A MIXED METHODS STUDY OF THE IMPLEMENTATION AND EFFECTIVENESS OF MASSED-PROLONGED EXPOSURE THERAPY FOR RAPE-RELATED PTSD AND DEPRESSION AMONG UNIVERSITY STUDENTS

Submitted by

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Declaration

I, Jessica Maria Louw, 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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To the participants of this study, it was an honour to bear witness to your incredible bravery and determination, thank you for trusting me to do so. I dedicate this research to you. You deserve peace, may you find it more and more.

"People rarely talk about how painful it is to come alive again. To tell the stories you were forced to bury. To name the things that made you shut down. To give your anger and grief the space to breathe. Few take this path – but to those who do, peace to you"

– Author unknown

Abstract

The prevalence of rape, post-traumatic stress disorder (PTSD) and depression among South African university students forms a complex triad of influence, further compounded by South Africa's sociocultural and economic intricacies. Research on effective trauma-focussed therapies (TFTs) for universities, among other contexts in the Global South, is scarce. University mental health resources are constrained, with only 27.3% of South African students with PTSD receiving psychological treatment. This mixed-methods study evaluates the effectiveness of Massed-Prolonged Exposure Therapy (Massed-PE) for treating rape-related PTSD and comorbid depression among South African university students and asks whether these participants perceive Massed-PE to be acceptable, feasible and appropriate to implement. Baseline screening assessments confirmed PTSD and depression symptoms among participants (n=3). Similar assessments were conducted regularly during- and at post-intervention. Implementation measures and semi-structured interviews were also administered at post-intervention. One participant dropped out after the second of ten sessions. Both remaining participants no longer met the diagnostic criteria for PTSD at post-intervention. One of these participants no longer met the diagnostic criteria for comorbid depression, and the other demonstrated a decrease in her depressive symptoms, just reaching the clinical cut-off. Quantitatively, participants experienced the therapy as acceptable and feasible, but differed on its appropriateness. Qualitative insights lent contextually valuable nuance to these findings. This study provides preliminary results in support of the effectiveness and implementability of Massed-PE. It underscores the importance of implementation research to bridge the know-do gap in the evidence base for treating rape-related PTSD and comorbid depression in university contexts, whilst offering insights which may be applied more broadly to PTSD treatment in resource-constrained settings.

Keywords: Post-traumatic stress disorder, depression, rape, massed-prolonged exposure therapy, South African university students, resource-constrained settings.

List of Abbreviations

ACC	Anterior cingulate cortex
AIM	Acceptability of Intervention Measure
APA	American Psychiatric Association
BEP	Brief Eclectic Psychotherapy
CBT	Cognitive Behavioural Therapy
CPT	Cognitive Processing Therapy
CPTSD	Complex Post-Traumatic Stress Disorder
CT	Cognitive Therapy
dlPFC	Dorsolateral prefrontal cortex
DSM	Diagnostic and Statistical Manual of Mental Disorders
EPT	Emotional Processing Theory
EBTs	Evidence-based treatments
EMDR	Eye Movement Desensitisation and Reprocessing Therapy
FIM	Feasibility of Intervention Measure
HIC	High-income country
IAM	Intervention Appropriateness Measure
ICD	International Classification of Diseases
PCL-5	Post-Traumatic Stress Disorder Checklist for DSM-5
PDS-5	Post-Traumatic Stress Disorder Diagnostic Scale for DSM-5
PE	Prolonged Exposure Therapy
PHQ-9	Patient Health Questionnaire-9
PTSD	Post-traumatic stress disorder
RCT	Randomised controlled trial
RU-HREC	Rhodes University Human Ethics Committee

SAM	Situationally accessible memory system
SAPS	South African Police Service
SASH	South African Stress and Health Study
SCED	Single case experimental design
SCED-MM	Mixed methods single case experimental design
SUDS	Subjective units of distress scale
TFTs	Trauma-focussed therapies
U.S.	United States
VA	Veterans Affairs
VAM	Verbally accessible memory system
vmPFC	Ventromedial prefrontal cortex
WHO	World Health Organization

Brief Glossary

Imaginal exposure	Imaginal exposure is a process during which the client visualises 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 an intervention can be performed relatively easily or conveniently, given the existing resources and circumstances.
Acceptability	The perception among stakeholders that an intervention is agreeable, satisfactory, or palatable based on their experiences, values, or expectations
Appropriateness	The perceived fit, relevance, or compatibility of an intervention for a given setting, population, or problem

Contents

Declaration i
Acknowledgements ii
Abstract iii
List of Abbreviations iv
Brief Glossary vi
Contents vii
List of Figures xi
List of Tables xii
Chapter 1 Introduction 1
1.1 Psychological Trauma in South Africa 1
1.2 PTSD Among South African University Students 2
1.3 Trauma-Focused Therapy for PTSD 3
1.4 Massed-PE 3
1.5 Problem Statement and Rationale 4
1.6 Aims of the Study 4
1.6.1 Research Hypothesis 5
1.6.2 Research Questions 5
1.7 Value of the Study 5
1.8 Thesis Outline 5
Chapter Summary 7
Chapter 2 Psychological Theories of PTSD 8
Chapter Overview 8
2.1 Brief History of Psychological Theories of PTSD 8
2.2 Emotional Processing Theory 10
2.3 The Fear Structure of PTSD 10
2.4 Modifying the Fear Structure of PTSD 11
2.5 Habituation 11
2.6 Massed-Prolonged Exposure Therapy for PTSD 12
2.7 Treatment Challenges and Limitations 13
2.8 Theoretical Prediction 14
Chapter Summary 14
Chapter 3 Literature Review 16
Chapter Overview 16
3.1 Brief History of Psychological Trauma 16
3.2 Clinical Definition of PTSD 17
3.3 Diagnostic Debates 18

3.4 Trauma and Culture....18
3.5 Neurobiology of PTSD....19
3.6 Prevalence of PTSD, Rape-Related PTSD and Depression....20
3.7 Trauma-Focused Treatment for PTSD....23
3.8 Massed-PE as a First-Line Treatment for PTSD....23
3.9 Massed-PE for University Students in South Africa....26
3.10 Adaptations to Address PTSD Treatment Gaps....27
Chapter Summary....28
Chapter 4 Methodology and Design....29
Chapter Overview....29
4.1 Aim of the Study....29
4.2 Single-Case Experimental Design....29
4.3 Features of SCED....30
4.3.1 Specification of Treatment Focus....31
4.3.2 Continuous Assessment....31
4.3.3 Separate Phases....31
4.3.4 Stability of Performance....31
4.4 Sampling in SCED....32
4.4.1 Participant Recruitment....32
4.4.2 Inclusion and Exclusion Criteria....32
4.4.3 Sample Size....32
4.5 SCED Designs....33
4.5.1 A-B-A Design....33
4.5.2 Rationale for A-B-A Design....33
4.6 Data Collection....33
4.6.1 Time 1: Pre-Intervention....33
4.6.2 Time 2: During Intervention....34
4.6.3 Time 3: Post-Intervention....35
4.7 Data Analysis....35
4.7.1 Visual Analysis....36
4.7.2 Thematic Analysis....36
Chapter Summary....36
Chapter 5 Intervention: Massed-PE....38
Chapter Overview....38
5.1 Intervention Overview....38
5.1.1 Session 1: Treatment Rationale and Trauma Interview....38
5.1.2 Session 2: In Vivo Exposure Planning....39

5.1.3 Session 3: Initiating Imaginal Exposure 39
5.1.4 Intermediate Sessions (4-9): Continued Exposure and Processing 40
5.1.5 Session 10: Review and Relapse Prevention 40
5.2 Treatment Fidelity 41
5.3 Ethical Considerations 41
Chapter Summary 42
Chapter 6 Massed-PE Case Studies 43
Chapter Overview 43
6.1 Nathi 43
6.1.1 Case Introduction 43
6.1.2 Presenting Complaints 44
6.1.3 Case Conceptualisations 46
6.1.4 Meaningful Developments During Therapy 47
6.2 Lindi 48
6.2.1 Case Introduction 48
6.2.2 Presenting Complaints 49
6.2.3 Case Conceptualisation 50
6.2.4 Meaningful Developments During Therapy 52
6.3 Zibu 52
6.3.1 Case Introduction 52
6.3.2 Presenting Complaints 53
6.3.3 Case Conceptualisation 54
Chapter Summary 55
Chapter 7 Results 56
Chapter Overview 56
7.1 Quantitative Results 56
7.1.1 Visual Inspection 58
7.1.3 Implementation Measures 65
7.2 Qualitative Results 67
7.2.1 Nathi 68
7.2.2 Lindi 75
Chapter Overview 81
Chapter 8 Discussion 82
Chapter Overview 82
8.1 Summary 82
8.2 Intervention Effectiveness 82
8.3 Implementation outcomes: Feasibility, Acceptability and Appropriateness 85

8.3.1 Implementation Measures 86
8.3.2 Qualitative Findings: Perceptions and Experiences of Massed PE 86
8.1.3 Integrated Insights 93
Chapter Summary 94
Chapter 9 Limitations, Recommendations and Conclusion 95
Chapter Overview 95
9.1 Therapist Reflections 95
9.2 Limitations of the Study 95
9.3 Implications of the Study 96
9.4 Implementation Recommendations 96
9.5 Value of the Study 97
9.6 Conclusion 97
References 99
Appendices 127

List of Figures

Figure 6.1 *Visual representation of Nathi's case conceptualisation* 46
Figure 6.2 *Visual representation of Lindi's case conceptualisation* 51
Figure 7.1 *Nathi: PCL-5 Between-Condition Scores*..59
Figure 7.2 *Nathi: PHQ-9 Between-Condition Scores*...59
Figure 7.3 *Nathi: PCL-5 Within-Condition Scores*..60
Figure 7.4 *Nathi: PHQ-9 Within-Condition Scores*...60
Figure 7.5 *Lindi: PCL-5 Between-Condition Scores* 61
Figure 7.6 *Lindi- PHQ-9 Between-Condition Scores* 61
Figure 7.7 *Lindi: PCL-5 Within-Condition Scores* 62
Figure 7.8 *Lindi: PHQ-9 Within-Condition Scores* 62
Figure 7.9 *Across Participants: PCL-5 Between-Condition Scores*.......................................63
Figure 7.10 *Across participants: PHQ-9 Between-Condition Scores* 64
Figure 7.11 *Across Participants: PCL-5 Within-Condition Scores*..64
Figure 7.12 *Across Participants: PHQ-9 Within-Condition Scores*.......................................65
Figure 7.13 *Feasibility of Intervention Measure (FIM)*...66
Figure 7.14 *Intervention Appropriateness Measure (IAM)* 66
Figure 7.15 *Acceptability of Intervention Measure (AIM)*..67

List of Tables

Table 7.1 *Sample Characteristics of Participants* 57
Table 7.2 *Key: Implementation Measures Likert Scale* 65
Table 7.3 *Themes and Sub-Themes: Nathi* 68
Table 7.4 *Themes and Sub-Themes: Lindi* 75

List of Appendices

Appendix A PDS-5 127
Appendix B PHQ-9 131
Appendix C PCL-5 132
Appendix D Implementation Measures 133
Appendix E Semi-structured Post-Intervention Interview Schedule 134
Appendix F Trauma Interview 135
Appendix G In Vivo Exposure Hierarchy 140
Appendix H Ethical Approval from the RU-HREC 141
Appendix I Participant Informed Consent Form 142

Chapter 1
Introduction

1.1 Psychological Trauma in South Africa

South Africa's unique trauma history recreates itself in the present, manifesting in endemic levels of trauma exposure and post-traumatic stress disorder (PTSD; Atwoli et al., 2013; Kaminer et al., 2008; Stevenson et al., 2023; Williams, 2007). South Africa's collective psyche is scarred by colonial- and apartheid-legacy-violence, which remains largely unprocessed. This trauma, complicated by socioeconomic inequality and depravity, is transferred intergenerationally and reenacted at all levels of society, from systemic oppression to gang violence, to domestic and gender-based violence (Atwoli et al., 2013; Hamber, 2009; Stevenson et al., 2023). Research indicates that close to 75% of South African adults (n=4315) have been exposed to one or more traumatic event across their lifetime, with 55.6% reporting multiple traumas (Atwoli et al., 2013, 2015; Benjet et al., 2016; Williams, 2007). These high rates of trauma exposure, with increased risk of PTSD, represent a significant public health concern in South Africa (Atwoli et al., 2013). Nonetheless, only 14% of adults living with PTSD in low-and middle-income countries (LMICs) like South Africa ever access mental healthcare during their lifetime (Thornicroft et al., 2018). Only 5% of these service users receive adequate psychotherapy (Stein et al., 2023).

Considered by some to be the rape capital of the world, rape is central to South Africa's trauma landscape (Naidoo, 2013; Rapanyane, 2021). Crime statistics indicate 41 739 rape cases reported in South Africa between 2021 and 2022 (South African Police Service [SAPS], 2022). However, this is considered a major underrepresentation with findings that as few as 1 in 25 rapes are reported to SAPS (Abrahams & Gevers, 2017; Machisa et al., 2011). Rape survivors are more vulnerable to developing PTSD than survivors of other traumas (Breslau et al., 2013; Yehuda et al., 2015). Across the world, rape trauma poses the highest conditional risk (19%) and accounts for the longest mean duration of PTSD (Kessler et al., 2017). In South Africa rape is the trauma most strongly associated with a PTSD diagnosis in women (Kaminer et al., 2008). Sepeng and Makhado (2018) report a 74.5% prevalence of PTSD among South African rape survivors in one province. Rape stigma, understood to develop at the intersection of gender- and economic inequality, is a necessary consideration in determining the prognosis and treatment of rape-related PTSD in South Africa (Jewkes et al., 2022; Mgoqi-Mbalo et al., 2017).

Depression is commonly comorbid with PTSD (Rytwinski et al., 2013), especially among rape survivors (Dworkin, 2020; Zinzow et al., 2012). Nothling et al. (2022) found that, along with experiences of rape stigma, depressive symptoms, were the most salient predictors of PTSD symptom severity among South African rape survivors. The literature suggests that in trauma survivors, depressive symptoms develop secondary to PTSD. Furthermore, depressive symptoms have repeatedly been successfully treated as secondary outcomes in evidence-based treatments (EBTs) for PTSD (Dell et al., 2023; McLean et al., 2017; Rauch et al., 2021). However, findings that severe comorbid depression may inhibit PTSD treatment adherence warrant attention (Bryant et al., 2003; Nixon & Nearmy, 2011)

1.2 PTSD Among South African University Students

The complexities of South Arica's trauma landscape are played out on its university campuses, where rape is prevalent. At one of South Africa's large residential universities, 90% of students (n=1337) reported trauma exposure across their lifetime (McGowan & Kagee, 2013). In a survey of 17 South African universities, a 36% prevalence rate was found for PTSD among students (Bantjes et al., 2023). Between 20% and 25% of women report sexual victimisation during their time at South African universities (Makhaye et al., 2023). This is likely an underrepresentation, given the reluctance among university students to report sexual violence to authorities (Macleod et al., 2018; Makhaye et al., 2023). As microcosms of the broader society, South Africa's layered social dynamics manifest on its university campuses, where gendered power relations and rape stigma contribute to a rape culture, further complicated by excessive alcohol use (Macleod, 2018; Makhaye et al., 2023). Rhodes University is no exception (De Klerk et al., 2007). A decade of silent protest on campus, culminating in the #RUreferncelist activism of 2016, suggests that sexual violence is an ongoing concern for Rhodes University students (Macleod et al., 2018).

It is clear from these findings that South African university students are at risk of developing PTSD, with rape-related PTSD potentially accounting for a significant portion of these cases. High comorbidity rates of PTSD with conditions such as depression, anxiety and suicidal ideation among these students underscore the importance of access to effective mental health care on university campuses (Bantjes et al., 2016). However, a significant treatment gap remains (Brown, 2018). Bantjes et al. (2020) found that only 18.1% of students secured mental health care in a year, whilst only 28.9% of those with mental disorders received treatment. Greater exclusion of historically marginalised groups was observed. The resulting detriments across academic, inter- and intra-personal functioning are a major

opportunity cost at this formative life stage (Bantjes, 2020; Brown, 2018).

1.3 Trauma-Focused Therapy for PTSD

The American Psychiatric Association (APA, 2013) recognises various empirically validated trauma-focused therapies (TFTs) for treating PTSD. Among these are the more traditional Cognitive Behavioural Therapy (CBT) and innovations such as Eye Movement Desensitisation and Reprocessing therapy (EMDR).

A version of CBT, Prolonged exposure therapy (PE) is a well-established first-line treatment for PTSD (Foa et al., 2019; McLean & Foa, 2024). PE is a manualised 8-15 session therapy informed by Emotional Processing Theory (Foa & Kozak, 1986; Rauch & Foa, 2006), in which individuals are assisted in confronting their traumatic memories. It comprises 4 components: repeated in vivo and imaginal exposures, education about common trauma sequelae and emotional processing (Foa et al., 2019). PE has been rigorously evaluated including through numerous clinical trials across a variety of countries, cultures, trauma populations, and comorbid conditions (Burton et al., 2022; Ghafoori, 2018; McLean & Foa, 2024; van den Berg et al., 2015). It is considered the leading PTSD treatment in the United States (U.S.; Foa et al., 2019; McLean & Foa, 2024). Yet implementation research in Global South contexts, such as South Africa, is limited (Booysen & Kagee, 2020; McLean & Foa, 2024).

1.4 Massed-PE

Adaptations of standard PE have sought to address various clinical and population concerns, such as treatment dropout rates, which average 22% for standard PE (Lewis et al., 2020; McLean & Foa, 2024). Massed-PE, with sessions held daily for two weeks as opposed to the standard weekly sessions, has shown promising results, reporting low dropout rates (Levinson et al., 2022; Foa et al., 2018; Peterson et al., 2023; Rauch et al., 2021). Massed-PE limits dropouts by reducing demotivation, avoidance and between-session distraction (Sherrill et al., 2022; Wright et al., 2023). Moreover, Massed-PE has been found to be noninferior to standard PE in treating PTSD and depression symptoms (Dell et al., 2023; Foa et al., 2018; Peterson et al., 2023).

University counselling centres are an essential and, in Global South countries like South Africa, often singular provider of mental health care to students (Cilliers et al., 2011). Despite resource constraints, these centres are tasked with addressing a broad range of conditions and struggle to effectively meet these ever-growing needs. The result is lengthy

waiting lists with limited session offerings (Bonar, 2015; Pedrelli et al., 2014; Watkins et al., 2012). This punctuates the need for effective psychotherapeutic interventions to better ensure efficient service provision and “value for money” in terms of proven outcomes.

University counselling centres tend to default to weekly, in-person delivery of traditional psychotherapeutic modalities, which do not effectively or efficiently target specific conditions, like PTSD (Sokol, 2009; Abrams, 2022). Resistance to EBTs such as Massed-PE among centre staff stem from concerns of retraumatisation and dropout risks (Bonar, 2015; Foa et al., 2013). However, research indicates that transient symptom increases are routine and do not impede the efficacy of PE, with insignificant symptom increases by the end of treatment and no relation to treatment non-completion (Foa et al., 2002; Keller et al., 2014; Larsen et al., 2016). PE is safe to use and tolerated comparably to other CBT variations (Riggs et al., 2006). Massed-PE offers a novel approach to address therapeutic challenges and practical constraints.

1.5 Problem Statement and Rationale

The prevalence of rape, PTSD and depression among university students form a mutually reinforcing psychopathological triad within the broader context of South Africa’s complex sociocultural and economic reality. Yet, access to effective TFTs for addressing this burden among students is severely limited. This is attributed to resource constraints and a sparse knowledge base on contextually relevant implementation of TFTs. The objective of Massed-PE is to deliver an equivalently substantial exposure therapy, despite fast-tracking the process, with the intention of reducing dropout rates whilst maintaining improved outcomes for PTSD and its common comorbidities. As such, it is essential to assess the effectiveness, feasibility, acceptability and appropriateness of Massed-PE in treating comorbid rape-related PTSD and depression among university students.

1.6 Aims of the Study

The broad aim of the study is to investigate the implementation of massed-prolonged exposure therapy in terms of its effectiveness, feasibility, acceptability and appropriateness as a treatment for rape-related PTSD and depression among university students in the South African context. The following research hypothesis and questions guided the proposed study:

1.6.1 Research Hypothesis

- Massed-prolonged exposure therapy will improve symptoms of rape-related PTSD and comorbid depression among university students in South Africa.

1.6.2 Research Questions

- Is massed-prolonged exposure therapy an effective treatment for rape-related PTSD and comorbid depression in university students in South Africa?
- Is massed-prolonged exposure therapy perceived as feasible, acceptable and appropriate to implement by university students seeking treatment for rape-related PTSD and comorbid depression in South Africa?

1.7 Value of the Study

This study investigates a vital and underexplored niche within the TFT knowledge base. The prevalence of rape, PTSD and depression among university students forms a complex triad of influence, further convoluted by South Africa's sociocultural and economic intricacies. Implementation research in real-world settings is desperately needed to capture these nuances and bridge the know-do gap that currently exists in the evidence-base for treating this population. This study is the first of its kind to assess the effectiveness and perceived feasibility, acceptability and appropriateness of Massed-PE in treating rape-related PTSD and comorbid depression amongst university students in South Africa, an important step in addressing the above-mentioned challenges. Furthermore, the study's qualitative component offers a unique opportunity to add dimensionality to its findings, increasing their contextual validity.

This study works to reduce this know-do gap to address or mitigate resource-constraints and other practical limitations on access to effective TFTs among South Africa's university students. This may offer insights which can be applied more broadly to low-resourced settings, contributing to the wider discourse on TFTs in the Global South. The intention is that this research will prepare the way for further study and implementation of Massed-PE in these underrepresented contexts, ultimately improving access to EBTs.

1.8 Thesis Outline

Chapter 1 introduces the research context, problem statement and rationale, aims of the study, research hypothesis, research questions, and concludes with the value of the study.

Chapter 2 presents a brief history of psychological theories of PTSD and discusses EPT, the theoretical framework underpinning the Massed-PE intervention, which is the subject of this study. The four key components of Massed-PE are introduced. Treatment challenges and limitations are addressed, followed by an EPT-informed theoretical outcome prediction for the Massed-PE intervention.

Chapter 3 explores the historical context as well as the clinical and neurobiological understandings of PTSD in the extant literature, including ongoing diagnostic and cultural debates. The prevalence and contextual complexities of PTSD, rape-related PTSD and comorbid depression within the South African context, and specifically among South African university students, is unpacked. First-line TFTs for PTSD are described with a focus on the PE and Massed-PE literature in terms of the above-mentioned populations. Finally, promising novel adaptations in PE and Massed-PE implementation are explored.

Chapter 4 describes and provides a rationale for the research design and corresponding methodology used to examine the hypothesis and questions that arise from the study’s aim. The intended methodological elements, including sampling, data collection and analysis, are explained for this mixed methods study's quantitative and qualitative components.

Chapter 5 provides a session-by-session overview of the Massed-PE intervention structure and agenda. The issue of treatment fidelity is discussed, followed by ethical considerations.

Chapter 6 offers an idiographic overview of the three study participants. For each participant, their history, including trauma history, is briefly introduced. This is followed by an analysis of their presenting complaints. Case conceptualisations are provided according to EPT. Lastly, meaningful developments during therapy are discussed.

Chapter 7 presents the mixed methods results of the Massed-PE intervention. A visual inspection with individual and across-participant analysis of the quantitative data is provided. Thereafter the results of the implementation measures are reported. Findings from a thematic analysis of the qualitative data are presented.

Chapter 8 provides a discussion of the quantitative and qualitative results of this study, in relation to the extant literature to address the study’s research hypothesis and questions.

Chapter 9 presents the therapist’s reflections along with the study’s limitations and

implications, recommendations and value. Lastly, the conclusion is presented.

Chapter Summary

Chapter 1 introduced the study's context and rationale. This informed the aim of this study, to assess the effectiveness and feasibility of Massed-PE for treating rape-related PTSD and depression amongst South African university students.

Chapter 2
Psychological Theories of PTSD

Chapter Overview

Chapter 2 provides a brief historical overview of the development of psychological theories of PTSD. This is followed by an examination of EPT, the theoretical framework informing this study. The operationalisation of EPT into Massed-PE, a shorter-duration version of standard PE, a four-component manualised psychotherapeutic intervention, is then described. Thereafter, treatment challenges and limitations are addressed. Lastly, an EPT-informed theoretical outcome prediction for the Massed-PE intervention is made.

2.1 Brief History of Psychological Theories of PTSD

Learning theories provided foundational understandings of fear and trauma (Foa & Rothbaum, 1998). Mowrer (1960) integrated principles of classical and operant conditioning, from the behavioural school of thought, in developing his *Two-Factor Theory*. Classical conditioning involves learning through association. For instance, a neutral stimulus becoming associated with something frightening. After this pairing, the formerly neutral stimulus alone can trigger a fear response (Pavlov, 1955). For example, if a person is bitten by a dog, they may start to feel fear whenever they see a dog, because the sight of the dog (previously neutral) has been linked with pain. Operant conditioning involves learning based on the consequences of behaviour (Skinner, 1938). In this case, if the person avoids dogs and consequently feels relief from their fear, that avoidance behaviour is negatively reinforced. The removal of an unpleasant feeling (fear) makes the person more likely to keep avoiding dogs. Mowrer (1960) proposed that fear develops through learning by association and is maintained because avoiding the fear-inducing situations (trauma reminders) is rewarded by a reduction in distress, however, it prevents the fear from being unlearned (Foa & Rothbaum, 1998).

Learning theories were instrumental in treatment understandings, particularly exposure therapy, by attributing the maintenance of PTSD symptoms to the avoidance of trauma reminders (Brewin et al., 2003; Foa & Rothbaum, 1998; Wolpe, 1958). However, learning theories primarily focused on observable behaviour and external stimuli, offering limited insight into the internal cognitive and emotional experiences of trauma survivors (Brewin et al., 1996; Brewin et al., 2003).

Information-processing theories built on learning theory foundations by incorporating

cognitive mechanisms. An architecture to cognitively represent the encoding, storage, recall and appraisal of trauma experiences was proposed. It was suggested that biases in information processing systems, namely attention, interpretation and memory are instrumental in the development and maintenance of PTSD (Beck & Clark, 1997; Ellis, 1977; Mathews & MacLeod, 1987). These distortions lead to excessive processing of threatening cues resulting in over-representation of threat-related information in cognition and an exaggerated subjective sense of danger as well as diminished belief in one's coping capacity in the face of threat (Beck et al., 1985; Chemtob et al., 1988; Foa & Kozak, 1986; Litz & Keane, 1989).

