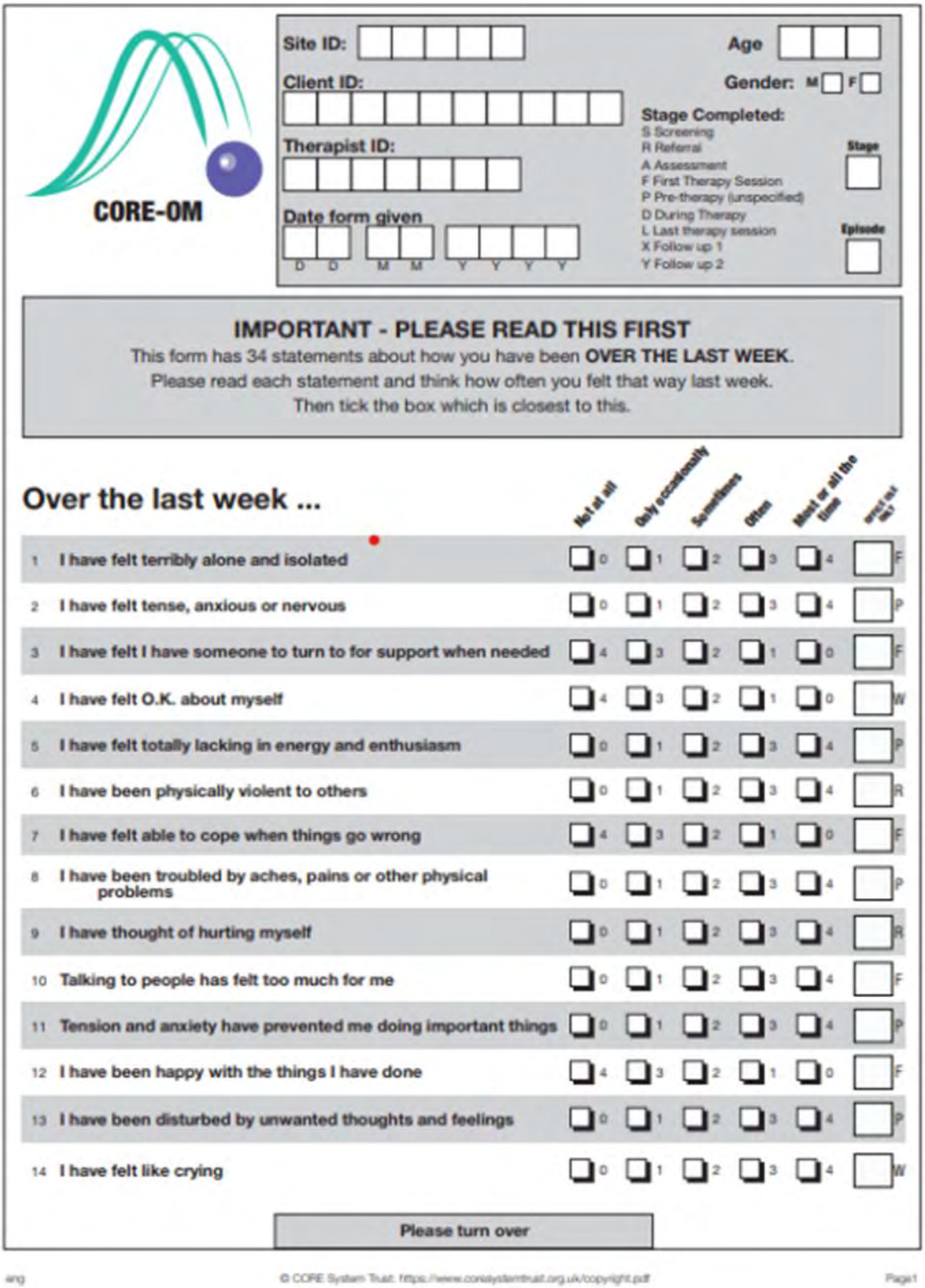
____22. How much have these difficulties been interfering with your everyday life (e.g. relationships, work, or other important activities)?

SYMPTOM ONSET AND DURATION

23. How long after the trauma did these difficulties begin? [circle one]
    a. Less than 6 months
    b. More than 6 months

24. How long have you had these trauma-related difficulties? [circle one]
    a. Less than 1 month
    b. More than 1 month

Appendix K: CORE-OM



CORE-OM

Site ID: Age

Client ID: Gender: M F

Therapist ID:

Date form given D D M M Y Y Y Y

Stage Completed:
S Screening
R Referral
A Assessment
F First Therapy Session
P Pre-therapy (unspecified)
D During Therapy
L Last therapy session
X Follow up 1
Y Follow up 2

Stage

Episode

IMPORTANT - PLEASE READ THIS FIRST

This form has 34 statements about how you have been **OVER THE LAST WEEK**.
Please read each statement and think how often you felt that way last week.
Then tick the box which is closest to this.

Over the last week ...	Not at all	Only occasionally	Sometimes	Often	Most or all the time	
1 I have felt terribly alone and isolated	0	1	2	3	4	
2 I have felt tense, anxious or nervous	0	1	2	3	4	
3 I have felt I have someone to turn to for support when needed	4	3	2	1	0	
4 I have felt O.K. about myself	4	3	2	1	0	
5 I have felt totally lacking in energy and enthusiasm	0	1	2	3	4	
6 I have been physically violent to others	0	1	2	3	4	
7 I have felt able to cope when things go wrong	4	3	2	1	0	
8 I have been troubled by aches, pains or other physical problems	0	1	2	3	4	
9 I have thought of hurting myself	0	1	2	3	4	
10 Talking to people has felt too much for me	0	1	2	3	4	
11 Tension and anxiety have prevented me doing important things	0	1	2	3	4	
12 I have been happy with the things I have done	4	3	2	1	0	
13 I have been disturbed by unwanted thoughts and feelings	0	1	2	3	4	
14 I have felt like crying	0	1	2	3	4	

Please turn over

eng

Page1

Over the last week ...

		Not at all	Only occasionally	Sometimes	Often	Most or all the time		
15	I have felt panic or terror	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		P
16	I made plans to end my life	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		R
17	I have felt overwhelmed by my problems	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		W
18	I have had difficulty getting to sleep or staying asleep	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		P
19	I have felt warmth or affection for someone	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0		F
20	My problems have been impossible to put to one side	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		P
21	I have been able to do most things I needed to	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0		F
22	I have threatened or intimidated another person	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		R
23	I have felt despairing or hopeless	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		P
24	I have thought it would be better if I were dead	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		R
25	I have felt criticised by other people	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		F
26	I have thought I have no friends	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		F
27	I have felt unhappy	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		P
28	Unwanted images or memories have been distressing me	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		P
29	I have been irritable when with other people	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		F
30	I have thought I am to blame for my problems and difficulties	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		P
31	I have felt optimistic about my future	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0		W
32	I have achieved the things I wanted to	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0		F
33	I have felt humiliated or shamed by other people	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		F
34	I have hurt myself physically or taken dangerous risks with my health	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4		R

THANK YOU FOR YOUR TIME IN COMPLETING THIS QUESTIONNAIRE