Drawing on information processing principles, *Ehlers & Clark's Cognitive Model of PTSD* proposes that PTSD develops when trauma information is organised to produce a current sense of threat despite the historical nature of the traumatic event (2000). This is facilitated by cognitive distortions from the compounding influences of existing autobiographical information, fragmented or poorly integrated trauma memories, and negative interpretations of the event, its aftermath and assumed future consequences.

Social-cognitive theories highlighted the longer-term and broader socio-emotional impact of trauma on an individual (Brewin & Holmes, 2003). Following a traumatic experience, the psyche attempts to integrate the resultant disruptions to an individual's interpretive frameworks, or schemas (Epstein, 1991). Through his *Stress Response Theory,* Horowitz (1976) described the distress of oscillating between intrusion and avoidance of this trauma information. Building on this, models such as *Shattered Assumptions Theory* emphasised the post-trauma challenge to specific core beliefs about the safety of the world, the meaningfulness of life, and the individual's own self-worthiness (Janoff-Bulman, 1992).

Contemporary developments in models of PTSD include *Dual Representation Theory* (Brewin et al., 1996). Here, information processing and social-cognitive perspectives are integrated with neuropsychological evidence of anatomically separate memory systems (Brewin, 2001; Brewin & Holmes, 2003). This has contributed to increasingly comprehensive understandings of PTSD, linking cognitive and emotional experiences with their underlying neural processes. According to Brewin et al. (1996), the Verbally Accessible Memory (VAM) and Situationally Accessible Memory (SAM) operate in parallel to process traumatic experiences. VAM encodes consciously processed, voluntarily retrievable information. This information is situated temporally within the personal context but limited in volume given diversion of attention to the critical threat. SAM encodes more detailed, lower-level

perceptual memories including of physiological responses. This is the information not consciously attended to during the traumatic incident. An underrepresentation in VAM of the trauma-related data encoded in SAM is understood to perpetuate PTSD.

2.2 Emotional Processing Theory

Emotional processing theory (EPT) forms the theoretical foundation of PE therapy, the subject of this study. Grounded in evidence from learning theories, information processing models, cognitive models, and cognitive behavioural therapy, EPT has shaped understandings and operationalisations of PTSD, and its effective treatments, along with other anxiety-related disorders (Foa & Kozak, 1986). For recovery, EPT requires both cognitive and emotional engagement with the trauma memory (Rauch & Foa, 2006).

Lang's (1977, 1979) *Bio-Informational Theory* was especially seminal to EPT (Foa & Kozak, 1986). Lang (1977) proposed that emotions, with a particular focus on fear, are cognitively represented in memory as associative networks comprising three elements. These include: (1) stimulus information (details about what triggered the fear), (2) response information (physiological and behavioural responses), and (3) meaning information (interpretations of the stimulus and response information). Rather than abstract concepts, these emotional experiences are encoded as action-oriented programmes such that when one aspect of the fear structure is activated, a fear response is triggered in the entire network. In adaptive fear structures, representing a realistic threat, this facilitates escape from dangerous situations. However, fear structures can also be maladaptive (Foa & Kozak, 1985, 1986).

2.3 The Fear Structure of PTSD

Applying EPT to PTSD, Foa and Rothbaum (1998) describe trauma memories encoded as pathological fear structures which do not accurately represent reality. These comprise excessive stimulus elements, which are overgeneralised and inaccurately associated with danger. Excessive response elements, which interfere with natural recovery – such as an overreactive physiological fear response, and avoidance behaviours – are the second component. The third element of the fear structure is erroneous interpretation of meaning in the links between these response and stimulus elements. This invariably involves the basic dysfunctional beliefs that: a) the world is entirely threatening, and b) the self is entirely incompetent. These interconnected maladaptive elements form a rigid, avoidance-promoting fear structure which consequently resists modification and sustains the distorted experiences characteristic of PTSD (Foa & Riggs, 1993; Foa & Rothbaum, 1998).

2.4 Modifying the Fear Structure of PTSD

Stimuli activation of the psychopathological fear structure elicits PTSD symptoms, however, this is also the pathway to healing (Rauch & Foa, 2006). Modification of the pathological elements of the fear structure, based on Piaget's cognitive development theory, is the mechanism of emotional processing (Foa & Rothbaum, 1998). This requires a) that the fear structure be activated through engagement with fear-arousing content, termed imaginal and in vivo exposure, and b) that information incompatible with these pathological elements be incorporated (Foa & Kozak, 1986). Systematic avoidance of trauma information by traumatised individuals prohibits this process from occurring naturally through routine interactions (Foa & Cahill, 2001).

Activation of the fear structure may occur through in vivo exposure or imaginal exposure, though research shows a combination of both techniques to be most effective in treating PTSD (Foa et al., 1980). During these processes, it is essential to monitor the extent of emotional engagement, as indicated by the intensity of the individual's physiological distress reactions. To allow optimal levels of fear structure activation (Foa & Kozak, 1986; Rauch & Foa, 2006).

Rather than changing the existing fear structure, modification involves forming a competing non-pathological structure that becomes more dominant across repeated exposures (Foa & McNally, 1996). Both the erroneous cognitions and the stress-related response underpinning PTSD are modified. This manifests as improved organisation of the trauma narrative, the distinction between remembering and reliving and between the trauma and similar but safe experiences (Foa et al., 2019).

2.5 Habituation

Modification of stress-related responses, as mentioned above, occurs through the process of habituation. The negative affect is gradually reduced through in vivo or imaginal exposure to the realistically non-threatening trauma-associated stimulus (Foa et al., 2006; Foa & Rothbaum, 1998). In the absence of the expected negative outcome, the fear structure's distorted danger ions are experientially disconfirmed until interaction with these elements no longer elicits a stress response (Benito & Walther, 2015). Survivors are given bodily proof that their trauma memory poses no realistic current threat. They are empowered to reclaim control of their lives, realising that the anxiety is not inherently perpetual, and nor are they necessarily incompetent or out of control in the face of it (Foa et al., 2019).

2.6 Massed-Prolonged Exposure Therapy for PTSD

PE is grounded in EPT's position that fear structures – along with associated distorted beliefs and avoidance behaviour – develop in response to trauma exposure (Rauch & Foa, 2006). PE aims to facilitate emotional processing by helping trauma survivors confront their traumatic memories and associated emotions in a safe and controlled environment. Following from EPT, it is understood that through repeated, intentional exposure to the client's trauma memory and associated stimuli, the fear structure is activated and can thus be modified, such that erroneous associations and beliefs within their fear structure are disconfirmed and the fear response subsides (Foa et al., 2006; Foa et al., 2019).

PE for PTSD is an evidence-based TFT (McLean & Foa, 2024). Standard PE comprises 8-15 weekly 90-minute sessions of manualised exposure-based trauma therapy. Massed-PE, a fast-tracked version of standard PE, delivers the same manualised content over two weeks with daily 90-minute sessions (Foa et al., 2018; Peterson et al., 2023). Both versions involve four primary components, as outlined below (Peterson et al., 2019).

During repeated imaginal exposures, the client visualises and verbally recounts the traumatic events as if they were being relived. This facilitates the identification and processing of the traumatic memory as an integrated whole rather than the disjointed parts experienced in intrusive thoughts, flashbacks or nightmares (Foa et al., 2019).

In-vivo exposure involves real-world exposure to generally safe stimuli that are the objects of the client's avoidance due to their association with the traumatic event. These include people, places, things and activities and specific sensory inputs such as smells, sounds, and tastes. The only way for clients to disassociate these otherwise safe "triggers" from a sense of threat is to encounter them and experience the resultant reduction in anxiety known as habituation (Peterson et al., 2019).

Breathing retraining helps clients manage physiological arousal by teaching controlled, slow breathing techniques. The aim is to provide clients with a tool for managing general anxiety to assist with daily functioning. Breathing retraining is not intended to actively counter the distress necessarily experienced during exposure activities, as this would constitute a safety behaviour (described under treatment challenges and limitations, below). In rare cases where a client is over-engaged during exposure (a further treatment challenge described below), breathing retraining may be employed Foa et al., 2019).

Clients are engaged in psychoeducation about standard post trauma reactions as well

as the rationale for the imaginal and in-vivo exposure. The intention is to validate their experience and normalise their trauma reactions, whilst generating motivation for the exposure work.

These components of PE are designed to address avoidance, understood as the mechanism of PTSD. Following the development of erroneous beliefs such as the world being entirely unsafe or the self entirely incapable, survivors avoid external and internal stimuli associated with the traumatic event. However, in so doing, they deny themselves the opportunity to have their erroneous beliefs and associations proven wrong (Peterson et al., 2019). This maintains their anxiety and impedes post-traumatic processing and healing. By confronting these triggers through exposure, their anxiety is reduced. Survivors may then reclaim aspects of their internal and external worlds, regain a sense of control and self-efficacy, and feel empowered to make sense of the traumatic event in an authentic way (Foa et al., 2019).

2.7 Treatment Challenges and Limitations

The EPT literature has distinguished possible survivor presentations which may impede an individual's emotional processing during PE treatment. Firstly, cognitive avoidance often involves subtle but deliberate strategies of distraction, such as focusing on the benign elements of the traumatic experience during exposure or distorting the feared image into a less threatening version (Foa et al., 2006; Foa & Kozak, 1986). These cognitive strategies are examples of safety behaviours, however, safety behaviours can also be physical or social, such as clutching a comforting object or having a trusted person accompany one during exposures (Foa et al., 2019). Avoidance disguised as coping, for instance, over-preparing for exposure tasks, is a further example. Safety behaviours undermine emotional processing. The full experience of fear, necessary for learning that the feared situation or memory is not actually dangerous, is blocked (Craske et al., 2014). In relying on these coping mechanisms during exposures, the person attributes their reduced anxiety to the safety behaviour, rather than learning that they can tolerate the fear, and that it naturally decreases over time (Foa et al., 2019). Secondly, effective treatment outcomes require the maintenance of an optimal level of emotional engagement (Rach & Foa, 2006). Under-engagement, due to insufficient activation of the fear structure or over-engagement, due to excessive activation, which overwhelms an individual's capacity to process information and modify the fear structure, will impede habituation (Foa et al., 2006; Hembree & Cahill, 2007). Notably, within-session habituation is not necessarily an indication of successful treatment. However,

across-session habituation is an essential indicator of positive treatment outcomes (Foa et al., 2006; Foa et al., 2019). Thirdly, characteristics associated with severe depression may impede the capacity of individuals with this comorbidity to reach optimal levels of emotional engagement (Angelakis & Nixon, 2015; Foa & Kozak, 1986). These characteristics include emotional numbing, emotional dysregulation, overgeneralised memory, and maladaptive cognitive processes such as increased negative appraisals and ruminative response styles, associated with severe depression (Angelakis & Nixon, 2015; Beevers et al., 2007; Brewin et al., 2010; Dalgleish et al., 2008; Jaycox & Foa, 1996). Fourthly, experiences of overwhelming anger during imaginal exposure may dominate an individual's affect, blocking access to the core fear (Hembree & Cahill, 2007; Jaycox & Foa, 1996). Finally, individuals classified as 'overvalued ideators' exaggerate the essentiality of erroneous beliefs. They demonstrate persistent resistance to encoding corrective information through elaborate justifications, which, protean and robust, defy disconfirmation (Foa, 1979; Foa & Kozak, 1986). These complicating factors must be accounted for in treatments informed by EPT.

2.8 Theoretical Prediction

Characterised by maladaptive functioning, PTSD impacts affect, cognition and behaviour in individuals who have experienced or witnessed a deeply distressing or life-threatening event (APA, 2013). As discussed, EPT understands avoidance and erroneous negative cognitions about the world and oneself to be the mechanisms sustaining PTSD (Foa et al., 2019; Rauch & Foa, 2006). EPT proposes that activation of the fear structure in memory and its modification through incorporation of contending new information to disconfirm these irrational beliefs will alleviate PTSD symptoms. Accordingly, it is hypothesised that the university students participating in this study, undergoing Massed-PE, the psychotherapeutic treatment grounded in EPT, will experience an abatement in their rape-related PTSD symptoms during the intervention and maintain these treatment gains at post-intervention.

Chapter Summary

Chapter 2 offered a historical overview of psychological theories of PTSD, including *learning theories, information-processing theories, Ehlers & Clarke's Cognitive Model of PTSD, and social-cognitive theories* which were foundational to the more contemporary *Dual Representation Theory*. This was followed by an examination of EPT. The operationalisation of EPT as Massed-PE with its four-component structure, was described. Thereafter, treatment

challenges and limitations were addressed. Lastly, an EPT-informed theoretical prediction was made, i.e., that the Massed-PE intervention will effectively alleviate symptoms of rape-related PTSD and depression amongst university students and be perceived as feasible.

Chapter 3
Literature Review

Chapter Overview

A literature review was conducted to examine the psychotherapeutic treatment of PTSD and comorbid depression, particularly rape-related PTSD with an emphasis on massed-PE. The pertinence of this existing body of research to the South African context is a key element of this review, emphasising the student population.

The search criteria combined the following keywords “traumatic stress”; “PTSD”; “rape-related PTSD”; “PTSD and depression”; “exposure therapy”; “prolonged exposure therapy”; “massed-prolonged exposure therapy”; “low- and middle-income country”; “trauma amongst university students in South Africa”; “rape trauma amongst university students in South Africa”; depression amongst university students in South Africa”. The applicable literature was included to formulate this thesis. Article selection was based on perceived reliability as determined by its empiricism, peer-reviewed status and relevance to the topic.

Searches were conducted in academic databases including EBSCOhost, PsycINFO, Scopus, the African Journal Archive from Sabinet and Google Scholar. High-impact sources were sought out in specific academic journals, renowned for publication of PTSD-related research, such as the Journal of Traumatic Stress and the South African Journal of Psychology.

3.1 Brief History of Psychological Trauma

Despite the complex experiential and conceptual history of psychological trauma, PTSD remains a relatively new diagnostic construct within psychiatry (Andreasen, 2010; Shauer & Elbert, 2010). Hypotheses regarding the psychological fallout among combat soldiers, colloquially termed “shellshock” and then “battle fatigue” during World War I and II, are considered PTSD’s diagnostic predecessor (Horwitz, 2018; Sadock & Sadock, 2003). The high rates of psychiatric comorbidity with shared symptomology in veterans of the Vietnam War occasioned the explicit diagnosis of PTSD. These symptoms included weakness, sleep disruptions, fatigue, impaired memory, poor attention and concentration, headaches, body pain, gastrointestinal disruptions, depression, anxiety and irritability (Horwitz, 2018; Eagle, 2002; Green 1994).

An approximation of PTSD designated “gross stress reaction”, had initially been

included in the official nomenclature in 1952 when the first Diagnostic and Statistical Manual of Mental Disorders (DSM-I) was published. It was omitted in the second edition and formally recognised as PTSD in the DSM-III of 1980 (Andreason, 2010). At this point it was conceptualised as a disorder marked by traumatic memories and intrusive symptoms, such as flashbacks, nightmares and intrusive thoughts, with 17 symptoms divided across 3 criteria (APA, 1980).

The diagnostic criteria of PTSD have been reworked across subsequent psychiatric taxonomies. The latest DSM edition, the DSM-5, Text Revision distinguishes 20 PTSD symptoms across 4 criteria, with no significant departure from its predecessor, the DSM-5 (APA, 2013, 2022). This more encompassing categorisation accounts for individuals with below-threshold as well as significant symptomology. Essential PTSD criteria in the ICD-11, the latest edition of the World Health Organisation (WHO)'s International Classification of Diseases, were simplified to remove non-PTSD-specific symptoms (Wisco et al., 2017)

3.2 Clinical Definition of PTSD

The DSM-5 diagnostic system guides clinical definitions within this paper given its dominance in the U.S. where PE was pioneered, and in South Africa where this study is set (Kriegler & Bester, 2014; Miao et al., 2018).

PTSD is a mental health condition that manifests in response to one or more traumatic event(s). These include actual or threatened death, serious injury, or sexual violence. An individual must have either personally experienced, witnessed or been vicariously exposed – whether repeatedly or in harrowing detail – to the traumatic event or learnt details of the violent or accidental death of a loved one (APA, 2013).

In essence, the following symptoms, present for more than 1 month following the traumatic event, to the detriment of that individual's functioning, justify a PTSD diagnosis. These include, at minimum, one intrusion symptom, one avoidance symptom, two symptoms indicative of adverse changes in mood and cognition and two notable changes in arousal and reactivity, all of which are associated with the traumatic event (APA, 2013).

Individuals with PTSD commonly experience intrusive memories and may repeatedly involuntarily reexperience the traumatic event through nightmares or dissociative flashbacks, leading to intense psychological and physiological distress (Iribarren et al., 2005). These intrusive symptoms, criterion 1 of the diagnostic criteria, are a salient feature of PTSD, distinguishing it from other psychiatric pathologies (Brewin & Holmes, 2003). Criterion 2

describes engagement in behavioural and cognitive avoidance strategies, to manage both internal triggers, such as thoughts or emotions, and external triggers, including people, places, and activities associated with the trauma (APA, 2013). Significant dysfunctional changes in cognition such as trauma-related memory loss or negative beliefs (distrust or blame of self, others, or the world) paired with associated negative emotions (fear, guilt, shame or anger) and low or anhedonic mood, characterise criterion 3 (Foa et al., 2019). Criterion 4 accounts for altered reactivity and arousal, namely irritability, reckless behaviour, angry outbursts and sleep disturbances (APA, 2013).

3.3 Diagnostic Debates

The divergent nosological approaches to PTSD, whether broad or narrow, have led to contentious best-practice debates (Stein et al., 2014; Wisco et al., 2017). These debates indicate ongoing investment in the study of PTSD and psychological trauma more generally. The ICD-11's narrower approach represents a simplification and increased stringency, intending to avoid overdiagnosis. However, the DSM-5's more encompassing approach is said to better account for typical clinical presentations where posttraumatic phenotypes are not emotionally limited to fear (Friedman, 2013; Wisco et al., 2017). Echoing Friedman, Kilpatrick (2013) endorses the DSM-5's broader view for being more clinically realistic, allowing for increased validity and reliability. The process of refining the diagnostic structure of PTSD from the DSM-IV to the DSM-5 was described as empirical and rigorous (Friedman, 2013; Kilpatrick, 2013).

A departure from previous editions, the DSM-5 placed PTSD in a new chapter separate from the anxiety disorders, named Trauma- and Stressor-Related Disorders (Friedman, 2013; Schnurr, 2013). Kilpatrick (2013) celebrates this as a more balanced consideration of the nurture-nature debate compared to the reductionist approach of psychiatry's biomedical paradigm. He argues that it encourages consideration of interactions between psychosocial, genetic and biological risk and protective influences in understanding traumatic stress. The study of traumatic stress is dynamic and ever evolving, with various ongoing disputes, a detailed review of which is beyond the present scope (Friedman, 2013; Isobel, 2021; Maercker & Brewin, 2025).

3.4 Trauma and Culture

Trauma researchers in the Global North have historically overlooked cultural variability in the psychological processes and social implications of trauma (Maercker et al.,

2019). Such oversimplifications may explain why trauma interventions originating in Western settings tend to show less efficacy in the divergent cultural contexts of the Global South and LMICs – as demonstrated in a recent meta-analysis (Thompson et al., 2018). Trauma survivors in LMICs frequently experience trauma-related distress that does not align with Western psychiatric diagnostic frameworks. This includes spiritual disruption, somatic symptoms, and diminished social standing (Kohrt & Hruschka, 2010; Michalopoulos et al., 2020). Maercker and Horn (2013) developed the socio-interpersonal model of PTSD, which integrates individual, relational, and societal dimensions of trauma, underscoring the importance of social acknowledgement, collective suffering, and cultural scripts in shaping both the development of PTSD and pathways to recovery. Maercker and colleagues caution against a 'one-size-fits-all' approach to trauma treatment, and their work has laid a foundation for making established interventions more culturally responsive and socially attuned (Maercker & Hecker, 2016; Maercker et al., 2019). Research shows that culturally adapted TFTs can improve intervention effectiveness and acceptability in LMICs (Brunnet et al., 2021; Hall et al., 2016). That said, in a recent systematic review, Ennis et al. (2020) identified a significant lack of studies that comprehensively document the process of culturally adapting PTSD interventions. Few studies move beyond superficial adaptations, such as changes in language or terminology, to meaningful, in-depth cultural modifications to intervention content and delivery (Ennis et al., 2020).

3.5 Neurobiology of PTSD

PTSD is closely associated with dysregulation in the brain's fear-related neurocircuitry, particularly fear-learning structures (Rauch et al., 2006; Sheynin & Liberzon, 2017). The amygdala, which coordinates responses to threat, is consistently found to be hyperactive in individuals with PTSD, contributing to exaggerated fear responses and intrusive symptoms (Rauch et al., 2006; Milad et al., 2009). In contrast, the ventromedial prefrontal cortex (vmPFC), which normally regulates fear in a top-down manner by inhibiting amygdala activity and supporting extinction learning and recall (the acquisition and retrieval of information which could modify the fear structure, per an EPT formulation) is hypoactive (Rauch et al., 2006; Liberzon & Abelson, 2016). Furthermore, the hippocampus, meant to provide contextual information to the vmPFC and amygdala to support this top-down regulation of fear, is also hypoactive in individuals with PTSD (Garfinkel et al., 2014; LeDoux, 2000). Along with the amygdala, the anterior cingulate cortex (ACC), is involved in bottom-up processing of sensory information, whereby aversive stimuli trigger a fight-or-

flight response, engaging the sympathetic branch of the autonomic nervous system (Koch et al., 2016). The ACC is hyperactive in individuals with PTSD. This imbalance across the fear neurocircuitry likely underpins impaired habituation and fear extinction and the overgeneralization of fear to non-threatening cues, core features of PTSD (Rauch et al., 2006; Lopresto et al., 2016).

Emotion regulation deficits, the impaired awareness and modulation of intensely negative emotional states, are also implicated in PTSD (Sheynin & Liberzon, 2017). Implicit emotion regulation, an automatic process, involves the top-down regulation of the amygdala by the vmPFC, which, as described above, is hypoactive in PTSD (Gyurak et al., 2011). Explicit emotion regulation, such as cognitive reappraisal, is conscious and effortful, associated with top-down regulation of the amygdala by the dorsolateral prefrontal cortex (dlPFC) (Buhle et al., 2014). The dlPFC also shows hypoactivity in individuals with PTSD with a pattern of reduced cognitive reappraisal in favour of emotion suppression (Rabinak et al., 2014; Shepherd & Wild, 2014).

Emerging research has identified elevated levels of pro-inflammatory cytokines in individuals with PTSD. Pro-inflammatory cytokines are a natural part of the body's immune response to injury, infection or stress. However, chronic stress activation in PTSD may cause neuroinflammation associated with core PTSD symptoms like hyperarousal, mood disturbances, cognitive impairments, and sleep disruption (Michopoulos et al., 2017; Yang & Jiang, 2020). Understanding the neurobiological underpinnings of trauma provides critical insights for targeting dysfunction with clinically and therapeutically appropriate "active ingredients" from empirically supported TFTs (Stojek et al., 2018).

3.6 Prevalence of PTSD, Rape-Related PTSD and Depression

PTSD is a global health concern. A World Mental Health Surveys study (n=68 894) revealed that 70.4% of respondents across 24 countries experienced a lifetime traumatic event, with an average of 3.2 traumas per capita (Benjet et al., 2016; Kessler et al., 2017). Traumas involving interpersonal violence posed the highest risk for PTSD with rape and sexual assault-related traumas accounting for the highest proportions of this burden at 13.1% and 15.1% respectively. The category of intimate partner sexual violence contributed 42.7% of overall person-years with PTSD (Kessler et al., 2017). Rape is the index trauma associated with the highest risk for developing PTSD (Breslau et al., 2013; Yehuda et al., 2015).

South Africa's general population is at elevated risk for developing PTSD, with a

remarkably high incidence rate of trauma exposure, at 73.8% in a nationally representative sample (n=4315). As was recorded in the South African Stress and Health Study (SASH) (Atwoli et al., 2013, 2015; Benjet et al., 2016). 55.6% of respondents reported multiple traumas, with 26.1% reporting 4 or more traumas (Williams et al., 2007). Despite these high prevalence rates of PTSD, a significant treatment gap exists, particularly in LMICs like South Africa (Kaminer et al., 2024). Only 14% of adults living with PTSD in LMICs ever access mental healthcare during their lifetime, as compared to 47% in high-income countries (HICs) (Thornicroft et al., 2018). Only 5% of these service users receive adequate psychotherapy, with only 18% receiving any type of effective treatment, as compared to 21% and 41%, respectively, in HICs (Stein et al., 2023).

Rape accounts for a significant portion of South Africa's trauma exposure. SAPS (2022) reports an average yearly rate of 40 000 rape cases nationally. Due to severe underreporting, this may account for as little as 4% of the true incidence, per a Gauteng-based study (Abrahams & Gevers, 2017; Machisa et al., 2011). Echoing international findings, rape is the index trauma most strongly associated with PTSD among south African women, per SASH data (Kaminer et al., 2008). Sepeng and Makhado (2018) report a 74.5% prevalence rate of PTSD among South African rape survivors in the North West province.

The detriments of rape stigma for PTSD prognosis and treatment are well established in the national and international literature (Abrahams & Gevers, 2017; Caretta et al., 2016; Elklit & Christiansen, 2013; Foa et al., 1999). In South Africa, rape stigma, including rape myths, victim blaming and unsupportive reactions to disclosure is rife, so too at its universities (Macleod et al., 2018; Makhaye et al., 2023). Experiencing rape stigma drastically exacerbates survivor shame and self-blame (Bhuptani & Messman, 2023; Ullman et al., 2007). Nothling et al. (2022) found that experiences of rape stigma, operationalised as self-blame, shame, guilt, social devaluation and discredit, is one of the top two predictors of PTSD symptom severity among South African rape survivors (n=639). Rape stigma, both external and internalised, impedes disclosure of rape to potential support structures such as significant others or health care systems, as well as impeding the quality of care received, according to a study in the Western Cape (Abrahams & Gevers, 2017). Jewkes et al. (2022) confirm the ubiquity and intersectionality of rape stigma in the South African context, structurally driven by gender inequality and food insecurity and exacerbated by prior trauma exposure. Willan et al. (2024) echo these findings, which position socioeconomically marginalised women at heightened risk for developing rape-related PTSD (Abrahams et al.,

2020; Steele et al., 2019).

Depression is the psychopathology most commonly comorbid with PTSD, at rates of 52% of PTSD cases, per Rytwinski et al.'s (2013) meta-analysis. The literature suggests that in trauma survivors, depressive symptoms develop secondary to PTSD, whilst existing depression increases the likelihood of PTSD manifesting, following trauma exposure (Breslau et al., 2000; Koenen et al, 2002). The shared symptomology and vulnerability pathways to developing PTSD and depression suggest a bi-directional relationship between these two disorders (Angelakis & Nixon, 2017; Flory & Yehuda, 2015).

Depression is commonly comorbid with rape-related PTSD, both internationally (Au et al., 2013; Dworkin, 2020; Zinzow et al., 2012) and in South Africa (Mgoqi-Mbalo et al., 2017). Along with rape stigma, Nothling et al. (2022) found depression to be the main predictor of PTSD symptom severity in South African rape survivors. Furthermore, being undermined by their support system and their belief in rape myths is linked to increased depressive symptoms among these survivors (Wyatt et al., 2017). Rape stigma appears to mediate this relationship between PTSD and depression.

Trauma exposure is commonplace among South Africa's university students, indicating high risk for PTSD and comorbid depression. 90% of university students at a large residential South African university (n=1337) had experienced one or more traumatic event, with 50% reporting experiencing multiple traumatic events (McGowan & Kagee, 2013). A 12-month prevalence rate of PTSD at 36% was recorded in the South African National Student Mental Health Survey across 17 South African universities (N = 28 516) (Bantjes et al., 2023). This identified PTSD as the second most prevalent psychopathology amongst students, though only 27.3% of these students received treatment for PTSD (Bantjes et al., 2023). The same study reported major depressive disorder as the third most prevalent, at 29.1%, with only 30% of students receiving treatment (Bantjes et al., 2023).

The cognitive and motivational impairments associated with PTSD and depression jeopardise academic performance among university students (Bantjes et al., 2021; Boyraz et al., 2015). This warrants urgent attention given high levels of failure and attrition in South African universities (Murray, 2014). Bantjes et al. (2021) found that moderate depression increased the probability of progression delay by nearly double, and by triple for severe depression among first year South African university students (n=1402). A population-based cohort study in Sweden (n=2 244 193) found that individuals diagnosed with PTSD had 73%

lower odds of completing a university degree (Vilaplana-Pérez et al., 2020). Associations were found between PTSD, rape, depression, prior trauma exposures, suicide risk, inequitable gender beliefs, food insecurity and academic pressures among black female students across South Africa's higher education institutions (n=1292) (Machisa et al., 2022). This highlights the elevated risk for PTSD and depression among certain multiply marginalised South African student populations, with the understanding that financial pressures, academic pressures and mental health difficulties have compounding negative effects (Mall et al., 2018). Lives hang in the balance, with PTSD and depression symptoms having been found to predict suicidal ideation among South African students (Bantjes et al., 2016). Moreover, South African students report relatively higher rates of lifetime suicidal ideation compared to other countries (Bantjes et al., 2016; Mortier et al., 2018). Ensuring the availability of effective and accessible on-campus mental health services is essential for promoting academic success and advancing transformation within South African universities (Bantjes et al., 2021).

3.7 Trauma-Focused Treatment for PTSD

PTSD is a devastating condition associated with major disruptions in functioning for the individual and their significant others, including medical, social and financial challenges (Miao et al., 2018). Luckily, there are multiple effective psychological treatments for PTSD on offer (Watkins et al., 2018). According to extensive research, these interventions typically yield a reduction or even remission of PTSD symptoms, an amelioration in symptoms of PTSD's common comorbidities like depression, and a better quality of life, among other beneficial outcomes (Miao et al., 2018). The first-line treatment options for PTSD are referred to as TFTs and include Cognitive Therapy (CT), CBT, Cognitive Processing Therapy (CPT), Brief Eclectic Psychotherapy (BEP) and exposure-based therapies such as PE (Miao et al., 2018; Watkins et al., 2018).

3.8 Massed-PE as a First-Line Treatment for PTSD

PE is a CBT, considered a first-line TFT for treating PTSD and its common comorbidities such as anxiety, substance use disorder and, notably, depression (Cusack et al., 2016; McLean & Foa, 2024). PE is recognised and recommended in this capacity by the American Psychological Association, the United Kingdom's National Institute for Health and Care Excellence, and the International Society for Traumatic Stress Studies (Curtois et al., 2017; Isserlin et al., 2008). PE has been the subject of numerous randomised controlled trials

(RCTs; over 40 as of 2024) across an extensive range of trauma populations (McLean & Foa, 2024). A meta-analysis of these RCTs found that over 80% of PE recipients had better outcomes than controlled conditions (Powers et al., 2010).

In accordance with overlapping symptomology and potential shared vulnerabilities, PE demonstrates consistent, strong, sustained treatment effects for comorbid depression across the literature (Cusack et al., 2016; van Minnen et al., 2015). Moreover, improvements in PTSD symptoms seem to drive improvements in depression (Aderka et al., 2013). However, concerns that more rigid distorted negative beliefs, rumination, difficulties engaging in behavioural treatment and tolerating exposure among those with this comorbidity should not be ignored (Nixon & Nearmy, 2011; van Minnen et al., 2015).

In terms of neurobiology, research suggests that PE impacts various neural circuits (Stojek et al., 2018). Exposure therapy seems to affect fear and contextualisation neurocircuitry by promoting communication between the vmPFC, hippocampus and amygdala, facilitating top-down regulation of amygdala-driven fear responses. Furthermore, research shows that PE reduces activity in and volume of the ACC (Fonzo et al., 2017; Helpman et al., 2016). The increased connectivity between these brain structures is evident in modification of the fear structure and habituation, extinguishing the overgeneralised fear response in successful PE. PE also appears to strengthen emotion regulation networks, particularly explicit emotion regulation involving the dlPFC. This may account for some broader transdiagnostic effects of PE, such as reductions in symptoms of comorbid depression (King et al., 2016; Fonzo et al., 2017).

It is necessary to address concerns regarding the potential risks or adverse effects associated with PE for treating PTSD, including rape-related PTSD. Research has shown that whilst transient symptom increases during treatment are routine, this does not impede the efficacy of PE, insignificant symptom increases by the end of treatment and no relation to treatment non-completion were found (Foa et al., 2002; Keller et al., 2014; Larsen et al., 2016). PE is safe to use and tolerated comparably to other CBT variations (Riggs et al., 2006).

Massed-PE, as described in chapter 2, involves the same manualised exposure intervention as standard PE, with the same number of sessions, but delivered over a condensed duration, typically two weeks (Foa et al., 2019). This relatively novel PE format was proposed to reduce dropout rates, found to be 22% on average (Lewis et al., 2020).

Whilst on par with other TFTs, there is room for improvement (McLean & Foa, 2024).

The effectiveness of Massed-PE at ameliorating PTSD symptoms has been established across multiple studies. In a landmark RCT (n=366) where Massed-PE was compared to standard PE, Massed-PE was found to be noninferior to standard PE (Foa et al., 2018). A subsequent RCT by Peterson et al. (2023) augmented findings of Massed-PE's efficacy. A meta-analysis across 35 RCTs found reduced dropout rates when PE sessions were delivered more frequently than the once-weekly standard (Levinson et al., 2022). An RCT by Dell et al. (2023) found Massed-PE was noninferior to standard PE, with significantly reduced symptom severity maintained at 12-month follow-up, with dropout rates of 4.8% for the former and 16.9% for the latter. Massed-PE dropout rates were 3.5 times less than standard PE.

Preliminary findings suggest that the benefits of Massed-PE apply to those with comorbid PTSD and depression. In the RCT by Dell at al. (2023) described above, symptom reductions in comorbid depression, anxiety and anger, as well as improved quality of life, were found in both treatment groups and maintained at 12-month follow-up. Research suggests that increased session frequency may be beneficial for depressed clients in supporting treatment adherence and resulting in larger effect sizes (Bruijniks et al., 2020; Cuijpers et al., 2023).

Qualitative findings from recipients and administrators indicate that the benefits of Massed-PE align with its rationale (Sherrill et al., 2022; Wright et al., 2023). It limits avoidance and between-session distraction, with daily therapist contact enhancing a sense of support and commitment to the process. As such, the significant dose of exposure early in the process is not diluted and symptom relief is accelerated. Therefore, engagement is rewarded and motivation enhanced. This facilitates treatment adherence (Sherrill et al., 2022; Wright et al., 2023). Discomfort during the intensive treatment was the main critique of Massed-PE; this is expected given the nature of exposure (Sherrill et al., 2022). Furthermore, the briefer treatment period is particularly helpful in resource-constrained settings, which tend to be more volatile, where commitment to a 3–6-month process may be unrealistic (Sripada et al., 2022).

In terms of rape-related PTSD specifically, PE has been validated as an effective treatment in a Cochrane systematic review, amongst other literature (O'Doherty et al., 2023; Resick et al., 2012; Rothbaum et al., 2005). However, no study to date has explored the

effectiveness of massed PE in treating rape-related PTSD and comorbid depression, particularly not among university students. Furthermore, implementation research in resource-constrained Global South contexts such as South Africa is limited both for standard and Massed-PE (Booysen & Kagee, 2020; McLean & Foa, 2024).

3.9 Massed-PE for University Students in South Africa

While a treatment gap exists among university students globally, it is particularly pronounced in South Africa. Bantjes et al. (2020) found that only 18.1% of students (n=14 474) at two relatively well-resourced South African universities, secured mental health care in a year, whilst only 28.9% of those with mental disorders received treatment. More pertinently, major treatment gaps exist among university students across South Africa with PTSD and depression, as reported on earlier in this chapter (Bantjes et al., 2023). Nonetheless, university counselling centres offer most South African students, particularly those from socially marginalised demographics, the first opportunity they may get to engage with mental health services (Bantjes et al., 2023).

Research shows that barriers to mental health service utilisation among South African university students are both structural and attitudinal (Bantjes et al.,2023). This mirrors findings regarding treatment barriers for adults with PTSD in LMICs (Thornicroft et al., 2018). On a practical level, limited resource capacity at university counselling centres restricts accessibility (Bantjes et al., 2020; Cilliers et al., 2010). At the same time, students' perceptions of the appropriateness of available services – along with their mental health literacy, particularly among potential first-time users – significantly influence whether these students seek support (Bantjes et al., 2023). The status quo of weekly in-person-delivery of traditional psychotherapeutic modalities, which do not effectively or efficiently target specific conditions like PTSD and its common comorbidities, is not meeting the overwhelming need (Sokol, 2009; Abrams, 2022). Innovative and sustainable services – designed with explicit consideration of student perceptions regarding appropriateness, acceptability and feasibility – are needed (Bantjes et al., 2023).

A standard PE protocol has been investigated on a small scale, with two case studies of students at a university counselling centre in the U.S. PTSD symptoms were successfully brought down to subclinical levels in both cases (Bonar, 2015). An online PE protocol, administered to three students at a South African university showed PTSD symptom reductions and was perceived as a feasible treatment by its participants (Booysen & Slabbert,

2025). These preliminary findings are promising. However, significantly more research is needed to understand the effectiveness and implementation nuances of PE – particularly Massed-PE, which is expected to be a more dynamic adaptation – for university students in resource-constrained settings such as South Africa.

3.10 Adaptations to Address PTSD Treatment Gaps

Findings show that barriers to PTSD treatment in LMICs, such as South Africa – including at South African universities – are both structural and attitudinal (Bantjes et al., 2023). Structural barriers include the unavailability of mental health professionals and evidence-based treatments, lack of nearby services or transport, and high treatment costs. Attitudinal barriers involve poor mental health literacy, including mental health stigma and lack of perceived need for treatment, and limited confidence in the effectiveness of treatment. These findings emphasise that improving access alone, without ensuring intervention quality, will not meaningfully reduce the burden of PTSD in these settings (Bantjes et al., 2023; Chen et al., 2017; Thornicroft et al., 2018). These findings highlight the need for innovative approaches to service delivery that prioritise sociocultural sensitivity. Such approaches are essential not only for improving access to effective TFTs, but also for ensuring that these treatments are perceived as feasible, appropriate, and acceptable by local populations (Kaminer et al., 2024). There is a paucity of LMIC-based research examining these implementation-related concerns surrounding PE and Massed-PE interventions (Booysen & Kagee, 2020; McLean & Foa, 2024). Nonetheless, there are a few promising findings regarding novel implementation adaptations in the PE and Massed-PE literature, as well as in the broader TFT literature, for improving access to treatment in resource-constrained settings, as detailed below.

Virtual treatment delivery online may address certain structural and attitudinal treatment barriers such as long travel distances and fear of stigmatisation associated with in-person treatment (McLean & Foa, 2024; Evans, 2018). With the proliferation of smartphones, digital mental health interventions are likely to be significantly more cost-effective to deliver at scale compared to conventional face-to-face treatments, even when accounting for data-related expenses (Muñoz, 2022). Preliminary outcomes for online PE find it noninferior to in-person delivery (Acierno et al., 2021; Morland et al., 2020; Tuerk et al., 2010). As reported in section 3.7, a small-scale study of an online PE intervention for South African university students showed PTSD symptom reductions and was perceived as a feasible intervention by its 3 participants (Booysen & Slabbert, 2025).

Task-shifting is an exciting development in the PE literature, whereby nonspecialist health workers such as social workers, community healthcare workers or psychiatric nurses administer the manualised PE intervention under supervision from expert psychologists (Rossouw et al., 2018). This enables a better-integrated, community-based approach and facilitates access to treatment, especially in underserviced rural areas, despite crippling shortages of mental healthcare professionals (Booysen et al., 2024; Hoeft et al., 2019). Allowing individuals with PTSD to receive support from culturally accepted community figures, rather than from specialists in clinical settings often associated with severe mental illness, may help lower the stigma surrounding help-seeking (Bolton, 2019). Preliminary findings in community settings in South Africa, including 1 RCT, show significant reductions in PTSD symptoms for task-shifting of PE (Booysen et al., 2024; Rossouw et al., 2018), with improvements maintained at 12- and 24-month follow-ups (Rossouw et al., 2022).

Given this growing potential for improving access to PE and Massed-PE, more research examining the effectiveness, feasibility, acceptability and appropriateness of these interventions is needed. The need is across various populations, such as rape survivors with comorbid PTSD and depression, and across various underrepresented contexts, such as South African universities, where barriers to accessing TFTs are both structural and attitudinal.

Chapter Summary

Chapter 3 explored the historical context as well as the clinical and neurobiological understandings of PTSD in the extant literature, including ongoing diagnostic and cultural debates. The prevalence and contextual complexities of PTSD, rape-related PTSD and comorbid depression within the South African context, and specifically among South African university students, were unpacked. First-line TFTs for PTSD were described with a focus on the PE and Massed-PE literature in terms of the above-mentioned populations. Finally, promising novel adaptations in PE and Massed-PE implementation were explored.

Chapter 4
Methodology and Design

Chapter Overview

Chapter 4 describes and provides a rationale for the research design and corresponding methodology used to examine the hypothesis and questions arising from the study's aim. The intended methodological elements, including sampling, data collection and analysis, are explained for this mixed methods study's quantitative and qualitative components.

4.1 Aim of the Study

The broad aim of the study was to investigate the implementation of massed-prolonged exposure therapy in terms of its preliminary effectiveness, acceptability, appropriateness and feasibility as a treatment for rape-related PTSD and depression among university students in the South African context. This study draws on implementation literature in health research to conceptualise these implementation outcomes (Rabin & Brownson, 2023). Effectiveness refers to the impact of an intervention under real-world conditions. Acceptability concerns whether relevant stakeholders, based on their direct experience with or knowledge of the intervention, perceive it as satisfactory, agreeable or palatable. Appropriateness indicates perceptions of an intervention's relevance, in a given context, or for addressing a particular issue. Feasibility refers to how well an intervention can be applied within a particular setting, including its suitability, practicability, and actual fit (Rabin & Brownson, 2023).

4.2 Single-Case Experimental Design

The significance of single-case experimental designs (SCEDs) traces back to B.F. Skinner's early work in the 1930s which emphasised within-subject experimental analysis to study learning and behaviour (Richards et al., 1999). Unlike traditional group-based research, SCEDs focus on individual variability and systematically measuring behavioural changes over time (Kazdin, 2019). In the mid-20th century, researchers like Sidney Bijou, Montrose Wolf, and Donald T. Campbell refined SCED methodologies, introducing reversal designs, multiple baseline approaches, and alternating treatment models to strengthen experimental rigor (Epstein & Dallary, 2022). The evolution of SCEDs continued with advancements in applied behaviour analysis, clinical psychology, medicine and special education, making SCEDs a gold standard for individualised intervention research (Kazdin, 2019).

Today, SCEDs are invaluable in fields requiring personalized, ethical, flexible and evidence-based treatment evaluations, offering scientific rigor while maintaining practical adaptability in real-world settings (Kazdin, 2019; Smith, 2012). Shadish and Sullivan (2011) found that SCEDs were utilised by 44% of psychological and educational intervention studies in 2008. Kazdin (2019) argues that the scope for SCEDs within clinical psychology has expanded in recent years with the advancement of cognitive-behavioural approaches like PE.

It is necessary to distinguish between SCED and case study research. Both are used to study individual cases in depth, but they differ in methodology, purpose, and level of experimental control (Barlow et al., 2009; Yin, 2018). Case study research is primarily descriptive and exploratory, typically integrating several qualitative data sources such as interviews, observations and document analysis (Yin, 2018). SCED establishes causal relationships by manipulating variables systematically and is, therefore, typically quantitative. It focuses on demonstrating cause-and-effect relationships through experimental control (Barlow et al., 2009).

This mixed methods study (SCED-MM) was designed according to SCED methodology but with an embedded qualitative component (Hitchcock et al., 2010; Onghena et al., 2019). Methodologists have long emphasised the necessity for methodological pluralism in idiographic psychotherapy and implementation research (Onghena et al., 2019). Integrating qualitative methods into SCED can enhance the depth of understanding and complement the quantitative findings by capturing subjective experiences, perceptions, and contextual factors that numerical data alone might miss (Hitchcock et al., 2010; Creswell & Clark, 2018). The combination of SCED and qualitative methods within a mixed methods framework provides a strong means of exploring localized causality and describing intervention application (Hitchcock et al., 2010).

4.3 Features of SCED

SCED enables the derivation of empirically supported conclusions regarding the effectiveness of therapeutic interventions. Treatment efficacy is assessed by monitoring changes in a participant's symptoms or adaptive functioning over time (Kazdin, 2019). SCED consists of four key components: (1) a dependent variable (DV) such as PTSD; (2) an independent variable (IV) such as the Massed-PE intervention; (3) repeated measurement of the dependent variable over time; and (4) the effect, an examination of the causal relationship between the DV and IV to determine whether meaningful changes have occurred, such as

reduced PTSD symptomology (Kazdin, 2019; Kratochwill & Levin, 2014).

4.3.1 Specification of Treatment Focus

According to Kazdin (2019), a key component of SCED is the clear definition of treatment goals, such as identifying specific symptoms and areas of functioning to be targeted for change. Therefore, it is essential to select appropriate measures capable of capturing potential improvements following treatment. The clinician researcher must determine the type of changes which represent progress and how to suitably measure them (Kazdin, 2019). In the context of PE intervention research, Foa and Meadows (1997) emphasise the importance of selecting psychometrically appropriate assessment measures. In this study, the main outcome focus was PTSD; as such, psychometrically valid and reliable measures were employed to monitor the resulting symptom changes (see 4.6).

4.3.2 Continuous Assessment

Continuous assessment is a critical component of SCED and plays a key role in the selection of appropriate measurement tools (Kazdin, 2019). The chosen measures should effectively track treatment progress and be administered at multiple time points, including before treatment begins and consistently throughout its duration. This is essential, as SCED is designed to evaluate changes in a participant's symptoms or adaptive functioning over time (Kratochwill & Levin, 2010). In the present study, assessments were conducted at baseline, at the start of each session, and post-intervention to comply with this key SCED principle.

4.3.3 Separate Phases

In SCED, continuous assessment occurs across distinct phases (Kazdin, 2019). The first phase, known as the baseline phase, takes place before treatment begins and serves as a reference point for evaluating the participant's functioning and symptomatology, against which their post-intervention presentation can be compared. During the intervention phase, ongoing assessment continues, enabling the systematic monitoring of progress and changes throughout treatment (Kazdin, 2019).

4.3.4 Stability of Performance

Ensuring the relative stability of data gathered at baseline is essential for establishing it as a reliable comparison point against which to evaluate changes following intervention and for making accurate predictions regarding the participant's future responses. As such, no trend should be visible, fluctuation and variability should be minimal (Kazdin, 2019).

Ideally, multiple assessments could be conducted at the baseline phase to yield performance stability. However, in psychotherapy research, multiple assessments are not always feasible or ethical due to practical constraints (Frank et al., 1963; Kazdin, 2019). Therefore, the present study administered a single baseline assessment.

4.4 Sampling in SCED

SCEDs are experimental methodologies designed to evaluate the effects of an intervention, typically using smaller samples (Krasny-Pacini & Evans, 2018). This enables more detailed observations, facilitating the examination of contextual, demographic and process-oriented data for each participant (Kratochwill & Levin, 2014; Richards et al., 1999).

4.4.1 Participant Recruitment

The present study formed part of a larger pilot study which recruited participants from Rhodes University in the Eastern Cape. Email list services such as the 'StudentNews' platform circulated an advertisement for the study to all students. This included a Google Docs link with key information about the study and intervention. Participants provided consent and basic demographic information and completed the PTSD Diagnostic Scale for DSM-5 (PDS-5) and the Patient Health Questionnaire-9 (PHQ-9) measures via this online form. Due to this being a mini-thesis in partial fulfilment of the requirements for a master's degree, its scope was limited to a maximum of 3 participants.

4.4.2 Inclusion and Exclusion Criteria

Rhodes University students older than 18 years who reported a lifetime experience of rape and presented with a minimum score of 28 on the PDS-5 (at least 1-month post trauma), as well as a minimum score of 5 on the PHQ-9 for depression, could be included. It was required that participants speak English or Afrikaans. Respondents in crisis conditions such as extreme suicidality would be excluded and referred to the Rhodes Counselling Centre.

4.4.3 Sample Size

A sample of 3 participants (n = 3) was recruited. This small sample size aligns with the ideographic focus of SCED in implementation research, enabling greater detailed observation and analysis of the intervention's effects without aiming for generalisability (Barlow et al., 2009; Kazdin, 2019). Purposive sampling was used. This non-probability sampling approach selects members of a population based on predefined criteria, such as the inclusion and exclusion criteria for this study described above (Etikan et al., 2016). Based on

the exclusion and inclusion criteria, contact was made with 4 participants from the larger project, 3 of whom followed through to attend the intake interview. One of these 3 participants dropped out after the second Massed-PE session.

4.5 SCED Designs

SCED offers a variety of core design structures for application across diverse settings, and research objectives. Examples include the multiple baseline, changing criterion and alternating treatment designs, and the A-B-A design chosen for this study (Kratochwill & Levin, 2014; Richards et al., 1999).

4.5.1 A-B-A Design

The A-B-A design, as used in this study, comprises three distinct phases: the initial pre-assessment or baseline phase (A), an intervention phase (B), and concludes with a post-assessment phase (A). This SCED-MM study incorporates a qualitative component during the post-assessment phase.

4.5.2 Rationale for A-B-A Design

The appropriate SCED structure is dependent on the research questions under investigation (Barlow et al., 2009). An A-B-A structure, as described above, can quantify intervention effectiveness (Byiers et al., 2012). This speaks to the first research question: whether massed-PE is an effective treatment for rape-related PTSD and depression among university students in South Africa. Quantitative implementation measures, as described below, along with the qualitative component incorporated into the post-assessment phase of the A-B-A design, speak to the second research question: whether massed-PE is perceived as feasible, acceptable and appropriate to implement by university students seeking treatment for rape-related PTSD and depression in South Africa.

4.6 Data Collection

The three-phase A-B-A design was implemented as three-time points for data collection, during which the following measures were administered:

4.6.1 Time 1: Pre-Intervention

During this phase, potential participants completed a form that served to screen for eligibility and establish a baseline. The following measures were used:

- **PTSD Diagnostic Scale for DSM-5 (PDS-5)**: This 24-item self-report measure assesses PTSD symptom severity. It includes trauma screen questions to gauge trauma history and identify an index trauma, as well as 20 items for each symptom criterion within the DSM-5. It has demonstrated excellent internal consistency ($\alpha = .95$) and test-retest reliability ($r = .90$). It also exhibits strong convergent validity with other PTSD measures, such as the PTSD Checklist-Specific version and the PTSD Symptom Scale-Interview version for DSM-5, while maintaining good discriminant validity with the Beck Depression Inventory-II and the State-Trait Anxiety Inventory-Trait scale (Foa et al., 2016; see Appendix A).
- **Patient Health Questionnaire-9 (PHQ-9)**: A self-administered 9-item questionnaire used to assess depression severity. It has shown excellent internal reliability ($\alpha = .89$) and test-retest reliability (Kroenke et al., 2001). The PHQ-9 has been validated for use in the South African context among university students as well as in non-specialist care settings (Bhana et al., 2015; Makhubela & Khumalo, 2023; see Appendix B)

The next step in the pre-intervention phase was an intake interview of about 2 hours during which the participant and clinician-researcher met for the first time. During this interview, a brief clinical history taking was conducted with each participant. They were furnished with greater details about the study and introduced to the rationale for the exposure activities. Some of these discussions overlapped with the standard PE trauma interview conducted in the first session of Massed PE.

4.6.2 Time 2: During Intervention

At the start of each session, participants self-completed the following measures to monitor symptom progression during treatment. Furthermore, the during-intervention measures taken at the start of session 1 could be compared to the pre-intervention measures for an approximation of symptom stability.

- **PTSD Checklist for DSM-5 (PCL-5)**: A 20-item self-report tool designed to evaluate PTSD symptoms based on DSM-5 criteria, the PCL-5 measure serves multiple functions, including tracking symptom changes throughout and after treatment, screening individuals for PTSD, and aiding in provisional PTSD diagnosis (Weathers et al., 2013). The PCL-5 has strong internal consistency ($\alpha = .96$), test-retest reliability ($r = .84$), and robust convergent and discriminant validity (Bovin et al., 2016). Kagee et al. (2021) have validated the PCL-5 for use in the South African context (see

Appendix C). With their shared foundation in the DSM-5 criteria and symptom coverage, the PCL-5 and PDS-5 are comparable instruments for assessing PTSD. This is indicated by their strong psychometric properties, including high internal consistency, reliability and convergent validity. (Bovin et al., 2016; Foa et al., 2016).

- **PHQ-9**

4.6.3 Time 3: Post-Intervention

The during intervention measures were also administered at the end of treatment by the clinician-researcher to determine the effectiveness of the intervention by comparing these outcomes with those recorded at the start of session one, the beginning of treatment. The following additional measures were also administered by the clinician-researcher at post-intervention. They were administered in person, within a week following the final Massed-PE session. These measures were selected to assist in answering the research question as to whether Massed-PE is perceived as feasible, acceptable and appropriate to implement by university students seeking treatment for rape-related PTSD and depression in South Africa:

- **Implementation Measures:** This component consists of three sub-measures: the Acceptability of Intervention Measure, the Intervention Appropriateness Measure, and the Feasibility of Intervention Measure (Weiner et al., 2017). Each measure contains four questions rated on a 5-point Likert scale, ranging from 1 (Completely disagree) to 5 (Strongly agree). This allows participants to express their perceptions of the intervention's acceptability, appropriateness, and feasibility (see Appendix D).
- **Post-intervention Interviews:** Semi-structured individual interviews were conducted to explore participants' experiences living with PTSD and engaging in Massed-PE A flexible interview guide was used, allowing for evolution and refinement of questions as the interviews progressed (Creswell & Clark, 2018). The intention was to provide more nuanced, in-depth data on how participants perceived Massed-PE for rape-related PTSD and depression, particularly in terms of contextual factors that either facilitated or hindered their experience (Onghena et al., 2019). Discussions were focused on the feasibility, acceptability, and appropriateness of the intervention (see Appendix E).

4.7 Data Analysis

Visual inspection was employed to analyse the intervention outcome data, including pre-, during- and post-intervention data, to answer questions of effectiveness. A thematic

analysis was used to analyse the post-intervention interview data. This was triangulated with an analysis of the implementation outcomes to answer questions of feasibility, acceptability and appropriateness.

4.7.1 Visual Analysis

Visual analysis is a widely used method in SCED for evaluating single-case data, allowing researchers to assess the reliability and consistency of an intervention through the examination of graphed data (Kazdin, 2019). This approach provides a structured framework for interpreting and comprehensively understanding each participant's data (Lane & Gast, 2014). One key advantage of visual analysis is its ability to help researchers determine whether participants have achieved favourable treatment outcomes by analysing graphical representations of clinical measures (Lane & Gast, 2014).

For this study, visual inspection was used to evaluate three key aspects of each participants' data. These were: performance level, the mean performance within a given condition (whether baseline or intervention); data trend, the direction in which symptoms were progressing (per the PCL-5 measure); as well as stability and variability, the consistency or fluctuations in data across sessions (Kratochwill & Levin, 2014; Lane & Gast, 2014).

4.7.2 Thematic Analysis

The post-intervention interview data were analysed using thematic analysis, following Braun and Clarke's (2006) six-phase process, chosen for its systematic yet flexible approach. The process began with the researcher familiarising themselves with the data through transcribing and reading it whilst noting key observations. Next, meaningful units within the data were systematically identified and coded. These codes were then grouped into potential main and sub-themes. The identified themes were subsequently reviewed and refined to ensure coherence, with a thematic map created to visualize relationships. In the next phase, the themes are further developed, with clear definitions and names assigned. Finally, the themes are presented in an analytical narrative in accordance with the research questions, incorporating vivid and relevant extracts to illustrate key findings (Braun & Clarke, 2006).

Chapter Summary

Chapter 4 described the study aim and chosen methodology, giving an overview of SCED-MM and the chosen A-B-A structure and rationale for this in relation to the research questions. The sampling procedures, various data-collection time points and measures as well

as the data analysis methods, namely visual inspection and thematic analysis were explained.

Chapter 5
Intervention: Massed-PE

Chapter Overview

Chapter 5 provides a session-by-session overview of the Massed-PE intervention structure and agenda. The issue of treatment fidelity is discussed, followed by ethical considerations.

5.1 Intervention Overview

Out of the sample of 3 participants, 2 completed the intervention of 10 Massed-PE sessions. Participants have been assigned pseudonyms: “Nathi” and “Lindi”. The third participant, “Zibu”, dropped out following the second session. The intended duration of these sessions was 90 minutes as per the PE manual. In practise, sessions frequently overran by about 20 minutes. Using her clinical judgment, the therapist determined that the complexity of both Nathi’s and Lindi’s cases required this degree of flexibility in session timing. This adjustment was necessary to maintain an emotionally validating environment and to support effective therapeutic work within the otherwise rigid structure of Massed-PE. Most of the extra time was spent on post-exposure processing, following in-session imaginal exposure, and at the start of sessions, processing participants’ experiences of listening to the imaginal exposure recordings. The intended timeframe was a daily session for 2 weeks, with no sessions on weekends. Nathi adhered to this structure exactly, whilst Lindi postponed sessions on various occasions due to illness and exhaustion, such that her process was extended across an extra week. At the start of each session during this intervention phase, the PCL-5 (PTSD) and PHQ-9 (depression) were self-completed by the participants. Participants made audio recordings of each session to listen to in advance of the next session. Following Foa et al’s (2019) PE manual, the structure and agenda of sessions were as follows:

5.1.1 Session 1: Treatment Rationale and Trauma Interview

The first session provided participants with an overview of the treatment plan and the fundamental principles and rationale of PE. The session included a structured trauma interview to gather relevant trauma-related information, as outlined in the PE Manual (see Appendix F). This assisted in instances with numerous traumatic exposures where it was necessary to identify the index trauma, the most distressing or central traumatic experience, which would be the primary focus of treatment. Participants were then introduced to breathing retraining. This relaxation technique is aimed at promoting stress management in

general life rather than at specifically moderating exposure experiences (thereby becoming a safety behaviour), unless the participant was over-engaged. Lastly, participants were assigned homework. This involved looking over the treatment rationale handout, practicing daily breathing retraining exercises, and listening to the audio recording of the sessions.

Listening to the audio recordings, particularly of the imaginal exposure component of sessions (commencing in session 3), is essential for reinforcing therapeutic gains between sessions. These recordings provide structured opportunities for continued engagement with the trauma memory, promoting emotional processing and habituation within Massed-PE's condensed timeframe. The recordings may help sustain therapeutic momentum, reduce avoidance, and support the re-evaluation of maladaptive trauma-related beliefs, ultimately enhancing the effectiveness of Massed-PE (Foa et al., 2019).

5.1.2 Session 2: In Vivo Exposure Planning

During the second session, after a brief homework review, psychoeducation was provided to the participant on the common reactions to trauma. This bi-directional engagement is intended to elicit the participant's own trauma sequelae in a validating, universalising way, whilst revealing their avoidant behaviours and general PTSD symptoms. The rationale for in-vivo exposure was introduced, and participants were encouraged to ask questions. A hierarchy of avoided activities and situations was developed collaboratively to guide in vivo exposure activities (see Appendix G). Those rated relatively lower on a participant's subjective units of distress scale (SUDS) were assigned as homework along with continued breathing retraining practise, reviewing the common reactions to trauma handout, and listening to the session recording. The SUDS is a self-reported scale ranging from 0 (no distress) to 100 (extreme distress). Before beginning exposure activities, a personalized SUDS scale is developed for each participant, with individually meaningful reference points defined for scores of 0, 50, and 100.

5.1.3 Session 3: Initiating Imaginal Exposure

Following a homework review and in vivo exposure update, the rationale for imaginal exposure was explained in a manner personalised to each participant's experience. This was followed by a guided revisiting of the trauma memory. This involved participants closing their eyes and visualising the traumatic event and associated thoughts, feelings, and sensory information as vividly as possible, whilst recounting this experience in the present tense. Once the end of the trauma memory was reached, Participants repeatedly retold the memory

to maintain the exposure for about 45 minutes. Every five minutes, participants were asked to rate their level of distress using the SUDS, allowing the therapist to monitor their physiological and emotional engagement throughout the exposure. Then followed 20-30 minutes of post-exposure emotion processing. The intention is that by unpacking the thoughts, emotions and details that surface during the recounting of the trauma memory, these could be processed, contextualised and eventually integrated into the participant's internal world, rather than isolated and distorted. For homework, participants were instructed to listen to the session recording, practise breathing retraining, and continue with in-vivo exposure exercises, gradually moving up the exposure hierarchy to activities with higher SUDS ratings, as determined at the end of the session.

5.1.4 Intermediate Sessions (4-9): Continued Exposure and Processing

Subsequent sessions followed a similar structure to session 3 without the imaginal exposure rationale section. However, the focus during imaginal exposure soon shifted to trauma 'hotspots' – the most emotionally distressing moments within the traumatic memory, typically reflected in elevated SUDS ratings. These hotspots represent the portions of the memory that evoke the greatest emotional and physiological arousal for the participant at a given time. Targeting these moments can enhance the efficiency of emotional processing by concentrating therapeutic effort where avoidance is highest and distress is most intense, rather than revisiting aspects of the trauma to which the participant has already habituated. Throughout the imaginal exposure the clinician-researcher monitored levels of engagement and intervened when participants were or over-engaged due to excessive activation of the fear structure or under-engaged due to insufficient activation, both of which interfere with effective emotional processing. For the former, breathing exercises were encouraged, whilst for the latter, greater depth of detail was encouraged, and safety behaviours – avoidance strategies which temporarily reduce anxiety but ultimately prevent full emotional processing – were addressed. Once the index trauma was sufficiently processed such that it elicited insignificant SUDS ratings during exposure, any remaining time was used to focus on secondary traumas.

5.1.5 Session 10: Review and Relapse Prevention

In the final session, participants spent about 20 minutes on imaginal exposure followed by post-exposure processing. Time was spent reviewing their treatment experience and progress, as well as discussing relapse prevention and maintenance of learnt strategies.

During the last session, post-intervention assessments were administered.

5.2 Treatment Fidelity

Treatment fidelity involves the sustained monitoring, evaluation, and refinement of a study's reliability and internal validity, making it a crucial element of credible intervention research (Kratochwill & Levin, 2014). Additionally, treatment fidelity describes the extent to which the prescribed treatment, Massed-PE in this study, was adhered to during implementation (Shelton et al., 2023).

Multiple measures were taken to ensure treatment fidelity during this study. Massed-PE sessions were also audio recorded by the clinician-researcher and stored on a secure Google Drive folder. Dr Duane Booysen, the research supervisor and expert PE clinician-researcher, was the only other person to have access to this folder, granted for oversight purposes. Dr Booysen provided ad hoc supervision to the implementing clinician-researcher throughout the implementation of the Massed-PE intervention. The clinician-researcher (also referred to as 'the therapist') was an intern clinical psychologist and the author of this thesis. The therapist's decision to allow a degree of flexibility in session timing – frequently extending sessions by approximately 20 minutes – is noteworthy from a fidelity perspective, representing a minor deviation from the manualised guidelines.

5.3 Ethical Considerations

The researcher acquired ethical approval from the Rhodes University Human Ethics Committee (RU-HREC; see Appendix H). Given the sensitive nature of the research topic, participant well-being was a central focus throughout the study. Respondents who did not participate were referred to the Counselling Centre for support. Key ethical principles, such as informed consent, confidentiality, beneficence, and non-maleficence, were adhered to at every step of the research process (Bless et al., 2014). For example, participants were provided with a "Client Consent Form" containing vital study information as part of the initial recruitment screening document (see Appendix I). The following was addressed during the screening and intake process: the research goals, potential risks and benefits for participants and broader society, confidentiality, voluntary participation and withdrawal, along with a requirement for written informed consent. No notable detrimental incidents occurred during the intervention implementation.

Chapter Summary

Chapter 5 provided a session-by-session overview of the Massed-PE intervention structure and agenda. The issue of treatment fidelity was discussed, followed by ethical considerations.

Chapter 6
Massed-PE Case Studies

Chapter Overview

This chapter offers an idiographic overview of the three study participants. The history of each participant, including their trauma history, is briefly introduced. This is followed by an analysis of their presenting complaints. Lastly, case conceptualisations are provided according to EPT.

6.1 Nathi

6.1.1 Case Introduction

Nathi was a 21-year-old African female student in her second year of a Bachelor of Commerce Accounting degree at Rhodes University. She lived in an all-female university residence and was being financially supported by bursaries and her family. Nathi was raised by her grandmother, who passed away in 2021, and by her mother, she had no relationship with her father. Nathi had an older half-brother and sister, and 2 younger sisters. She had had another older half-brother who passed away in a car accident and a younger brother who passed away due to illness. Both losses, of which she had only vague memories, occurred in her early childhood.

When Nathi was 7 years old, living in her grandmother's house, she was repeatedly violently raped over a period of 2 years by her male cousin who was about 10 years her senior. This ended when she returned to live with her mother. When she was about 10 years old, she was raped by her brother who was about 5 years her senior, this happened twice. She expressed hesitation in reporting these latter sexual abuses. She had generally withheld them in previous therapeutic processes, not knowing whether to classify them as rape or not. She explained that her brother, unlike her cousin, was gentle and that she had not put up a fight. She describes thinking at the time, given her experiences with her cousin and having been provided no sexual education, that perhaps "this was a normal thing to happen to a person", even the right thing to do, though another part of her felt it must be wrong. In her confusion, she felt like an accomplice rather than a victim, feelings which had persisted. Furthermore, Nathi described three incidents where strange men attempted to sneak into her home or bedroom in 2017, 2019/2020 and 2021. The first occurred at her mother's house, the second at her lodgings near her school. These incidents were more benign, as the men were thwarted prior to any face-to-face encounter. The third incident occurred at her mother's house. A man

was hiding away, waiting for her in the outhouse toilet. She ran away before he made physical contact. Nathi perceived each of these incidents as attempted rapes.

In 2019, at age 16/17, as she matured and developed insight into the extent to which she had been violated in her earlier childhood, Nathi described no longer being able to convince herself that she was okay. Likely also triggered by the attempted rapes, Nathi experienced a significant deterioration in her mental health at this time. She was overwhelmingly fatigued, experiencing suicidal ideation and feelings of emptiness and shame. Following this deterioration, she disclosed the rape by her cousin to her mother. Her mother was supportive and suggested reporting it to the police, though Nathi decided against this, fearing reprisal by her cousin. In 2023, following another significant deterioration in her mental health, Nathi reported the rape by her brother to her mother. In this instance, she experienced her mother's reaction as minimising, encouraging her to "leave the past in the past, and get over it".

Nathi had experienced prior therapeutic processes. Throughout 2021 and 2022, she was receiving weekly psychotherapy through the university's Counselling Centre. In 2023, she partook in an exposure therapy research programme, similar to the present intervention. However, this involved weekly sessions of writing down her trauma and engaging in emotional processing. At this time, she focused on the trauma involving her cousin. She dropped out after 7 sessions, taking an extended leave of absence from university and was admitted for three weeks to a psychiatric hospital due to suicide risk. At this time, she was put on antidepressants. She was no longer on psychiatric medication at the start of this intake due to the inaccessibility of the medication, which she had found to be effective.

6.1.2 Presenting Complaints

Nathi presented with a range of symptoms characteristic of comorbid PTSD and depression. Nathi experienced intrusive distressing memories of the rapes perpetrated by her cousin. Two memories in particular still recurred. This indicated insufficient emotional processing of this trauma during her previous exposure therapy. However, the trauma memories causing her the most psychological and physiological distress, when triggered by external or internal cues, were those perpetrated by her brother. These were the memories she most avoided, having withheld them in previous therapies.

Nathi engaged in persistent avoidance of internal trauma cues, including of thoughts and feelings related to the trauma memories. This internal avoidance had manifested as a

feeling of numbness and emptiness. This persistent inability to experience positive emotions illustrated the overlap between Nathi's PTSD and depression. These chronic feelings of emptiness were activated during her adolescence. Nathi presented with a disrupted sense of self and inner cohesion due to this emotional numbing, explaining that the rape traumas "stole" her "identity".

In terms of external trauma cues, Nathi had become so accustomed to her avoidance-based coping mechanisms and safety behaviours that they seemed to her more like preferences or habits. This was not surprising, given that both rape traumas occurred in childhood, with most of her life having been lived in reaction to these traumas (Foa et al., 2019). Consequently, it was initially challenging to identify these avoidance behaviours. This may, in part, explain her lower self-report scores at baseline screening for PTSD. However, it became apparent that Nathi avoided wearing skirts, dresses or any form-fitting clothing. She avoided men in general, particularly having to sit next to them in lectures or at the library. When forced into these situations, she vigilantly monitored these men. She repeatedly checked whether she had locked the door to her residence room when inside it. Nathi reported that her vigilance was further exacerbated following the third attempted rape in 2021.

In terms of distorted negative cognitions and associated emotions following the rape traumas, Nathi described feeling completely alienated from the notion of male humanity, believing all men are "some kind of monsters" she felt intense anger towards men. In terms of the rape perpetrated by her brother, Nathi viewed herself as dirty and was disgusted by herself. She blamed her own inaction and lack of active opposition for the rape, and carried deep shame associated with this.

Nathi had withdrawn from friendships and found it draining to engage with others. She had lost interest in her accounting studies, about which she had always been passionate and driven. These symptoms started around 2019 when her mental health deteriorated, likely triggered by the attempted rapes around this time. These symptoms represented a further overlap between her PTSD and depression. Nathi had struggled with extreme suicidal ideation at various points since 2019, however, she was not suicidal during this intervention.

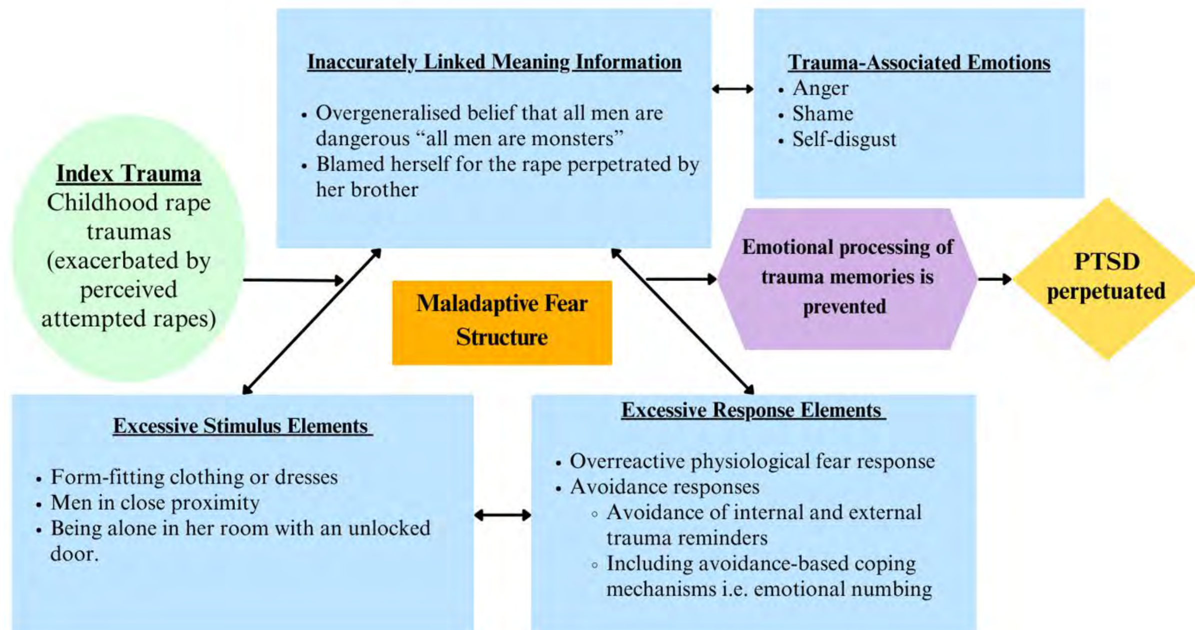
Also around 2019, Nathi noticed changes related to arousal and reactivity such as irritability, hypervigilance, jumpiness and difficulty concentrating. Nathi was a top achiever throughout school. However, these symptoms – compounded by the increased fatigue and sleepiness indicative of her comorbid depression – have significantly disrupted her university

studies. Nathi's hypervigilance and jumpiness became particularly pronounced following the third and most distressing attempted rape in 2021.

6.1.3 Case Conceptualisations

Figure 6.1

Visual Representation of Nathi's Case Conceptualisation



As illustrated in figure 6.1, Nathi developed a pathological fear structure following the childhood rape traumas perpetrated by her cousin and brother. This fear structure was reinforced by the attempted rapes during her teenage years. These traumas generally occurred in her family homes. Therefore, alongside her general fear of men and her discomfort in form-fitting clothing, her would-be safe spaces like bedrooms also became part of the excessive stimulus elements encoded in her fear structure. Excessive response elements included her overreactive physiological fear response, which fuelled her avoidance behaviours. Avoidance behaviours are also encoded as response elements and included Nathi's avoidance of external trauma reminders contained in the excessive stimulus component, such as sitting next to a man in the library. Inaccurately linked meaning information held within this fear structure was evident in her overgeneralised belief that all men are dangerous and in her distorted interpretation that she was to blame for the rapes perpetrated by her brother. Her associated feelings of anger, but particularly the shame and self-disgust she carried, were deeply distressing to Nathi. Emotional numbing functioned as a coping mechanism for Nathi to avoid these threatening emotional states that served as internal trauma reminders. Emotional numbing was also encoded in her fear structure's

response element. Nathi's fear structure functioned as a programme for avoiding any threatening cues associated with it, both internal and external (Rauch & Foa, 2006). Despite momentarily relieving her traumatic stress, the avoidance and safety behaviours Nathi developed perpetuated her PTSD and comorbid depression over time, never allowing her the opportunity for emotional processing to modify the erroneous associations contained within this fear structure (Lang, 1997).

The trauma memories involving her brother were chosen as the primary target of this intervention, guided by the understanding that gains in the emotional processing of the most distressing trauma may generalise to other traumas (Foa et al., 2019). Remaining sessions would be used to focus on the recurring intrusive memories involving her cousin and the hypervigilance and jumpiness exacerbated by the third rape attempt.

6.1.4 Meaningful Developments During Therapy

Nathi experienced elevated emotional and physiological reactivity during exposure activities. She reported a SUDs level as high as 100 on a scale of 0-100 at the start of her first imaginal exposure, and SUDs at 90 during the peak of some in-vivo exposure activities. This indicated activation of her fear structure as was necessary to modify its erroneous elements (Foa & Kozak, 1986). Significant reductions in Nathi's SUDs levels, as she habituated indicated successful emotional processing of her trauma memories.

The exposure to the memories involving her brother, allowed Nathi to feel the emotions and understand the sense-making processes of her 10-year-old-self in an intentional, coherent manner for the first time. This enabled present-day Nathi to empathise with her younger self and to view these events in the context of her current understandings of rape. Consequently, she was able to modify the erroneous elements of her fear structure, particularly the self-blame and shame she carried. Nathi characterised this experience as "connecting dots" In post-exposure processing Nathi expressed a new understanding for why she was unable to say no to her brother, "I took who I used to be with my cousin and brought it with my brother" she came to understand that her 10-year-old-self did not believe that no was an option "in such situations". This realisation was one of mixed emotions, sadness at the reality of what her brother had done to her and for the unrecognised "heroism" of her younger self, but also immense relief and a remarkable sense of freedom. By the end of the therapy, Nathi described an improved sense of inner cohesion and enhanced self-understanding from "connecting" with her emotions.

6.2 Lindi

6.2.1 Case Introduction

Lindi was a 25-year-old Black African female PhD candidate studying a creative art form at Rhodes University, where she had undergone all her tertiary studies. Her home language was Setswana. She resided on her own in off-campus accommodation and supported herself financially by working for her department and freelancing. Most of Lindi's friends during her undergraduate studies had moved away and Lindi felt she lacked a support structure on campus. Lindi identified as queer and had dated both men and women in the past. At the time, she had a boyfriend of almost 2 years but described their relationship as emotionally distant. Lindi had a sister 5 years her senior and a brother 11 years her junior. She was raised in a home with both of her parents, whom she characterised as having a loving partnership. However, she described her own relationship with her mother as verbally abusive, having been made to feel unwanted and burdensome. Lindi described how, after expressing her deep unhappiness at school, her mother responded: "Just make my life easier and die". In recent years, she had become closer to her father. However, she felt that he had not protected her enough during her childhood.

Lindi had a complex trauma history, spanning various forms of trauma. Aside from her childhood relational trauma rooted in her relationship with her mother, Lindi also reported several more discrete traumatic events. These included a serious car accident in her grade 11 year during which she, her father, and more so her brother, were injured. She also reported numerous experiences of rape and sexual assault by intimate partners and acquaintances. In grade 12, she was sexually assaulted by her boyfriend, who at the time had been her closest friend and confidant. During her undergraduate, Lindi had been in a relationship with a woman living in the same university residence as her, referred to by the pseudonym "Nomsa". This relationship quickly became "toxic", per Lindi's description.

Nomsa manipulated Lindi with threatened and actual self-harm to prevent Lindi from leaving the relationship. Eventually, in 2019, Nomsa violently raped Lindi. Furthermore, Nomsa invoked witchcraft during the incident, this was deeply threatening to Lindi in terms of her African Traditional Religion. The following year Lindi was raped by a male friend of a friend, referred to by the pseudonym "Luxolo", whom she was temporarily sharing a house with. She describes being caught off guard and freezing at the time. In 2023, when Lindi rebuffed a male acquaintance who had become possessive over her, he physically assaulted

her in a parking lot, grabbing her by the neck. This was the first incident she chose to report to the police. She found the police and judicial process to be extremely degrading.

Lindi had previously engaged in several therapy processes. Through the university counselling centre, she had about 7 sessions in 2018 and about 12 online sessions in 2020. These processes were supportive, but did not directly target the traumas. In 2022 and 2023 she saw a psychologist in private practise, she describes these sessions as pragmatic, focussing on tangible coping mechanisms. Lindi was not on any psychiatric medication at the time of this Massed-PE intervention, she had briefly tried antidepressants in the past but found the initial side-effects intolerable.

6.2.2 Presenting Complaints

Lindi presented with a variety of symptoms consistent with comorbid PTSD and depression. She experienced intrusive symptoms in the form of flashbacks, vivid nightmares and intrusive distressing memories of the trauma. She experienced some symptoms associated with the car accident, however, the memories which intruded most were the 2 rape incidents. External and internal trauma-associated cues triggered intense psychological and physiological distress reactions in Lindi. Lindi responded with avoidance, as is characteristic of PTSD.

In terms of external cues, Lindi avoided anything that reminded her of Nomsa or Luxolo. She got rid of any belongings which she associated with Nomsa. She avoided reading novels or going to a particular cake shop, both activities that they had shared. She avoided alcohol and particularly vodka which Nomsa had been drinking at the time of the rape. Lindi cut off any mutual friends she shared with Luxolo.

Lindi's avoidance of internal cues, particularly emotional states associated with the rape traumas was apparent. Referring to the reality of having been violated or victimised, she said, "I would do anything, even if it was not rational, to just cover it up, to change the narrative". This denial took various forms, including periods of promiscuity, self-blame, justifications of her perpetrators' actions, intellectualisation and overworking herself to shut down emotionally. Furthermore, Lindi described involuntary avoidance responses to internal cues. These included emotional numbing, a sense of detachment from her internal emotional experience, and episodes of feeling unreal or removed from herself. These experiences fall along the dissociative spectrum, particularly the latter, depersonalisation symptoms, which are recognised as a PTSD specifier in the DSM-5 (APA, 2013). These are deeply entrenched,

avoidance-based coping mechanisms that Lindi developed over her lifetime, originally emerging in reaction to childhood trauma.

Lindi had experienced negative alterations in cognition. She talked about hating people, no longer trusting them and feeling safer on her own. This was a marked departure from her prior “bubbliness” and optimism about humanity, which she now referred to as an illusion. This shift occurred during her university years following numerous interpersonal traumas. The repeated nature of Lindi’s traumatic experiences left her wondering whether her open and caring nature was to blame for her victimisation. Despite her vehement opposition to victim blaming, Lindi could not relinquish her distorted beliefs of self-condemnation, for freezing and not fighting back during the rapes.

In terms of alterations in mood and emotions, Lindi described feelings of self-hatred and disgust following the rapes and carries much anger, dread, hurt and shame. Lindi felt drained by her friendships and found herself withdrawing socially. In the past, Lindi was extremely passionate about and rewarded by practising and performing her art, but increasingly this too became tiring and devoid of feeling, and she had to force herself to do so. This fatigue, lack of motivation, anhedonia and increased negativity overlapped with her depressive symptoms.

In terms of alterations in arousal and reactivity, Lindi described being hypervigilant and easily irritated by others. This ongoing stress had also manifested in teeth-grinding during sleep. She engaged in self-destructive sexual behaviour, which left her feeling bereft. Lindi experienced a reduced appetite, poor sleep and impaired concentration, often zoning out, also symptoms which overlapped with her depression. Additionally, she spoke of numerous somatic symptoms since the rapes, including migraines and heart palpitations, these are common associated features of PTSD. Lindi reported fluctuating suicidal ideation over the prior 3-4 years, indicative of her depression, though this had never reached a concrete planning or action stage.

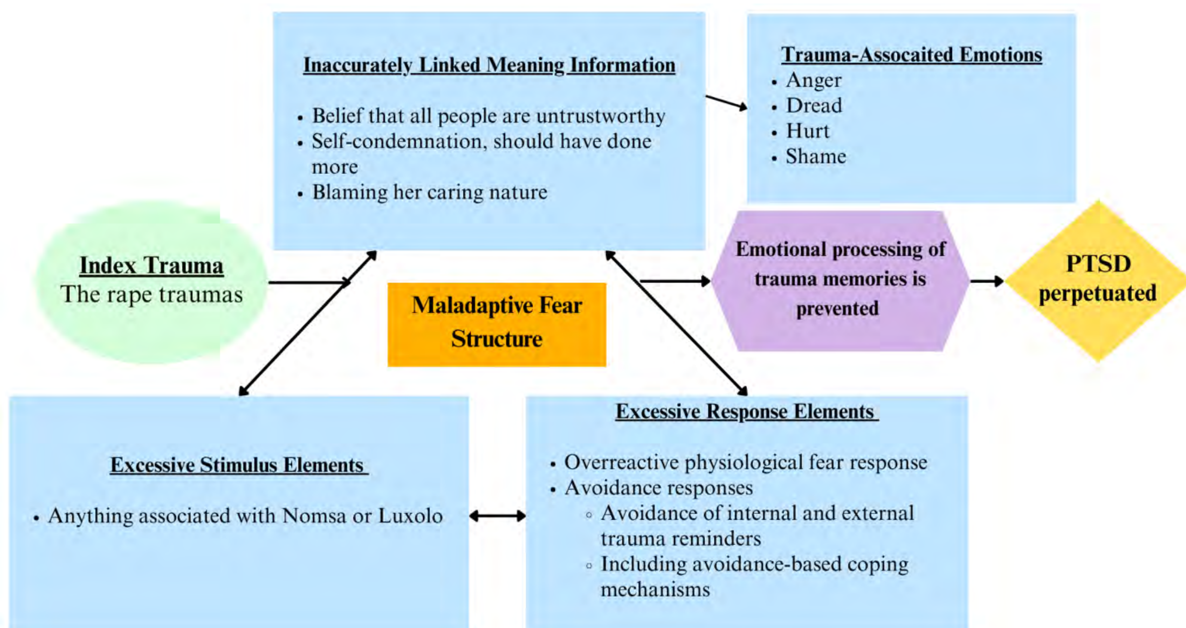
6.2.3 Case Conceptualisation

Lindi developed a pathological fear structure following the rapes, as illustrated in figure 6.1. Excessive stimulus elements contained in the fear structure comprised anything associated with Nomsa and Luxolo, including activities, places, objects and people. Excessive response elements included her overreactive physiological fear response, which fuelled her avoidance behaviours. Avoidance behaviours are also encoded as response

elements and included Lindi's avoidance of external trauma reminders contained in the excessive stimulus component, such as the smell of vodka, associated with the rape perpetrated by Nomsa. Inaccurately linked meaning information held within this fear structure was evident in her overgeneralised assertion that all people are untrustworthy; in her self-condemning interpretation that she should have done more to prevent the rapes; and in the appraisal that her own caring nature was to blame. Her related anger, dread, hurt and shame felt deeply threatening. Lindi's emotional disengagement – whether intentional or involuntary – was one of several coping mechanisms, described above, which she employed to avoid internal trauma cues. This disengagement represents another aspect encoded in her fear structure's response component. However, as evident in Lindi's restricted emotive and expressive capacity during engagement with her art, this maladaptive fear structure was preventing emotional processing of her trauma memories, shrinking her world and perpetuating her PTSD and comorbid depression.

Figure 6.2

Visual Representation of Lindi's Case Conceptualisation



Given her complex trauma history, Lindi had likely developed additional fear structures, undoubtedly one related to the car accident, evidenced by her flashbacks to this. However, the limited duration of the Massed-PE intervention, and the divergent trauma themes between the car accident and rapes, necessitated a choice between the two. The rape trauma memories were the most intrusive, distressing and avoided. Therefore, generalisability of exposure gains was maximised by focussing on the rape traumas and spending the

remaining time on the thematically similar sexual assault memories (Foa et al., 2019). Lindi had identified the rape by Nomsa as the more distressing memory, therefore, it was considered the index trauma and starting point. Furthermore, it is fair

6.2.4 Meaningful Developments During Therapy

Lindi eventually experienced elevated emotional and physiological reactivity during exposure activities. This indicates activation of her fear structure as was necessary to modify its erroneous elements (Foa & Kozak, 1986). However, due to her dissociative tendencies, Lindi had initially been under-engaged during exposures. She would zone out, feeling numb and detached rather than emotionally engaged. The PE manual makes provision for these presentations. Accordingly, the therapy was tailored to Lindi's needs by incorporating more sensory cues, such as the smell of vodka. Subsequently, Lindi reported SUDs levels as high as 100 when recounting hot spots in imaginal exposure and during the peak of some in-vivo exposure activities. Significant reductions in these SUDs levels, as she habituated, indicated successful emotional processing of her trauma memories.

During post-exposure processing across sessions, Lindi's distorted beliefs began to shift. It became evident to her that she had jumped from one extreme to the other in terms of her perspective on humanity. Her views softened as she endeavoured to find a more nuanced middle ground. In terms of her self-criticism, Lindi noticed that during imaginal exposures, both in session and listening to the recordings, she was able to extend more empathy to herself. The "why didn't I just" thoughts reduced significantly. Lindi was able to recognise her "critical voice" and self-blame as a response pattern across her traumatic experiences, stemming from childhood. Her emotional processing was evident in her renewed capacity to emotionally engage in the practise of her craft by the end of the process.

6.3 Zibu

6.3.1 Case Introduction

Zibu was a 23-year-old African female student in the second year of her postgraduate degree at Rhodes University. She resided in off-campus accommodation with a supportive housemate. She lost her bursary and though her mother provides support where she can, Zibu is accruing significant student debt. She was raised by both of her parents, describing them as a happy family until 2016 when her mother miscarried triplets. She remains very close to her mother, however, following the miscarriage, she felt that her father became cold and uncaring towards her. Zibu has a younger sister who is currently in her first year at Rhodes University,

and with whom she also has a close relationship. She also has a much younger brother, born in 2020.

In 2018 whilst Zibu was spending a year upgrading her matric, she was raped by a male peer. She visited his house and concluded he must have spiked her drink, as her memories of the night are incomplete. He denied having done so, claiming she had been drunk; however, she knows this was not the case. At the time she had not yet been sexually active but became pregnant and contracted sexually transmitted diseases from the rape. Her mother, a pastor in a Charismatic Christian church, was pro-life, believing abortions to be sinful and equivalent to murder. Though Zibu had not wanted to keep the baby, an abortion seemed out of the question. Following a difficult pregnancy and traumatic birth, Zibu's mother raised Zibu's daughter as her own. Zibu had told as few people as possible the truth. At the time, she had reported the incident to the police, who encouraged her to focus on her pregnancy and pursue the case when she was in a better mental state. She never reopened the case. She endured extreme victim-blaming from her father. The perpetrator still attempts to contact her, demanding to see his child.

Zibu had attended a few supportive counselling sessions in the past, through her local hospital shortly following the rape in 2018 and through the Rhodes counselling centre in 2020. Less than a week prior to the fist Massed-PE session, Zibu had been started on an SSRI by the outpatient department of the local psychiatric hospital.

6.3.2 Presenting Complaints

Zibu presented with a range of symptoms characteristic of comorbid PTSD and depression. According to screening assessments, Zibu met the criteria for both PTSD and a depressive disorder at the baseline screening and at the first Massed-PE session.

Zibu experienced intrusive symptoms typical of PTSD, including distressing memories and dreams of the night the rape occurred. External and internal trauma-associated cues triggered intense psychological and physiological distress reactions in Zibu.

Zibu coped through avoidance. External cues she avoided included the dark, she always slept with the light on. She avoided the suburb where the perpetrator's house was located, where the rape occurred. Creating music was an activity she and the perpetrator had collaborated on. Therefore, she avoided singing. Though she was forced to engage with men, she employed safety behaviours when doing so, always being on her guard. As far as possible, Zibu also avoided her daughter or acknowledgement of her daughter's maternity.

Zibu's avoidance of internal trauma cues had manifested in a pervasive emotional numbness and difficulty experiencing positive emotions.

Zibu had experienced marked alterations in cognition and mood following the rape. She had come to believe that all people were untrustworthy and was no longer willing to give them the benefit of the doubt. Zibu described losing confidence in herself following the rape. She reported feeling nothing in friendships and romantic partnerships, preferring to isolate herself, not "having the heart" to make an effort in relationships. She became apathetic about her future and lost motivation for her studies, which speaks to her depression and PTSD.

In terms of arousal-related symptoms, Zibu reflected that she would engage in destructive, reckless behaviour to gain a sense of control, particularly in relationships. She noticed an increase in her agitation and irritability towards others. She reported major difficulties with concentration, which had negatively impacted her studies, causing her to extend her degree. She struggled with sleep difficulties and a diminished appetite. These neurovegetative symptoms also indicate both PTSD and depression. Zibu had struggled with suicidal ideation since the rape, she had attempted suicide in 2021, ending up in hospital. She continued to have suicidal thoughts but reported that she was stable during this process.

Zibu had a history of drinking as a coping mechanism, to get to sleep, though she reported having had her last drink 2 weeks prior to the first Massed-PE session. Furthermore, Zibu was struggling with moments of overwhelming anxiety, which she described as panic attacks, during which she struggled to breathe.

6.3.3 Case Conceptualisation

Zibu dropped out following her second Massed-PE session. No exposure work had yet been conducted during sessions. However, the first in vivo exposure activity had been assigned to her for homework following session 2. It is unclear whether she completed this or not. During the second session, Zibu had expressed concern about her capacity for attending the therapy, given the approaching exams and her heavy academic load. She emphasised that it was a matter of limited time rather than avoidance. It became apparent that the daily session approach would not be viable for her. An alternative session schedule, working around her academic constraints, was devised. Zibu did not attend the third session and evaded efforts to reschedule or be referred.

Chapter Summary

Chapter 6 offered an idiographic overview of the three study participants. The history of each participant, including their trauma history, was briefly introduced. This was followed by an analysis of their presenting complaints. All three participants presented with symptoms of PTSD and co-morbid depression, as confirmed by the selected assessment measures. Lastly, case conceptualisations were provided according to EPT.

Chapter 7
Results

Chapter Overview

Chapter 7 presents the mixed methods results of the Massed-PE intervention. A visual inspection is employed to present the quantitative results of individual participants. These findings are supplemented with across-participant analysis. Thereafter, the results of the implementation measures are reported. Findings from a thematic analysis of the qualitative data are presented.

7.1 Quantitative Results

An idiographic case description was employed to contextualise each participant. This approach, as recommended by Barlow and Nock (2009), enables the investigation of causal relationships between variables. The quantitative data collected from the third participant, Zibu, before she dropped out of this study, were not sufficient for meaningful analysis. Table 7.1 reports on the sample characteristics.

Table 7.1

Sample Characteristics of Participants

Participant	Sex	Age	Race	Marital Status	Nationality	Home Language	Trauma Type	Trauma Complexity	Education	Employment	Prior Treatment
Nathi	Female	21	Black African	Single	South African	isiXhosa	Rape, attempted rape	Multiple, including childhood	Undergraduate	Full-time student	Multiple psychotherapies, short period of antidepressants
Lindi	Female	24	Black African	Boyfriend of 2 years	South African	Setswana	Rape, sexual assault, childhood emotional abuse, car accident	Multiple, including childhood, different types	Postgraduate	Multiple part-time jobs	Multiple psychotherapies, short period of antidepressants

7.1.1 Visual Inspection

Lane and Gast (2014) emphasize that visual inspection facilitates a systematic approach to the analysis and interpretation of participant data. Visual representation of clinical measurements helps to determine post-intervention functioning of participants (Lane & Gast, 2014). The data is evaluated according to three core analytical features in SCEDs: a) the level or mean performance in a condition, this refers to the average value of the data points within a specific phase of the study (i.e. baseline or intervention), b) the trend of the data, the refers to the overall direction of the data within a phase, whether it is increasing, decreasing or stable, and c) the variability or stability of the data, how much it fluctuates within a phase (Kratochwill & Levin, 2014; Lane & Gast, 2014). These core analytical features can be applied to the analysis of between-condition and within-condition data (Lane & Gast, 2014). The following section provides an idiographic presentation for the participants (n = 2) who completed the intervention.

7.1.1.1 Nathi

At intake, Nathi's PDS-5 score was 25. This is slightly below the PDS-5 clinical cutoff score for PTSD of 28 (Foa et al., 2016). Nonetheless, a PDS-5 score of 25 is still indicative of significant traumatic stress and general distress, falling into the moderate severity range according to commonly employed clinical guidelines (Foa et al., 2016). The decision, therefore, was made to include Nathi in the study. At the start of session 1 of the Massed-PE intervention, Nathi met the criteria for PTSD with a score of 39 on the PCL-5, another commonly used measure of PTSD symptom severity, with a clinical cutoff score of 33, placing Nathi into the moderately severe range (Bovin et al., 2016). This slight change in symptom severity between baseline screening and session 1 indicates minor variability in PTSD symptoms at the onset of the Massed-PE intervention.

Figure 7.1 demonstrates Nathi's treatment outcome in terms of PTSD. It compares Nathi's between-condition PTSD scores, a PCL-5 score of 39 at the start of the first Massed-PE session, with her post-intervention PCL-5 score of 29. A PCL-5 score of 29 falls within the moderate severity range and indicates sub-clinical PTSD.

Additionally, Nathi met the criteria for moderate depression at intake, as indicated by her PHQ-9 score of 12, with a clinical cutoff score of 10 (Kroenke et al., 2001). Figure 7.2 demonstrates Nathi's treatment outcome in terms of depression. It compares her between-condition PHQ-9 scores of 12 at baseline and 10 at post-intervention. Nathi experienced a

reduction in her PTSD symptoms. She continued to meet the criteria for moderate depression – albeit marginally.

Figure 7.1

Nathi: PCL-5 Between-Condition Scores

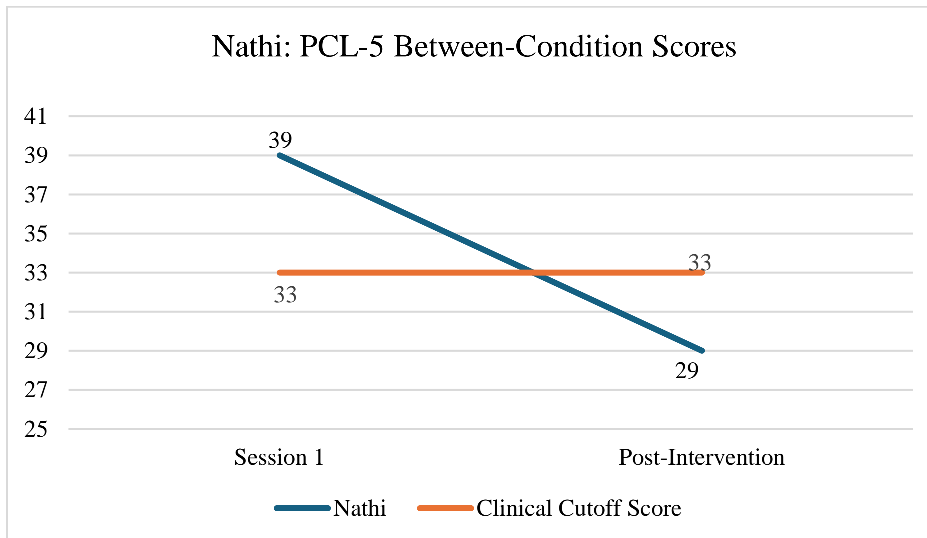


Figure 7.2

Nathi: PHQ-9 Between-Condition Scores

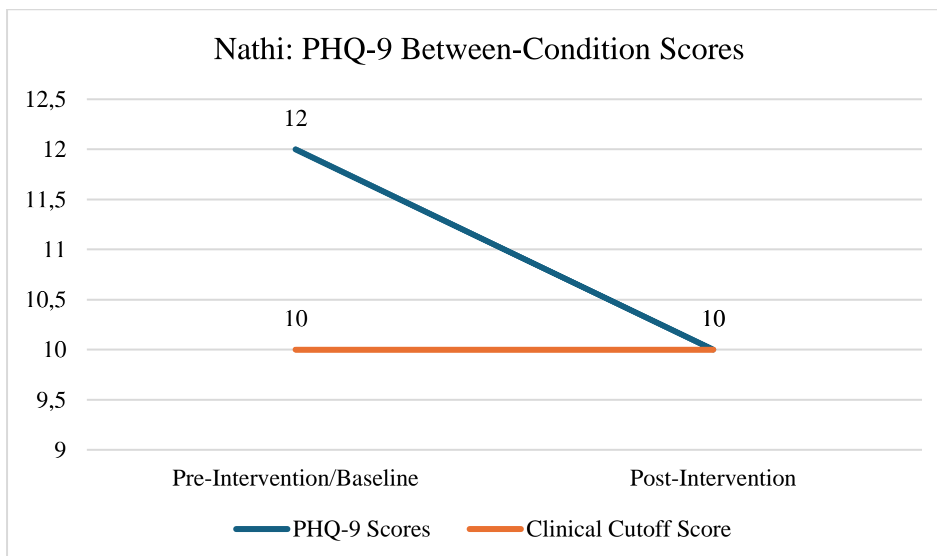


Figure 7.3 depicts Nathi's PTSD symptoms according to changes in her PCL-5 scores across the 10 Massed-PE sessions during the intervention phase. Between sessions 1 and 2, there was a slight increase, remaining stable between sessions 2 and 3. Following the commencement of imaginal exposure activities, first accounted for by the PCL-5 at the start of session 4, a gradual downward trend is evident. A more rapid but temporary increase is observed between the 5th and 7th sessions.

Figure 7.3

Nathi: PCL-5 Within-Condition Scores

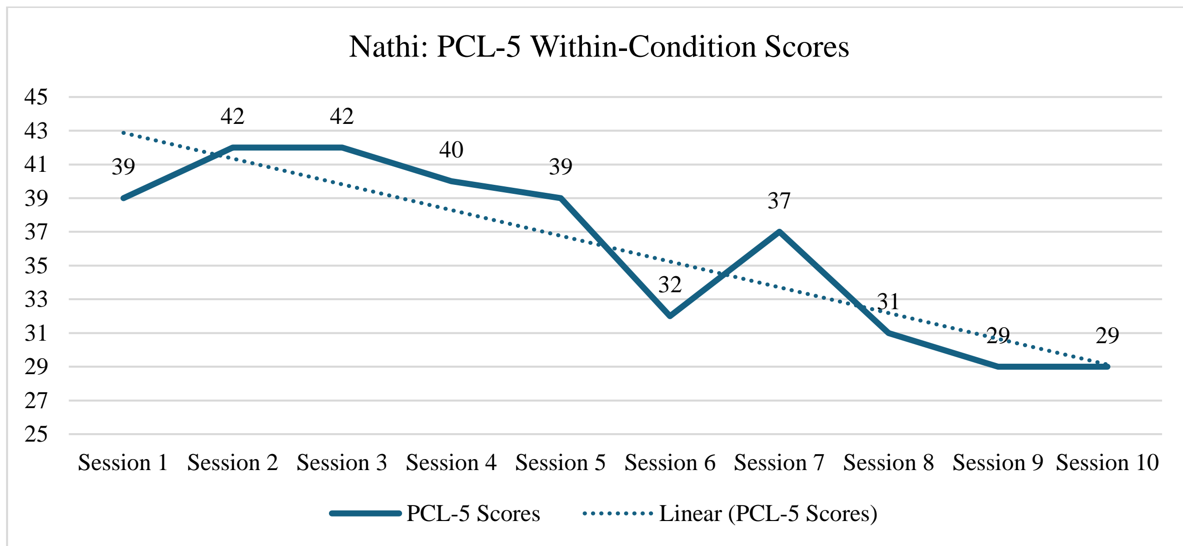


Figure 7.4

Nathi: PHQ-9 Within-Condition Scores

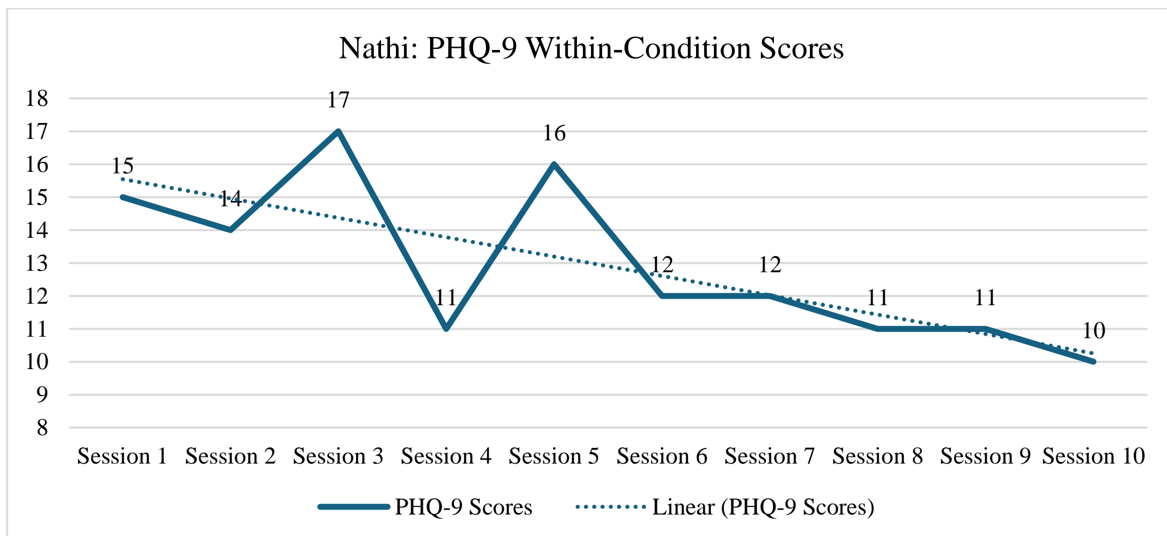


Figure 7.4 depicts Nathi's depression symptoms according to changes in her PHQ-9 scores across the 10 Massed-PE sessions during the intervention phase. A gradual downward trend is evident. Nonetheless, spikes are observed during the first half of the intervention.

7.1.1.2 Lindi

At intake, Lindi's PDS-5 score was 66. This is well above the PDS-5 clinical cutoff score for PTSD of 28. She met the criteria for PTSD, falling into the very severe range according to commonly employed clinical guidelines (Foa et al., 2016). At the start of session 1 of the Massed-PE intervention, Lindi continued to meet the criteria for PTSD with a score

of 65 on the PCL-5, an alternative measure of PTSD symptom severity, again placing Lindi in the very severe range (Bovin et al., 2016). This suggests relative stability in PTSD symptoms at the onset of the Massed-PE intervention.

Figure 7.5 demonstrates Lindi's treatment outcome in terms of PTSD. It compares her between-condition PTSD scores. Her PCL-5 score of 65 at the start of the first Massed-PE session is compared with her post-intervention PCL-5 score of 22. Lindi's PTSD was significantly reduced to sub-clinical levels by the end of the intervention.

Figure 7.5

Lindi: PCL-5 Between-Condition Scores

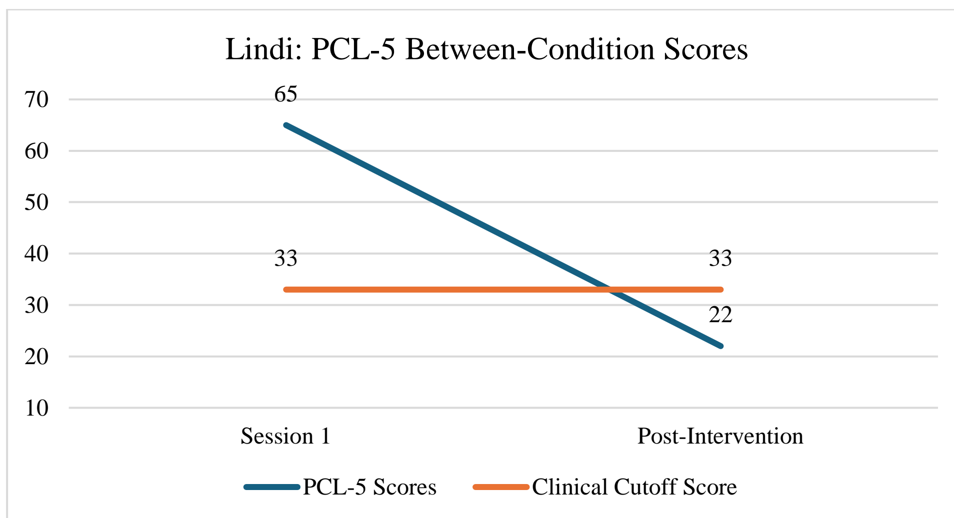
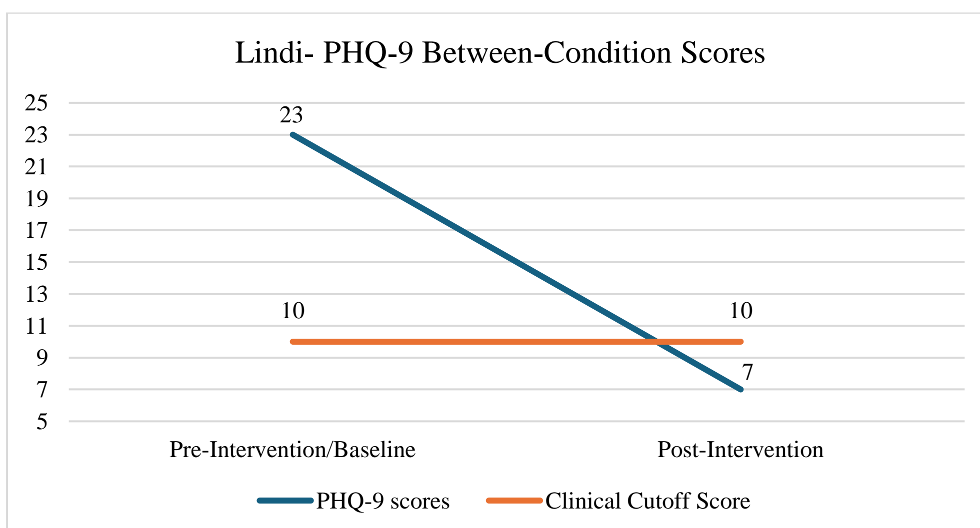


Figure 7.6

Lindi- PHQ-9 Between-Condition Scores



Additionally, Lindi met the criteria for severe depression at intake, as indicated by her PHQ-9 score of 23, with a clinical cutoff score of 10 (Kroenke et al., 2001). Figure 7.6

demonstrates Lindi's treatment outcome in terms of depression. It compares her between-condition PHQ-9 scores of 23 at baseline and 7 at post-intervention. Lindi's depression was significantly reduced to sub-clinical levels by the end of the intervention.

Figure 7.7 depicts Lindi's PTSD symptoms according to changes in her PCL-5 scores across the 10 Massed-PE sessions during the intervention phase. Between sessions 1 and 3, there was a slight increase. A rapid but unstained drop is observed following session 3. As of session 5, Lindi experienced a reasonably consistent downward trend with minor peaks and troughs.

Figure 7.7

Lindi: PCL-5 Within-Condition Scores

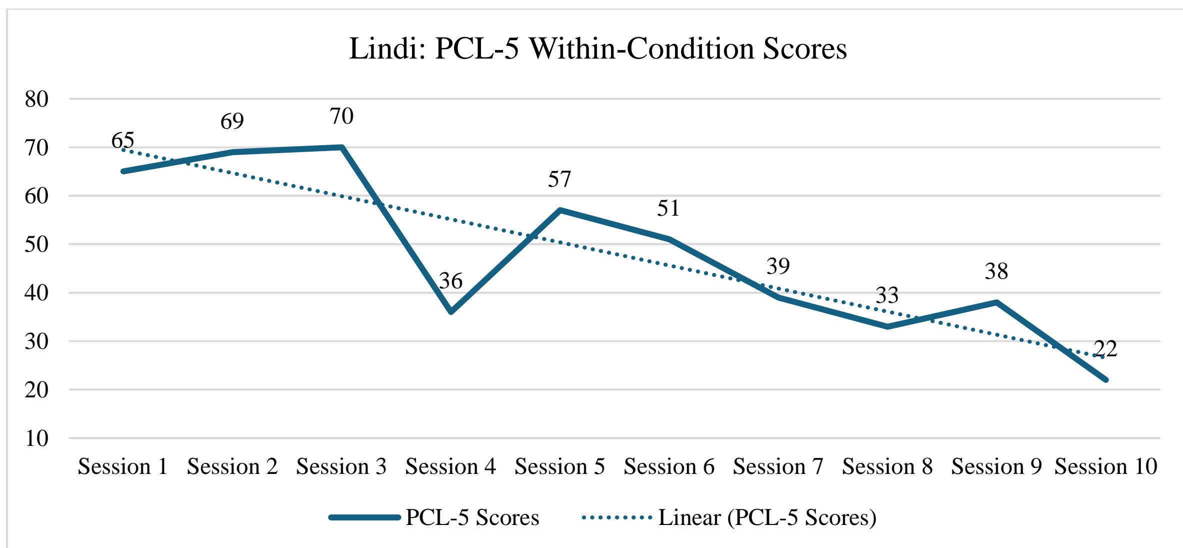


Figure 7.8

Lindi: PHQ-9 Within-Condition Scores

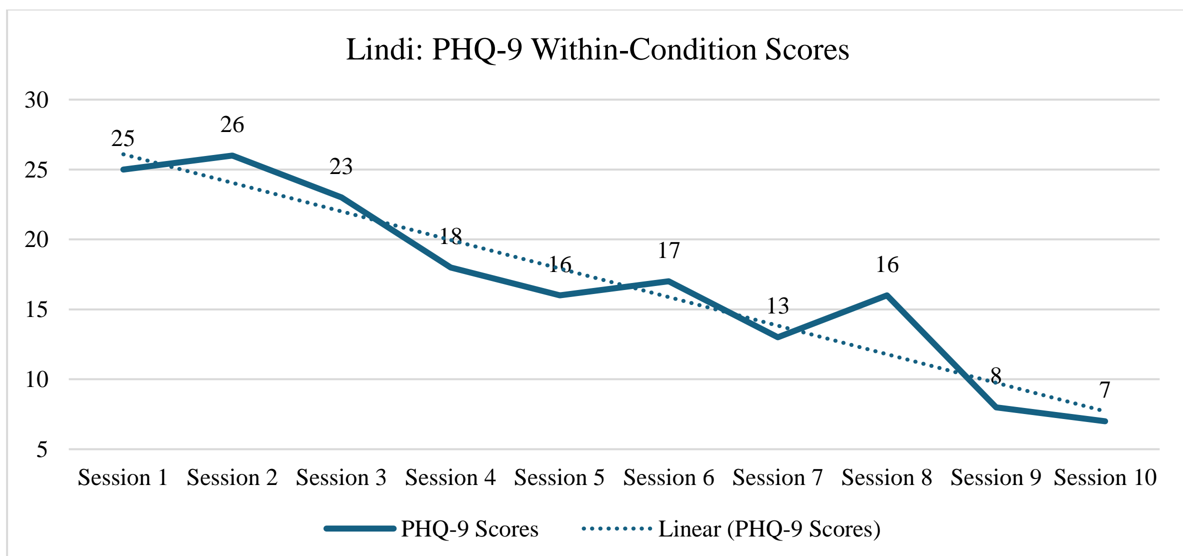


Figure 7.8 depicts Lindi's depression symptoms according to changes in her PHQ-9 scores across the 10 Massed-PE sessions during the intervention phase. A steady downward trend is evident, following a marginal increase between sessions 1 and 2. A minor spike in session 8 is observed.

7.1.1.3 Across Participant Analysis

Figures 7.9 to 7.10 demonstrate the within-condition combined trends across the two participants who completed the treatment. Figure 7.9 illustrates a downward trend in the PCL-5 scores across both participants. Overall, there appears to be a reduction in PTSD symptoms from the first session to post-intervention. In terms of depression symptoms, Figure 7.10 shows a downward trend in PHQ-9 scores across both participants. This indicates an overall reduction in symptoms of depression from the first session to post-intervention. In both figures 7.9 and 7.10, Lindi demonstrated a steeper downward trend, suggesting that she experienced more substantial PTSD and depression symptom relief than Nathi.

Figure 7.9

Across Participants: PCL-5 Between-Condition Scores

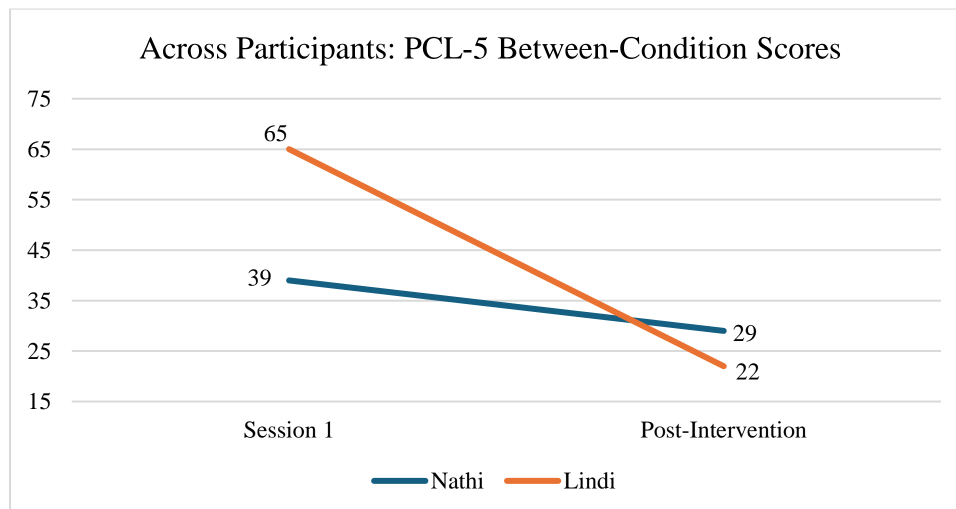
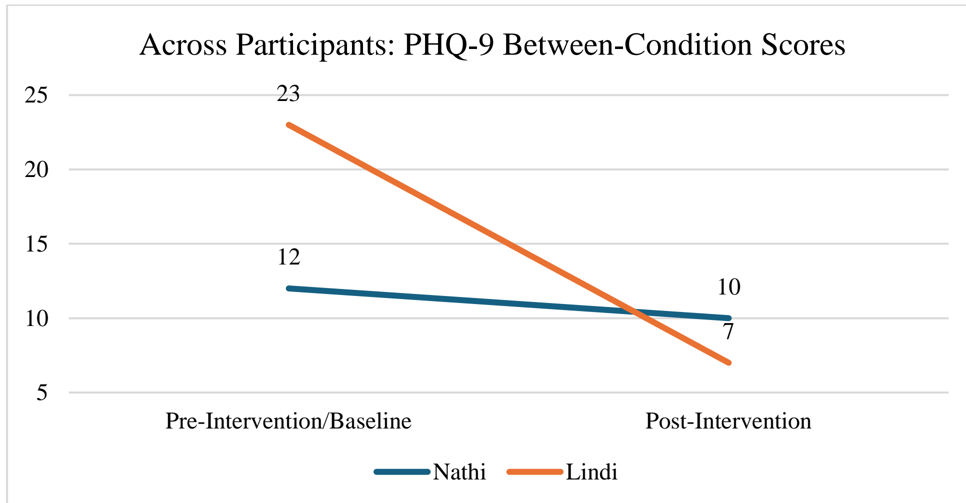


Figure 7.10

Across participants: PHQ-9 Between-Condition Scores



Figures 7.11 to 7.12 demonstrate the between-condition combined trends across the two participants. Figure 7.11 illustrates both participants' PCL-5 scores across the 10 Massed-PE sessions. Both participants demonstrate a downward trend in PCL-5 scores, indicating that habituation had taken place. Figure 7.12 shows PHQ-9 scores for both participants across the 10 sessions. Again, both participants experienced a downward trend in PHQ-9 scores. This suggests that the intervention was effective at treating PTSD and comorbid depression.

Figure 7.11

Across Participants: PCL-5 Within-Condition Scores

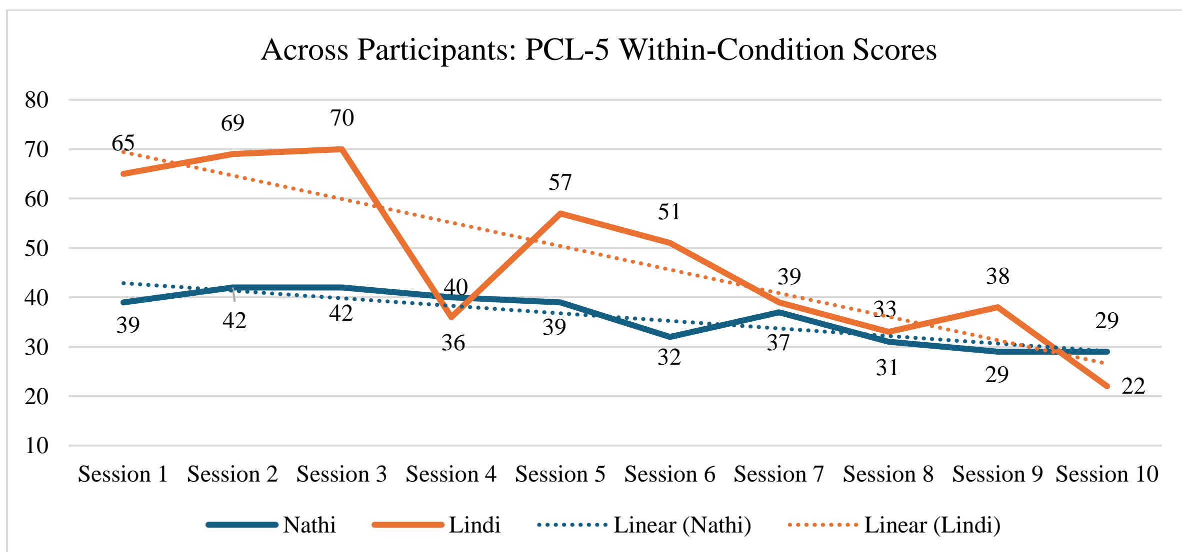
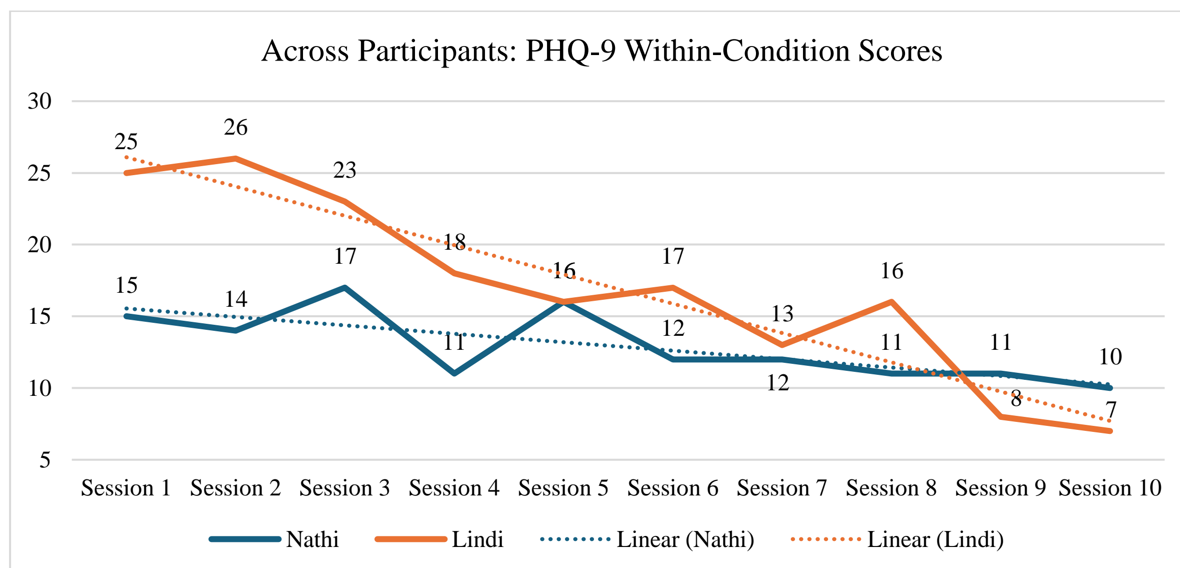


Figure 7.12

Across Participants: PHQ-9 Within-Condition Scores



7.1.3 Implementation Measures

Booysen and Kagee (2020) highlight the lack of implementation research regarding PE in South Africa and other low-resourced contexts. As discussed, an aim of this study is to establish whether university students perceive Massed-PE as a feasible, appropriate and acceptable treatment for rape-related PTSD and depression. To assist in this assessment, participants were asked to complete 3 post-intervention implementation measures developed by Weiner et al. (2017). This included the Feasibility of Intervention Measure (FIM), the Intervention Appropriateness Measure (IAM), and the Acceptability of Intervention Measure (AIM). Participants responded to items evaluating each measure using a five-point Likert scale ranging from "Completely disagree" to "Completely agree", as depicted in table 7.2.

Table 7.2

Key: Implementation Measures Likert Scale

1	Completely disagree
2	Disagree
3	Neither agree nor disagree
4	Agree
5	Completely agree

Figure 7.13 illustrates the FIM of Massed-PE. In terms of ease of use, both participants responded, "neither agree nor disagree", which is consistent with the discomfort

and fatigue they both reported at times during the therapy. Lindi responded "completely disagree" to whether the therapy seems implementable. This may reflect the challenges she faced in balancing the competing demands of therapy and daily life, as captured in the qualitative themes outlined below. Despite these concerns, the feasibility of Massed-PE is endorsed overall, with "agree" being the most common response. Both participants responded more positively than negatively, with a score of 16/20 for Nathi and 12/20 for Lindi. Nathi felt that the therapy was more feasible than Lindi did.

Figure 7.13

Feasibility of Intervention Measure (FIM)

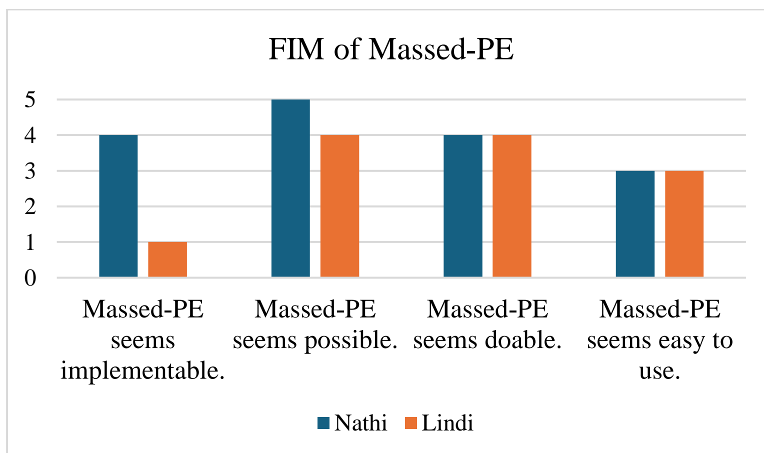


Figure 7.14

Intervention Appropriateness Measure (IAM)

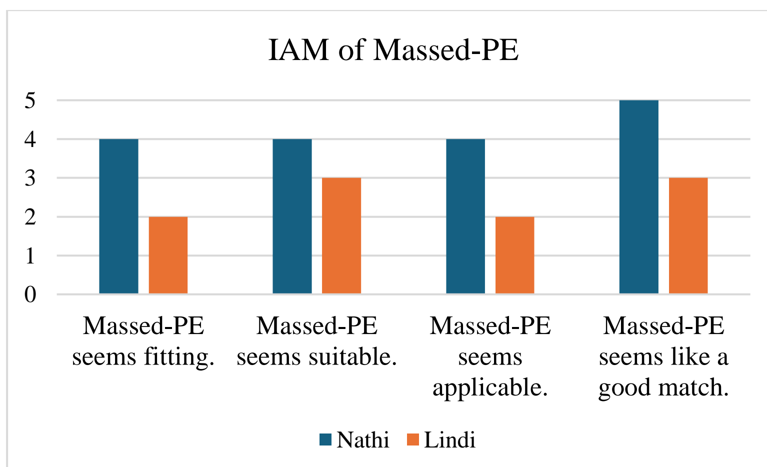


Figure 7.14 illustrates the IAM of Massed-PE. Nathi's responses conclusively indicate satisfaction in terms of appropriateness, responding either "agree" or "completely agree", with a score of 17/20. Lindi's responses are overall more ambivalent, with a score of 10/20. She responded "disagree" to the items asking whether the intervention seems fitting and

seems like a good match. This may reflect her perceptions that Massed-PE could be improved with greater consideration of sociocultural sensitivity, and her experience that Massed-PE did not address the full extent of her complex trauma history, as highlighted in the qualitative themes outlined below.

Figure 7.15

Acceptability of Intervention Measure (AIM)

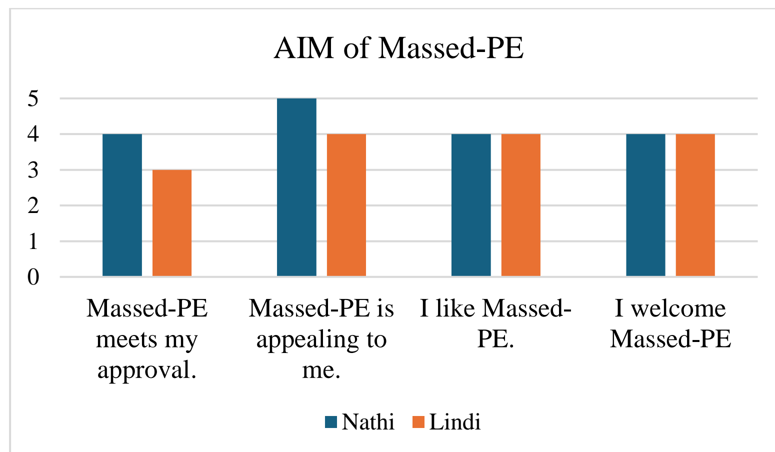


Figure 7.15 illustrates the AIM of Massed-PE. Both Nathi and Lindi endorsed the Massed-PE intervention in terms of acceptability, Nathi marginally more so, with a score of 17/20 to Lindi's score of 15/20. This indicates that this style of implementation would most likely be accepted by clients at organizations such as the Rhodes University Counselling Centre.

7.2 Qualitative Results

Qualitative findings can enhance the depth of understanding and complement quantitative findings by capturing subjective experiences, perceptions, and contextual factors that numerical data alone might miss (Hitchcock et al., 2010; Creswell & Clark, 2018). This is particularly valuable in psychotherapy and implementation research (Onhenga et al., 2019) Therefore, semi-structured post-intervention interviews were conducted with participants.

Thematic analyses of the textual data from the post-intervention interviews were conducted according to Braun and Clarke's (2006) six-phase process. A separate analysis was conducted for each participant who completed the therapy. This resulted in three themes for each participant, further supported by various sub-themes, as outlined in Tables 7.3 and 7.4.

7.2.1 Nathi

Table 7.3

Themes and Sub-Themes: Nathi

	Themes		Sub-Themes
7.2.1.1	Intervention Intensity	7.2.1.1.1	Not a First Step
		7.2.1.1.2	Sudden End
		7.2.1.1.3	Determination
7.2.1.2	Valued Features	7.2.1.2.1	Connecting with Emotions
		7.2.1.2.2	Common Therapeutic Factors
7.2.1.3	Essential but Inaccessible	7.2.1.3.1	Culture of Avoidance
		7.2.1.3.2	Navigating Cultural Norms and Clinical Needs

7.2.1.1 Intervention Intensity

Nathi found the Massed-PE intervention extremely challenging, particularly the imaginal exposure activities. She described imaginal exposure as *"the most uncomfortable thing I've ever done in my life"*. Listening to the imaginal exposure audio recordings between sessions was an additional challenge, presenting an opportunity for self-judgement: *"It's just that back in my room I just like to judge myself, and all these kind of things, of which in therapy I didn't have time for judging myself".* The three sub-themes: a) Not a First Step, b) Sudden End, and c) Determination describe Nathi's perception of the intervention intensity, but also her perseverance in the face of this intensity.

7.2.1.1.1 Not a First Step

Nathi expressed that she would not have gotten through the intervention had she not experienced multiple prior therapy processes, which taught her to articulate her internal psychological world, and prepared her to be able to confront her trauma memories and engage with her overwhelmingly negative associated emotions, as Massed-PE requires:

> *I don't think I would have done it. I seriously don't think I would have because no, it would trigger so many emotions at once. At first, I don't even want to talk, you know when you attend therapy it's hard to talk and now you must just go, straight up go to*

> *the thing and today you're facing it, tomorrow, you're facing it. It's not possible.*

Nathi felt that the confronting nature of the therapy, which was *"so straight to the point"* would cause people attending psychotherapy for the first time to drop out. However, she did acknowledge that perseverance may vary depending on the client's motivation:

> *It's scary. That's why I said I doubt a person who's starting therapy can do this if it's their first time, and especially if, I don't know, depending on their motivation though. But aaaiii, they will quit, they will quit.*

When asked to reflect specifically on her own experience, and whether the therapy was too confronting for her to handle and should be changed, Nathi responded: *"No, it's perfect for me".*

7.2.1.1.2 Sudden End

Nathi had an emotionally difficult week following the end of the therapy. She explained that the therapy *"provokes your emotions",* and that given the intensity of 2 weeks of daily sessions, the abrupt end left her feeling emotionally uncontained. Nathi made a comparison to the cessation of psychiatric medication, which is tapered rather than abruptly ended, suggesting: *"I was attending every day. At least now if maybe we say first, maybe twice a week, one a week, then to every second week, then one a month and then stop."* Referring to her suggestion of a phased termination, Nathi reflected:

> *"Stopping like that, making my body understand that and my mind, my everything understand that, okay, we are we going that way, we will stop actually, we are trying to stop, and all those kind of things. Because stopping like that, I'm not ready for it. Emotionally, physically I'm just not ready. But I feel like the slow process will make you ready and actually stop and be okay."*

Nathi believed that a gradual approach to termination would better support her emotional preparedness, as the intensity of the Massed-PE intervention had surfaced many difficult emotions, leaving her feeling emotionally vulnerable.

7.2.1.1.3 Determination

Having been in numerous prior therapy processes without experiencing transformative benefits, Nathi approached the Massed-PE intervention with measured expectations: *"So for me, I just took it as a trial and error kind of thing."* Despite her tempered expectations, the intense discomfort of the therapy, juggled alongside academic

demands, and the considerable fatigue characteristic of depression, Nathi persevered. She managed to adhere fully to the consecutive daily session structure, never once asking for a postponement. Reflecting on what fuelled her perseverance, Nathi explained:

> *That's the thing about me. I've always been desperate more than anything. It's desperation that leads me to do things, you know. It makes me do things outside of my comfort zone ... I was so desperate for healing ... so I think, yeah, it's me just wanting to be, to heal. That helped me. That gave me strength. It was more than dying or having no life at all.*

In this extract, Nathi talks about how desperation for healing propelled her through this intervention. In the last sentence, she explains that Massed-PE felt like the lesser evil, her alternatives being suicide or a continuation of her current reality, which felt lifeless.

Nathi also referred to her *"fighting spirit"* driven by a desire for justice. Despite conflicting feelings of guilt and shame associated with the traumas, and a strong desire at times to give up, she explained: *"I just knew I did, I deserved justice, and not justice because I'm saying maybe my cousin should be go locked up in jail. No. I'm like saying I deserve, just, I deserve a chance at life."* Nathi's determination not to give up and so give her trauma "the last laugh" gave her strength and fuelled her commitment to the Massed-PE process.

7.2.1.2 Valued Features

Nathi views her psychological recovery as an ongoing process, to which Massed-PE was a key contributor. It enabled her to *"connect all the pieces"* – implying consolidation and meaning-making. This is evident in Nathi's endorsement of the therapy particularly for others in a similar position to herself: *"It's a process, but it's worth it. Now I would advise a person I meet to definitely engage with this type of therapy, especially if they are like me".* Nathi felt she had improved in terms of an alleviated fear response, the hallmark feature of PTSD. However, she was still grappling with enduring psychological wounds, including difficulties with sense-of-self: *"I wouldn't say I have all my identity and all those kind of things, but I have an idea now on what the first thing to do."* Nonetheless, this excerpt suggests that a foundation has been laid for processing this deep-seated trauma sequelae.

The following two sub-themes: a) Connecting with Emotions, and b) Common Therapeutic Factors highlight particular aspects of the therapy which were valuable to Nathi.

7.2.1.2.1 Connecting with Emotions

Specific therapeutic factors refer to the techniques or mechanisms that are emphasised within a particular therapeutic modality, considered the active ingredients of that treatment. Nathi explained that what singled Massed-PE out from her prior therapy experiences was that it facilitated true engagement with, rather than avoidance of, the painful emotions associated with her trauma memories. For Nathi, the emotional processing was more impactful than talking through the specifics of what happened. Describing Massed-PE, as compared to her prior therapies, Nathi stated:

> *To tap into your emotions and go back to the moment and, you know, feel it again and all those kind of things. I never did that thing in my [previous] therapy sessions … yes, I did tell my story, how it happened and all those kind of things. But connecting with the feeling was never a thing.*

Nathi spoke about how Massed-PE enabled her to develop new self-insights by facilitating connection with her emotions, and gave the following example:

> *Nathi: I realized actually, I'm the one in control of my life … so I need to take full control of my life … Knowing that this whole thing cannot define me, I mean, I've always known that statement when they tell you that, okay, your past cannot define you. But there is knowing it [pointing to her head] and feeling it, your heart knowing, that is a whole different story…*
>
> Interviewer: *How do you think your heart learned that from this process?*
>
> Nathi: Connecting. I feel like it was connecting with my emotions.

In this excerpt, Nathi explained how the emotional engagement in Massed-PE allowed her to move past intellectual knowing to an experiential understanding. This felt sense that she is in control of her life was significantly more convincing to Nathi. She refers to several other new self-understandings, such as *"realizing what you used to call a weakness is not really a weakness."* Nathi described her mental health struggle as *"it's you having a misunderstanding with you"*, explaining that connecting with her emotions allowed her to *"resolve that misunderstanding"* so that she was no longer against herself, which freed her up to live her life. She stated, *"To connect with life, you need to connect with yourself",* which to her had come to mean not avoiding difficult emotions.

Another specific therapeutic factor of Massed-PE valued by Nathi was the sense of

empowerment the intervention gave her. Her empowerment is evident in her newly developed self-understandings, described above, which centred on reclaiming a sense of control and transforming her belief in her own weakness. Furthermore, Nathi explained how her perseverance during the intervention, despite the immense challenge the exposure activities posed for her, was itself empowering:

> *You actually feel empowerment when you push yourself to do those things you think are uncomfortable ... challenge yourself to do exactly the thing that you think you cannot do. And by doing it, you're already taking control of this whole situation.*

A broader aim of PE is facilitating a process for clients to reclaim control of their lives, realising that the anxiety is not inherently perpetual, and nor are they necessarily incompetent or out of control (Foa et al., 2019) The empowerment Nathi experienced reflects her internalisation of these insights.

7.2.1.2.2 Common Therapeutic Factors

Common therapeutic factors are the core elements that contribute to the effectiveness of psychotherapy across different therapeutic modalities, regardless of the specific theoretical orientation. Nathi spoke about how desperate her need had been to open up to someone who: *"…would understand me. Who would have that welcoming environment and all those kind of things, so that I don't feel crazy around them, and very stupid for admitting my thing."* Evident here is how much she valued common factors such as a supportive environment and empathy during the therapeutic process. Nathi appreciated the therapist's flexibility in terms of timing, suggesting that this felt validating: "*It's something I liked. I hate it when someone cuts me [off] and I still have something to say, especially when you're depressed, that feels like, okay, this person is valuing time more than me."* Nathi often talked about how the invalidation of her psychological distress, which she encountered in her relational environment, made her feel: *"I'm the only crazy one here".* The therapist's capacity to understand and resonate with her emotional experience countered her sense that she is irrational and abnormal. Nathi referred to a particular line that the therapist mentioned as part of the psychoeducation in the early stages of the intervention:

> *It was my first time hearing that line from a therapist. That actually, in therapy you can talk about the worst thing ever, you can talk about your worst mistake, you can talk about that thing you are ashamed of… So, it did encourage me to go all out when I'm doing the imaginal exposure. It did encourage me to go all out when I'm doing*

anything ... It felt like, okay, you won't be judged or anything like that. It did encourage me a lot. It played a huge part because it was always ringing in my mind.

The line she was referring to in this excerpt is contained within the PE manual, and is quoted in the conclusion of this thesis. It is evident that Nathi was profoundly impacted by this novel, explicit statement of unconditional positive regard, another common therapeutic factor. This lack of judgement stuck with her throughout the process and was essential in encouraging her, despite her shame, to confront her darkest, most emotionally jarring memories for the first time.

7.2.1.3 Essential but Inaccessible

A necessary space for emotional processing was out of reach for Nathi. She felt that her psychological distress had consistently been invalidated by her family and community. *"They compare physical injury with heart injury ... they just expected me to snap out of it,"* here Nathi explains that the rape traumas were regarded as if physical injuries which should heal naturally within a given timeframe. *"I will panic because, oh, I was supposed to get over this thing, and now here I am, I'm still stuck on it, now you feel stupid ... it makes you not want to talk to anyone,"* Nathi described how this invalidation caused her self-doubt, and dissuaded her from opening up about her trauma. Nathi felt that she never had an opportunity to address the psychological distress caused by the rape, not in organic conversation with an emotionally engaged other, nor through any counselling platform at her church or school. Nathi described desperately trying to find a psychologist when she was in high school, but no such resources were available in her hometown. University was her first opportunity to access counselling. Nathi, who had since heavily relied on these services, described how important this resource had been for her psychological stability: "*I'm always looking forward to having a therapist among anything, so that I can be sane."*

The following two sub-themes: a) Culture of Avoidance, and b) Navigating Cultural Norms and Clinical Needs highlight the need to address systemic emotional avoidance by expanding access to TFTs like Massed-PE at university counselling centres, offering a space for emotional processing.

7.2.1.3.1 Culture of Avoidance

Nathi explained that she did eventually tell certain community and family members that she was raped, adding that "…that's how far it can go. Because I know if I take it a bit deeper, the details of how I'm feeling about it and how it made me lose my mind … they'd be

like, oh girl, you're overreacting". Generalising her extensive personal experience of emotional minimisation to a discomfort with emotional vulnerability in her culture, Nathi expressed: "So I feel like this talking thing, with Africans, it feels like you are weak if you are talking or crying,". It was not easy for Nathi to disclose the rapes. Nonetheless, in these last 2 excerpts she suggested that the mental health stigma she experienced in her context was a more salient destabiliser than rape stigma. Others' discomfort with her resultant psychological distress and its manifestations, was the predominant cause of her feelings of alienation. Nathi understands this discomfort with emotional vulnerability as an intergenerational struggle among Black South Africans, rooted in systemic marginalisation:

> *Black parents do not understand ... they did not have such luxuries where they just express themselves ... the society at large is not giving us a platform to talk because our parents never talked, now they are projecting that to us.*

Nathi reflected that this discomfort around emotional vulnerability and the consequent invalidation impeded her recovery. Nathi described how out of fear that she was "*exaggerating the whole thing and overreacting",* she attempted to ignore the emotional pain associated with her trauma memories: "*Part of me really did try to move on and forget and made myself believe I forgot ... but it never did really work out because I always found myself still so depressed ... still not feeling anything".* It is evident from this excerpt that the norm of emotional avoidance fuelled her own avoidance, perpetuating her PTSD and depression, as per an EPT formulation.

7.2.1.3.2 Navigating Cultural Norms and Clinical Needs

Nathi explained that there are socially sanctioned approaches to dealing with psychological distress in her culture: "*African people believe in tradition ...other Africans believe in church and God, I believe in God too*". Though Nathi is religious, she is concerned that neither of these approaches *"get to the root"* of PTSD and depression, as they do not provide a platform for the processing of painful emotions. When Nathi advocated for attending psychotherapy instead, she described her mother's resistance to this foreign approach: *"She got mad because she said that I didn't want to be okay"*, in response, Nathi questioned:

> *Are we even dealing with it now if we go to traditional things ... it's like going to the pastor with the depression and asking him to pray for you. Sure, he prays but did the depression go now? No, because you need to talk about it, you need to feel it, you*

need to go through all that.

Nathi made the point that trauma, rape-related and otherwise, is a widespread issue in her community. She reported intergenerational patterns of trauma and depression in her own family, using her mother, older sister and baby nephew as examples. Nathi viewed these persistent patterns of psychological distress as evidence that access to psychotherapy is an essential and much-needed resource for her community. However, she also recognised that such an approach may be met with scepticism within her cultural context.

7.2.2 Lindi

Table 7.4

Themes and Sub-Themes: Lindi

	Themes		Sub-Themes
7.2.2.1	Overwhelming Demands	7.2.2.1.1	Daily Life Demands
		7.2.2.1.2	Intervention Demands
7.2.2.2	A Catalyst		
7.2.2.3	Sociocultural Sensitivity	7.2.2.3.1	Person in Context
		7.2.2.3.2	Therapeutic Alliance

7.2.2.1 Overwhelming Demands

Lindi found the Massed-PE intervention to be overwhelming, explaining that: *"It was very difficult throughout the process"*. The obligation to simultaneously juggle the demands of her everyday life as a student, including academic work and her paying jobs, added significantly to her sense of overwhelm. Lindi felt that competing demands may impede the feasibility of the Massed-PE intervention in the broader South African context. Two sub-themes: a) Daily Life Demands, and b) Intervention Demands elaborate on these concerns.

7.2.2.1.1 Daily Life Demands

Lindi made the point that, like herself, most South African adults are already overwhelmed by basic survival-level demands of life, they *"work unreasonable hours and have so many other responsibilities that it's not really practical to be in such an aggressive therapy"*. Lindi qualified these concerns regarding the feasibility of Massed-PE, adding that the process of bringing your SUDS down is a major commitment of time and emotional energy, requiring that one *"sit in it [the stress] and spend time with it"*. Reflecting on her

own Massed-PE experience, where attending sessions, listening to the session recordings or engaging in in-vivo exposures would completely drain her, Lindi explained that:

> *All those feelings coming out all at once was paralysing. So then it became: listen, we can't have a session today. I need to work. I need to get things done. I cannot be feeling like this. now ... the distractions made it too easy to avoid*

In this excerpt, using the example of session attendance, Lindi explained how she could justify her avoidance to herself, given the valid argument for prioritising more immediate needs. She justified under-engagement in between-session exposure activities in a similar way. However, Lindi clarified that her avoidance was not purposeful, circumstances undermined her efforts: "*It felt like I was still continuing a cycle even though I was trying to break it".* This illustrates the complexity of pinpointing intentional avoidance in contexts with so many potential mitigating factors. Lindi felt that she could have benefited more from the intervention had she not had these external limits on her capacity to emotionally engage.

7.2.2.1.2 Intervention Demands

The Massed-PE intervention was far more difficult than Lindi had expected. Coming into the process, she had hoped for some form of shock or hypnotherapy that would nullify the trauma memories and enable a continuation of her denial and avoidance. She had thought: "*Oh great I get to sort of remove the traumas and sort of you know be better"*. Listening to the audio recordings of the in-session imaginal exposure was a particularly jarring component of the intervention for Lindi: *"Listening to your own voice, listening to yourself get all emotional ... it was hearing myself say it and I think I've never heard myself say it. So that was really difficult".* Listening to herself talk about her traumas confronted Lindi with the reality of them, which she had been avoiding by way of denial, having previously mentioned that: "*It still felt like how can this be my life".* Lindi's lack of a support structure on campus intensified the emotional toll of listening to the recordings between-sessions, there being no therapist to contain her:

> *It was so painful, and then I just sit and I'm like oh, and you're dealing with this alone, and there's no one there that you can really speak to ... So, I kind of would ruminate a lot if I'm being honest.*

Ruminating and intellectualising more generally were mechanisms which Lindi employed as forms of emotional avoidance. She would, at times, revert to these coping mechanisms when emotionally overwhelmed. Lindi conveyed fears she had had, that through

sustained exposure her stress response would be triggered but would not abate, causing more psychological damage, and disrupting established psychological defences:

> *What if you just remain in that state of anxiety and it's more of re traumatization and sort of setting you even more back ... so now, things that your unconscious or subconscious sort of protected you from is now out in the open and so now there is no form of protection.*

Due to the negative valence (i.e. the negative emotional value) Lindi associated with the trauma memories, perceiving them as potentially emotionally overwhelming, Lindi expressed concern that exposure may be dangerous and lead to retraumatisation. This misconception is common among those who have not yet experienced or observed habituation in action (Foa et al., 2019). Nonetheless, Lindi maintained these concerns post-intervention, not for herself, but for potential future clients, wondering whether her personal coping mechanisms, such as intellectualisation and dissociation, had been emotionally protective, preventing her from becoming overwhelmed.

7.2.2.2 A Catalyst

Massed-PE was not the cure-all that Lindi had hoped for. This is not surprising given the complexity of her trauma history. Across her lifetime, and in response to multiple traumas, Lindi developed entrenched avoidance-based coping mechanisms, which distorted her relationship with herself and the world. Lindi referenced some of these coping mechanisms whilst reflecting on disruptions to the therapeutic process, caused by her complex trauma presentation:

> *What I struggled with was before we could even get to actually dealing with the trauma we were sort of trying to get me to stop my habits of dissociating ... [and] reminding me to, you know, don't intellectualize your feelings, you need to feel.*

Furthermore, Lindi felt that the two-week Massed-PE intervention could only partially address her psychological distress given the multiplicity of her trauma history: "*I feel like I could have left here so much better had it just been like one time. Had it just been like one assault"*. Lindi explained that the traumas were each *"rooted in something different"*, referring to a complex landscape of associated emotional wounds. She reasoned that this multiplicity limited the *"ripple effect"*, the generalisability of exposure gains across different trauma memories, particularly in terms of processing the emotional content.

Nonetheless, Massed-PE was able to accommodate Lindi's complex presentation. Lindi valued her Massed-PE experience, responding: "*I do think it was worth it ... I'd definitely do it again,"* when asked whether she would have signed up for the therapy knowing its limitations. Alongside the intervention's focus on habituation, identifying and modifying Lindi's long-standing maladaptive coping strategies was a key therapeutic mechanism. As Lindi explained:

> *A lot of the breaking down of the coping mechanisms did play a huge part in the therapy and did help quite a lot in terms of, after the two weeks... there's a lot that I will carry on or try to continue ... I think definitely being more kinder and compassionate to myself.*

Evident from this excerpt are the breakthroughs in terms of self-insights which Lindi gained from addressing her maladaptive coping mechanisms. Self-blame is an avoidance-based coping mechanism which has caused Lindi deep psychological pain across her lifetime. During the Massed-PE intervention, she recognised self-blame as a response pattern across her traumatic experiences. In the above excerpt, she references a felt sense of compassion towards herself, which she developed during the intervention, other times described as, *"I've awoken the hand on my shoulder".* Lindi viewed these new insights as foundational to her ongoing recovery explaining that *"I feel like ripping the band-aid* [a reference to the massed-PE intervention] *sort of helped me start a different conversation with myself"* However, Lindi believes that she will need more therapy in the future to specifically target traumas that remain unaddressed, and suggests that the intensive Massed-PE intervention be reinforced with follow-up sessions to "balance it out". Lindi came to perceive Massed-PE not as a cure-all, but as a catalyst for recovery in complex trauma cases.

7.2.2.3 Sociocultural Sensitivity

Lindi contended that for the Massed-PE intervention to be appropriately implemented in South Africa, it must account for the country's particularly intricate sociocultural dynamics. Referring to the intervention's origins in the U.S., Lindi reflected: "*It's not[developed] by us*, *so there's not really questions that best articulate some of our experiences* "Lindi felt that there was *"room for improvement"* in terms of Massed-PE's sociocultural sensitivity. She believed that explicit recognition and welcoming of a client's full range of sociocultural identities during implementation would add significant value in this regard. Furthermore, Lindi emphasised the importance of a strong therapeutic alliance in

navigating sociocultural incongruities and the inevitable identity-based differences within the therapeutic space. The sub-themes: a) Person in Context, and b) Therapeutic Alliance expand on these inputs.

7.2.2.3.1 Person in Context

Lindi made the point that in South Africa, it is likely that therapist and client will be faced with navigating differing sociocultural identities, as was the case during this Massed-PE intervention. Apartheid's legacy in South Africa has rendered race a central sociocultural marker, influencing and intersecting with identities like class, language, culture, and spirituality. Considering this, Lindi explained the significance of being of a different race to her therapist in terms of the potential for misunderstanding: "*There's like the reality that as a black woman and as a black person and you as a white woman there's just certain experiences that we will never understand of each other.* Lindi provided further insights into her discomfort, describing a previous therapeutic process where the white therapist's disregard for her culturally sanctioned distress caused her to feel invalidated, judged and uncontained:

> *My previous therapist had just absolutely no way of guiding and being there, she was unable to be there because it didn't make sense to her. And so, the fear of just that re-invalidation sort of happening again and the feeling of I'm being ridiculous … I wasn't going to allow it to happen here… So, I didn't go into the needed depths because I wasn't going to allow you to even get the chance to make me feel like it is crazy or judge me.*

This excerpt illustrates how latent and unresolved sociocultural tensions are carried into the therapeutic space, subtly shaping the dynamics within it. Furthermore, the omission Lindi referenced impeded her emotional processing of the trauma memory involving the rape by Nomsa. There was a spiritual component to this trauma memory, the details of which Lindi avoided during imaginal exposures. The therapist did not have the necessary understanding of African Traditional Religion to pick up on the extent of this omission to challenge this avoidance, particularly not in terms of emotional gravity. As Lindi explained: *"Because you don't know about it, like you don't have experience in it or an understanding of the African spiritual realm, you may not have understood how much pushing that might have needed".* Keeping a respectful distance from that which she did not understand, the therapist colluded with Lindi's avoidance. Additionally, the therapist was not sensitised to Lindi's fear

of invalidation, which was bolstering this avoidance.

This example illustrates how a lack of sociocultural sensitivity can impede Massed-PE effectiveness and acceptability. This oversight was eventually addressed. However, not enough sessions remained to thoroughly process this trauma hotspot. Lindi suggested that therapists implementing Massed-PE should be trained in cultural sensitivity so that they are equipped to proactively welcome the socially marginalised aspects of a client's identity from the outset of therapy. She suggested that greater focus on these identities during intake would convey affirmation: "*Even like in all the intake forms they don't really ask anything that is really related to blackness and Africanness…so all of those things sort of get overlooked".* Additionally, Lindi suggested that exploration of these identity-related aspects of the trauma could be welcomed through targeted prompts during imaginal exposure:

> *I feel like for there to be that kind of safety, it will be not just saying what are you feeling, what are you seeing [but rather,] how does that feel for you spiritually …so it's like sort of opening the space for there to be an opening [up] about that.*

Lindi voiced a further concern regarding the sociocultural sensitivity of Massed-PE. She suggested that even without a language barrier, difficulty verbalising emotional content may be a therapeutic obstacle in some South African cultures: "…*just not knowing how to talk about your feelings at all, because even in your own language you could be someone who just avoids to speak, who avoids to you know express themselves."*

Lindi has highlighted that a lack of cultural attunement can hinder the therapeutic process, suggesting that deeper integration of sociocultural understanding is essential for optimising outcomes in Massed-PE, particularly in the diverse South African context.

7.2.2.3.2 Therapeutic Alliance

Despite highlighting the intervention's margin for improvement in terms of sociocultural sensitivity, Lindi felt that the therapeutic alliance went a far way to counteract the feelings of alienation or anticipated invalidation engendered by the disparate identity markers between herself and the therapist.

Lindi explained how the genuine sense of care, respect and professionalism shown by the therapist, balanced by some light-heartedness, set her at ease: "… *so that immediately allowed the space for me to just be, you know, myself".* Lindi explained how, within the safety of a non-judgmental therapeutic alliance it was possible to address sociocultural

disconnects or misunderstandings:

Even if you did say something that was making me uncomfortable, the space was safe enough for me to be like, oh, I don't like that. Don't say that, or that's weird. You know? So I also didn't feel power dynamics. I didn't feel like you're gonna judge me, or I didn't feel like I had to say specific things.

Lindi felt that the mostly non-directive intake session was essential. This was a validating experience which laid the groundwork for a strong therapeutic alliance, such that when the structured Massed-PE sessions began, this did not feel as jarring, as Lindi explained:

You opened up everything from the beginning. So you allowed me to vent in our first intake session. I literally just told you everything, and you allowed me to. You gave me the space and the platform to and you allowed me to also direct and guide the emotions …which then created a safe space… as time went on, when things started to get more structured, it didn't feel invasive.

For similar reasons, Lindi expressed appreciation that the therapist was not overly rigid in terms of session timing.

Chapter Overview

Chapter 7 presented the mixed methods results of the Massed-PE intervention. A visual inspection was employed to present the quantitative results of individual participants, supplemented by across-participant analysis. Implementation measure results were reported. Lastly, findings from thematic analyses of the qualitative data were presented.

Chapter 8
Discussion

Chapter Overview

Chapter 8 presents a discussion of the quantitative and qualitative results of this study, in relation to the extant literature, to address the study's research hypothesis and questions.

8.1 Summary

This study aimed to investigate the effectiveness, feasibility, acceptability and appropriateness of Massed-PE for treating rape-related PTSD and comorbid depression among South African university students. This research was grounded in a context marked by high prevalence rates of PTSD, depression and experiences of sexual assault mong students, forming a complex triad of influence, further compounded by South Africa's sociocultural and economic intricacies (Bantjes et al., 2023; Jewkes et al., 2022; Makhaye et al., 2023; Stevenson et al., 2023).

The lack of access to evidence-based TFTs on South African university campuses – coupled with the scarcity of implementation research on TFTs like PE, and especially Massed-PE, in LMICs like South Africa – further informed this research (Bantjes et al., 2023; Booysen & Kagee, 2020). This mixed methods study, SCED-MM, was designed according to SCED methodology, with an embedded qualitative component, focused on a condensed format of standard-PE.

8.2 Intervention Effectiveness

To examine the effectiveness of the intervention, the present study aimed to test the hypothesis that massed prolonged exposure therapy would improve symptoms of rape-related PTSD and depression among university students in South Africa.

Nathi experienced a slight change in symptom severity between baseline screening and session 1, indicative of minor variability in PTSD symptoms at the onset of the Massed-PE intervention. This may have been caused by natural symptom fluctuation (Biggs et al., 2019). Alternatively, introducing Nathi to the intervention during intake may have heightened her anticipatory anxiety ahead of therapy, impacting her PTSD scores (Asmundson et al., 2019; Grillon et al., 2010). Furthermore, intake psychoeducation heightened Nathi's recognition of symptoms like avoidance, which she had previously regarded as personal preferences, and may not have reported at baseline.

At post-intervention, Nathi's PTSD score was sub-clinical. Massed-PE was successful in reducing Nathi's rape-related PTSD symptoms from the first session to the last so that she no longer met the PTSD diagnosis. However, notable symptom levels were still present, with both her pre- and post-intervention PTSD symptom severity falling in the moderate range. Therefore, her overall improvement was limited. Nonetheless, initial score variability should not discount the relatively steady downward trend observed in her within-condition PTSD scores across the 10 Massed-PE sessions. This downward trend was particularly evident once exposure activities began; this is consistent with the analysis that Nathi may have been experiencing anticipatory anxiety ahead of engaging in the exposure work.

In terms of depression, Nathi's PHQ scores were reduced from baseline to post-intervention. Nathi continued to meet the criteria for depression, though only marginally, a gradual downward trend was evident in her within-condition PHQ-9 scores across the 10 Massed-PE sessions. The literature suggests that comorbid depression can hinder an individual's ability to achieve optimal emotional engagement during PE treatment. This is due to increased levels of emotional numbing, emotional dysregulation, overgeneralised memory, and maladaptive cognitive processes such as increased negative appraisals and ruminative response styles (Angelakis & Nixon, 2015; Beevers et al., 2007; Brewin et al., 2010; Dalgleish et al., 2008; Jaycox & Foa, 1996). These effects appear to be especially pronounced when depression predates PTSD or presents as the more dominant condition, both of which may apply in Nathi's case (Angelakis & Nixon, 2015; Foa & Kozak, 1986). This may explain Nathi's more limited symptom improvements.

Furthermore, research shows that individuals with comorbid PTSD and depression may show a more delayed response to treatment than individuals with either one of these disorders (Green et al., 2006).

Lindi demonstrated relative stability in her PTSD symptoms at the onset of the Massed-PE intervention, with symptoms indicative of very severe depression at both pre-intervention and the start of session 1. At post-intervention, Lindi's PTSD score had been significantly reduced to sub-clinical levels. She no longer met the criteria for PTSD after a 2-week period. Lindi's within-condition-PCL-5 scores demonstrated a downward trend across the 10 Massed-PE sessions, with 1 major but un-sustained decline in symptoms. This rapid decrease is believed to reflect short-term relief driven by avoidance, rather than meaningful therapeutic progress. Notably, it coincided with a period of under-engagement from Lindi following the start of exposure activities (Foa et al., 2019; Rauch & Foa, 2006).

In terms of depression, Lindi's symptoms were significantly reduced from severe depression at pre-intervention to sub-clinical levels at post-intervention. She no longer met the criteria for depression after two weeks of massed-PE. Lindi's within-condition PHQ-9 scores across the 10 Massed-PE sessions demonstrated a steady downwards trend, with a minor peak towards the end consistent with exhaustion reported by the participant at his stage of the process, who felt drained by the competing demands of the intervention over and above her day-to-day life.

The quantitative findings, tracking clinical outcome measures for PTSD and depression, provide preliminary evidence in support of the research hypothesis that massed prolonged exposure therapy would improve symptoms of rape-related PTSD and depression among university students in South Africa. These outcomes are consistent with current findings in the extant literature, highlighting the potential of Massed-PE as an effective intervention for reducing symptoms of both PTSD and comorbid depression.

The effectiveness of Massed-PE at ameliorating PTSD symptoms has been established across multiple studies. In a landmark RCT where Massed-PE was compared to standard PE, Massed-PE was found to be noninferior to standard PE (Foa et al., 2018). A subsequent RCT by Peterson et al. (2023) augmented findings of Massed-PE's efficacy, with 61% of participants achieving clinician-assessed significant PTSD symptom reductions and 74% self-reporting symptom reductions at 1 month follow-up. An RCT by Dell et al. (2023) echoed these findings of Massed-PE's non-inferiority and demonstrates significantly reduced PTSD symptom severity maintained at 12-month follow-up.

Research examining the effectiveness of Massed-PE for treating specifically rape-related PTSD is limited. However, standard forms of PE have been validated as an effective treatment for rape-related PTSD in a Cochrane systematic review, amongst other literature (O'Doherty et al., 2023; Resick et al., 2012; Rothbaum et al., 2005). It is hoped that the preliminary findings of this study, suggesting the effectiveness of Massed-PE in treating this trauma-exposed population, will stimulate further research in this area.

The tentative finding of this study of Massed-PE's effectiveness at treating comorbid depression is echoed by preliminary findings in the literature. In the RCT by Dell et al. (2023), symptom reductions in comorbid depression, were found for Massed-PE and maintained at 12-month follow-up. Sherrill et al. (2022) found significant reductions in comorbid depression in a smaller (n=25) mixed-methods study of Massed-PE. Research

suggests that the increased session frequency of Massed-PE may be beneficial for depressed clients in supporting treatment adherence and resulting in larger effect sizes (Bruijniks et al., 2020; Cuijpers et al., 2023).

To the best of the author's knowledge, this study, which is part of a larger effectiveness and feasibility trial on Massed-PE for PTSD, is the first to evaluate the effectiveness of Massed-PE among South African university students. However, preliminary, small-scale case-study findings of standard PE suggest its effectiveness when administered to university students via university counselling services, in the U.S. and online in South Africa (Booysen & Slabbert, 2025; Bonar, 2015).

Lindi's improvements were significantly more substantial than Nathi's across PTSD and depression symptoms. Nathi experienced PTSD symptom improvements across the Massed-PE sessions, but only limited improvements from baseline to post-intervention. However, the findings of this study are multidimensional, with the implementation measures and qualitative findings discussed below suggesting that Nathi benefited from the massed-PE intervention in ways that may not have been captured by the clinical outcome measures. This reflects an ongoing methodological challenge in psychotherapy research: how to adequately operationalise change, given concerns that standardised symptom measures may fail to capture the full breadth and depth of client outcomes (Wampold & Imel, 2015).

Furthermore, research shows that symptom improvements may be dynamic and non-linear, with progress not reflecting immediately on clinical outcome measures (Laurenceau et al., 2007). An RCT of PE for rape survivors has shown further PTSD symptom improvements from post-intervention scores at 3-month follow-up, compared to Stress Inoculation Training (SIT) which did not show further improvements (Foa et al., 1991). This led Foa and colleagues (1999) to suggest that whilst SIT may effect rapid but transient relief of anxiety due to anxiety management skills, PE may set in motion an ongoing process of symptom improvement through emotional processing. These findings were corroborated by a later PE-SIT RCT for female survivors of sexual assault (Foa et al., 1999). Though these findings may not necessarily pertain to Massed-PE, they suggest the possibility that full symptom gains from the intervention for Nathi and Lindi may not appear immediately.

8.3 Implementation outcomes: Feasibility, Acceptability and Appropriateness

Quantitative findings from implementation measures and qualitative findings from post-intervention interviews address the research question as to whether Massed-PE is

perceived as feasible, acceptable and appropriate to implement by university students seeking treatment for rape-related PTSD and depression in South Africa.

8.3.1 Implementation Measures

Findings of the implementation measures (FIM; IAM; AIM) suggest that generally, both participants perceived the Massed-PE intervention to be feasible and acceptable, but differed in terms of its appropriateness. The acceptability of the intervention was strongly endorsed by both Nathi and Lindi. The feasibility of the intervention was strongly endorsed by Nathi, with Lindi finding the intervention more feasible than not. Nathi strongly endorsed the appropriateness of the intervention, whereas Lindi's evaluation positioned it at the threshold between appropriate and inappropriate. Compared to Nathi's strong endorsement of Massed-PE's implementability among university students in the South African context, Lindi conveyed a more ambivalent perspective.

To the best of the author's knowledge, there is no existing literature which addresses these questions of feasibility, acceptability and appropriateness of Massed-PE in university settings. The available research on Massed-PE and other forms of intensive outpatient PE treatments has primarily been conducted in the context of Veterans Affairs (VA) health facilities in the U.S (Dell et al., 2023; Peterson et al., 2023). Most of those patients either live in or near VA facilities, with challenges to feasibility being less of a concern. This may explain the lack of Massed-PE implementation research. However, this leaves a gap in the knowledge base regarding Massed-PE's effectiveness, acceptability and appropriateness in other settings, such as universities, particularly in LMICs.

While university campuses may offer a catchment area for students, they also serve as microcosms that reflect the broader societal context in which they exist (Macleod et al., 2018). For example, the third participant, Zibu's early withdrawal from the Massed-PE intervention may have been influenced by legitimate safety concerns, particularly as a rape survivor, about walking to sessions without access to transport. Difficulties prioritising this intensive form of PE, given competing responsibilities, are reflected across the literature, with academic demands being a particular issue in university settings (Bonar, 2015; Sherrill et al., 2022).

8.3.2 Qualitative Findings: Perceptions and Experiences of Massed PE

In terms of the qualitative data from post-intervention interviews, separate thematic analyses were conducted for each participant, resulting in three themes per individual, each

supported by sub-themes. While individual nuances were evident, the themes and sub-themes exhibited conceptual overlap across the two participants. The discussion of these results is structured according to four main points, with findings contextualised in relation to the existing literature.

8.3.2.1 Complex Trauma Histories

Both participants presented with complex trauma histories involving multiple incidents of abuse, including repeated childhood traumas and several prior treatment attempts. Such early, prolonged and cumulative exposure to trauma has been associated with Complex PTSD (CPTSD; Cloitre et al., 2009; WHO, 2019). While both PTSD and CPTSD involve core symptoms such as re-experiencing, avoidance, and hyperarousal, CPTSD is distinguished by persistent disturbances in an individual's self-organisation. These include negative self-perceptions, self-blame and enduring feelings of guilt, shame, worthlessness or failure, often rooted in prolonged interpersonal trauma (WHO, 2019). These disruptions to self-concept were evident in Nathi's sense that her identity had been stolen, her self-disgust and shame, believing herself to blame for the rapes perpetrated by her brother, and in Lindi's ever-present critical voice, self-blame and shame. Chronic emotional numbing reported by both participants is a further criterion of CPTSD, as is relational difficulties, evident in their social isolation. Lindi's somatic and dissociative symptoms are understood as culturally relevant manifestations of CPTSD (WHO, 2019). This study did not formally screen for CPTSD. However, clinical judgement suggests that both Nathi and Lindi presented with key symptoms suggestive of CPTSD (WHO, 2019).

Nonetheless, the Massed-PE model proved largely adaptable to Nathi and Lindi's clinical needs. Both participants valued the contribution of Massed-PE, viewing it as a meaningful shift in what had felt like stagnant recovery trajectories. As captured in the theme 'A Catalyst', Lindi recognised that Massed-PE was not a cure-all. There was only time to address the sexual abuse component of her trauma presentation, resulting in incomplete processing of her trauma narrative. Despite these limitations and the inherent discomfort of the intervention, Lindi felt that the therapy was ultimately worthwhile, equipping her with insights she could apply to unresolved elements of her trauma sequelae, and helping her start new conversations with herself, as she put it. Nathi expressed a similar evaluation of her therapeutic experience, suggesting that a foundation had been laid for ongoing recovery, as described in the theme 'Valued Features' and its sub-theme 'Connecting with Emotions'. Nathi described therapeutic gains such as a felt sense of empowerment and greater self-

understanding, no longer feeling at odds with herself. Nathi endorsed the therapy for others with similar experiences to her own, suggesting she views Massed-PE as suitable for individuals with rape-related PTSD and depression, including complex cases.

Preliminary findings in the extant literature echo those of the present study, supporting the use of condensed forms of PE to treat complex trauma presentations. Hendriks et al. (2018) studied an intensive outpatient PE model for individuals with a likely CPTSD diagnoses, presenting with multiple childhood traumas and treatment attempts and chronic PTSD symptoms. The model involved twelve 90-minute sessions over four days, followed by four weekly 90-minute booster sessions (N=73). PTSD symptoms were significantly reduced, with a response rate of 71% and outcomes maintained at 6-month follow-up. Low dropout rates of 5% were reported during the booster phase. Furthermore, Hendriks et al found that this intensive model was safe to use with this population, reporting no significant adverse events or symptom exacerbation.

In terms of the broader PE literature, Jerud et al. (2014) found that affect dysregulation among individuals with PTSD and a history of childhood abuse improved after PE. Individuals with complex trauma presentations have widely been excluded from TFT intervention trials (Bisson et al, 2013; O'Doherty et al., 2023). Nonetheless, based on a review of the available literature, De Jongh et al. (2016) found that PE is effective for individuals with CPTSD. This is an important finding for the South African context, where high rates of multiple lifetime traumas and childhood abuse arguably increase the risk for more complex trauma presentations (Atwoli et al., 2013; Hsiao et al., 2018).

The distinction between PTSD and Complex PTSD (CPTSD) is heavily debated within the literature, with ongoing questions about whether CPTSD warrants classification as a separate diagnosis or is sufficiently captured as a more severe or varied form within existing DSM-5 PTSD criteria (Brewin et al., 2017; Resick et al., 2012). This diagnostic uncertainty may partly account for the limited research on complex trauma within the PE and broader TFT literature (Foa et al., 2019; O'Doherty et al., 2023). An important contribution of this study is its demonstration that, regardless of diagnostic label, Massed-PE can be flexibly applied to treat clients presenting with higher levels of trauma complexity. Nevertheless, screening for CPTSD may be clinically useful, not to diagnostically categorise, but to better understand the complexity of a client's presentation. This could assist practitioners in anticipating potential treatment needs and tailoring the Massed-PE protocol accordingly.

8.3.2.2 Clinical Considerations in Treatment

Nathi and Lindi's cases highlighted specific clinical considerations for flexible implementation of the Massed-PE model. The added complexity brought by participants motivated the therapist's decision to allow for a degree of flexibility in session timing, to maintain an emotionally validating environment and support effective therapeutic work within the otherwise rigid structure of the Massed-PE intervention. Both Nathi and Lindi appreciated this flexibility, as evident in the sub-themes 'Common Therapeutic Factors' and 'Therapeutic Alliance'.

In terms of the condensed nature of Massed-PE, Lindi felt that the "ripping the band-aid" approach was a helpful catalyst for recovery, but suggested that the intense two-week process be supplemented by follow-up sessions, discussed in the theme 'A Catalyst'. Echoing Lindi, Nathi proposed a tapered approach following the two weeks, so that the intense therapy could wind down with gradually fewer sessions, rather than end abruptly, as this left Nathi feeling uncontained. This is reflected in the sub-theme 'Sudden End'. These findings are not corroborated, nor are they contested in the broader Massed-PE literature (Sherrill et al., 2022; Zwetzig et al., 2021). This may be attributable to the limited research currently available on this novel adaptation of PE. However, Dell et al. (2023) in a landmark RCT implemented 15-minute follow-up phone calls with the therapist at 1, 3 and 6 weeks following the 10th Massed-PE session. They found significant reductions in PTSD and depression symptoms, maintained at 12-months post-treatment. These booster sessions may have contributed to the sustained positive outcomes. Alternatively, follow-up sessions may be especially warranted in cases involving complex trauma presentations. The study of intensive PE by Hendriks et al. (2018), described above, implemented booster sessions and found positive outcomes for individuals with likely CPTSD.

Exposure is a means to an end, that end being emotion processing. This insight is the foundation of EPT, the theory which underpins PE and Massed-PE, and was reflected in both participants' therapeutic processes (Foa et al., 2019; Rauch & Foa, 2006). It was through "connecting" with her emotions, as Nathi described it, that she progressed from intellectual awareness to experiential understanding, enabling a sense of empowerment and the modification of long-standing, shame-based maladaptive beliefs, as captured in the sub-theme 'Connecting with Emotions'. Similarly, emotional engagement fostered in Lindi a felt sense of compassion towards herself, as discussed in the theme 'A Catalyst'.

For Nathi and Lindi, the therapeutic benefits of Massed-PE were derived from processing a range of trauma-related emotions beyond just fear. This is consistent with research showing that PE facilitates the emotional processing of various non-fear trauma-related emotions, such as shame, guilt and anger (Harned et al., 2014; Jerud et al., 2014; Langkaas et al., 2017). Nonetheless, despite its emphasis on emotion processing, EPT conceptualises fear as the primary emotion associated with PTSD, and little accommodation is made for commonly associated emotions such as shame and anger within EPT's maladaptive fear structure (Langkaas et al., 2017; Foa & Rothbaum, 1998). This omission becomes more conspicuous when associated emotions such as shame are central to a client's trauma sequelae, as was the case in both Nathi and Lindi's presentations. As such, Nathi and Lindi's case conceptualisations (see Chapter 6) relied heavily on clinical judgement. Greater emphasis on trauma-associated emotions in EPT may provide practitioners with greater guidance and conceptual clarity in the future.

8.3.2.3 **Stigma and Cultural Considerations**

Both Nathi and Lindi shared perspectives on the intervention that reflected their personal experiences as situated within the broader South African landscape, providing contextually grounded feedback.

Nathi interpreted the invalidation of her psychological distress by her family and community as reflecting a wider cultural tendency among Black South Africans to suppress emotional vulnerability. Nathi found this mental health stigma to be a more pervasive challenge to her psychological wellbeing than rape stigma. This societal-level avoidance of emotional distress perpetuated Nathi's own avoidance, as reflected in the sub-theme 'Culture of Avoidance'. The main theme, 'Essential but Inaccessible', reflects how the university offered Nathi her first opportunity to access psychotherapy and begin challenging her culturally reinforced emotional avoidance. In the sub-theme, 'Connecting with Emotions', she identified Massed-PE as the first intervention where she could meaningfully engage with her trauma-related emotions. However, in the sub-theme 'Not a First Step', Nathi emphasised that prior therapy had taught her to articulate her internal experiences and cautioned that expecting others to do so without similar scaffolding may be unrealistic. Lindi echoed this in the sub-theme 'Person in Context', suggesting that the therapy's reliance on verbal emotional expression may not align with cultural norms in the South African setting. Nathi observed that while traditional and faith-based approaches remain central to mental health in her community, they do not address emotional avoidance and should be supplemented with

psychotherapy. However, she suggests that there may be resistance to this unaccustomed practise, as reflected in the theme 'Navigating Cultural Norms and Clinical Needs'.

Nathi recognised the potential of Massed-PE to meet a critical psychological need in her community. While mental health stigma and emotional suppression are recognised as significant cultural phenomena within Black South African communities, a detailed exploration of their historical and sociocultural origins lies beyond the scope of this thesis (Daniels & Isaacs, 2023; Maercker & Heim, 2019; Nduna & Jewkes, 2011). However, the implementation literature highlights these attitudinal barriers as key obstacles to the uptake of TFTs in LMICs, including within the broader South African context and its university settings (Bantjes et al., 2023; Kaminer et al., 2024; Thornicroft et al., 2018).

The research suggests that structural and especially attitudinal treatment barriers can be addressed through meaningful cultural adaptations, which may improve the effectiveness and acceptability of manualised TFTs such as Massed-PE, developed in the Global North (Ennis et al., 2020; Hall et al., 2016; Kaminer et al., 2024; Maercker & Heim, 2019). In the theme 'Sociocultural Sensitivity' and its sub-theme, 'Person in Context', Lindi affirms these findings. She suggests that the Massed-PE intervention can do more in terms of sociocultural sensitivity, particularly given South Africa's intricate sociocultural dynamics, and provides suggestions for appropriate adaptations. Lindi expressed that navigating differing sociocultural identities between therapist and client may introduce a therapeutically limiting fear of invalidation into the process. During the intervention, this was exemplified by how deeply her trauma hotspot was intertwined with African Traditional Religion, a core part of her sociocultural identity, which the therapist and therapeutic model were insufficiently sensitised to, thereby colluding with Lindi's avoidance.

The above example raises important considerations for the South African context, where African Traditional Religion is widely practised and represents a worldview in which spiritual, psychological, and social experiences are deeply interconnected (Asamoah-Gyadu, 2013; Guma & Mokgoatšana, 2020). For many, trauma is understood within this holistic framework, which contrasts with the biomedical foundations of Western TFTs like Massed-PE (Eagle, 2014). To avoid inadvertently impeding treatment or alienating South African clients within the Massed-PE framework, Lindi suggested proactively welcoming diverse sociocultural identities, particularly those which are socially marginalised during the intake process and through targeted prompts during imaginal exposure. Furthermore, Lindi recommended that clinicians go through cultural-sensitivity training. Her suggestions align

with PE and broader TFT literature advocating for nuanced, rather than surface-level, cultural adaptations (Bryant-Davis, 2019; Ennis et al., 2020; Kaminer et al., 2024).

The importance of the therapeutic relationship and other common therapeutic factors should not be overlooked in Massed-PE. Reflecting on her massed-PE experience, in the sub-theme ‘Therapeutic Alliance’, Lindi described how a strong therapeutic relationship can help mediate power dynamics and bridge sociocultural divides both between client and therapist, and between client and therapeutic model. In her experience, the person-centred intake session provided an essential foundation for building therapeutic rapport and trust. Nathi affirmed the importance of the therapeutic relationship among other common therapeutic factors. The supportive environment, empathy, validation and especially the explicit communication of unconditional positive regard were a vital motivating factor for Nathi throughout the intervention, as described in the theme ‘Common Therapeutic Factors’. This finding reflects the emphasis within the PE manual on balancing therapeutic structure with a strong relational foundation, ensuring that protocol adherence does not come at the expense of human connection in therapy (Foa et al., 2019; Hembree et al., 2003).

8.3.2.4 The Challenge and Opportunity of Emotional Processing

The themes ‘Intervention Intensity’ and ‘Overwhelming Demands’ reflect the distress experienced by Nathi and Lindi, respectively, during this Massed-PE intervention. Nathi described Massed-PE, especially the imaginal exposure, as the most uncomfortable thing she has ever done in her life. She attributes her perseverance during the intervention to a deep yearning for healing and a refusal to be defined by her trauma, as captured in the sub-theme ‘Determination’.

Lindi found the Massed-PE process to be emotionally distressing and exhausting, having to confront what she had previously denied, especially without much of a support structure on campus, as discussed in the sub-theme ‘Intervention Demands’. Lindi found listening to the audio recordings of the sessions particularly jarring, as did Nathi. The finding that the intervention, particularly the exposure activities, caused discomfort is consistent with the global and South African PE and Massed-PE literature, examining participants’ intervention experiences (Booysen & Kagee, 2023; Sherrill et al., 2022).

In the PE manual, Foa et al. (2019) emphasise the necessity of this temporary discomfort, which is considered a marker of emotional engagement, an essential mechanism of recovery. Despite experiencing habituation, Lindi maintained a hypothetical fear of

retraumatisation and psychological decompensation in the absence of avoidance-based coping mechanisms such as dissociation. This may indicate that she had not fully relinquished reliance on these maladaptive coping mechanisms, reflecting the unresolved aspects of her trauma sequelae.

In the sub-theme 'Daily Life Demands', Lindi described feeling overwhelmed by the competing pressures of the Massed-PE intervention and her day-to-day responsibilities, which included the academic and survival-level demands of a university student in a financially precarious position. Although this narrative was valid and grounded in Lindi's lived experience, it was also occasionally employed to rationalise her avoidance behaviours. This dialectic highlights the complexity for clinicians between identifying and addressing avoidance whilst communicating realistic, context-sensitive expectations, so that the intervention is not undermined by unchallenged avoidance, nor by the overwhelm and invalidation of the client. Bonar (2015) described the same challenge in his case studies of a standard PE intervention administered to students at a university counselling centre in the U.S. Bonar suggested that collaborative discussion between client and therapist is essential to address this issue. This finding is affirmed in the broader PE literature and in South African literature addressing barriers to mental health among university students (Bantjes et al., 2023; Fo a et al., 2019; Hembree et al., 2003).

Nathi and Lindi approached the intervention with differing expectation levels. Nathi's expectations were measured, whereas upon reflection, Lindi realised that hers had been unrealistically high, as captured in the themes 'Determination' and 'Intervention Demands', respectively. Nonetheless, despite the distress endured by both participants during the intervention, both participants felt that this discomfort had been worth it.

8.1.3 Integrated Insights

Lindi appears to have been more critical in her perspective on the acceptability, feasibility and appropriateness of the Massed-PE intervention than Nathi, both in terms of findings from the implementation measures and the post-intervention interviews. However, it was Lindi who demonstrated more substantial improvements in terms of her symptoms of PTSD and depression following treatment. This divergence in the results between perceived therapeutic experience and symptom improvement may reflect differences in expectational framing. Nathi joined the intervention with measured expectations, which may have facilitated a more favourable perception of the process. In contrast, Lindi may have held less

attainable expectations, potentially contributing to a more critical appraisal of the intervention. Furthermore, Lindi appeared to engage more analytically with the feedback process than Nathi did, prompting constructive criticism. This may reflect individual differences in personality, cognition and social style between the two participants.

As outlined in the discussion on intervention effectiveness (see Section 8.2), clinical outcome measures may overlook important therapeutic gains beyond symptom reduction (Wampold & Imel, 2015). For example, instruments like the PCL-5 or PHQ-9 do not assess outcomes such as the sense of empowerment reported by Nathi. The discrepancy between outcome data and idiographic experience underscores the value of methodological pluralism in idiographic psychotherapy and implementation research (Onghena et al., 2019).

A key reason for implementing a Massed-PE rather than a standard PE model was to overcome avoidance behaviour and treatment dropout by delivering the intervention within a short time frame (Dell et al., 2023; Levinson et al., 2022; Sherrill et al., 2022). It is therefore important to acknowledge that 1 out of 3 of this study's participants dropped out of treatment. However, this occurred following Zibu's second Massed-PE session, before any significant exposure work had begun. Furthermore, she had been unable to manage daily sessions alongside her academic load, though alternative scheduling was arranged; this was insufficient to maintain Zibu's attendance. This aligns with the finding that academic pressures, among other competing demands, challenge the feasibility of implementing Massed-PE in a university setting.

Chapter Summary

Chapter 8 presented a discussion of the quantitative and qualitative results of this study, in relation to the extant literature to address the study's research hypothesis and questions. The Massed-PE intervention has been shown to be relatively effective, feasible, appropriate and acceptable to implement in the treatment of university students with rape-related PTSD and depression at universities in the South African context. However, additional considerations for treating this population have emerged, particularly in relation to accommodating complex trauma presentations and sociocultural factors and managing competing demands.

Chapter 9

Limitations, Recommendations and Conclusion

Chapter Overview

Chapter 9 presents the therapist's reflections along with the study's limitations and implications. Thereafter, recommendations are provided, and the value of the study is discussed. Lastly, the conclusion is presented.

9.1 Therapist Reflections

My dual role as clinician-researcher allows me to present reflections on my experience administering the Massed-PE intervention. There is much to reflect on, however, one particular insight feels most pertinent and appropriate to share.

I administered a version of the PE model for the first time for the purpose of this study. In the initial stages of the intervention following intake, having become acquainted with the complexity of my participants' trauma histories, I struggled to believe that a two-week therapeutic intervention that asked participants to do something so painful could prove worthwhile or even psychologically safe. Having been in this position, I empathise with reticence among practitioners to implement PE and Massed-PE interventions, as reflected in the literature, due to similar concerns (Foa et al., 2013). Nevertheless, Foa and colleagues urge clinicians new to the model to trust in over three decades of research and clinical experience supporting the efficacy of PE, and to return to its core principles when uncertainty arises. Guided by this advice, I proceeded with the intervention, and in doing so, had the privilege of witnessing the most profound therapeutic outcomes of my clinical career. I now recognise that what initially appeared to be extraordinary were, in fact, theoretically consistent therapeutic gains facilitated by emotional processing.

9.2 Limitations of the Study

The findings of this study should be interpreted in light of certain limitations. The homogeneity of the sample – all female, all Black African and all university students – may limit the generalisability of the results to male survivors of sexual trauma, individuals from other racial identities or varying education levels. The external validity of the study is limited by its small sample size; however, this is consistent with the idiographic focus of SCEDs. Although the idiographic nature of the research design may limit the generalisability of the findings, it enables nuanced insights that can inform, challenge, or enrich broader nomothetic

theories and patterns (Barlow & Nock, 2009). The study did not include a long-term follow-up phase to assess symptom outcomes at, for example, 3- or 6-months post-intervention. Such data could have offered valuable insight into the sustained effectiveness of the Massed-PE intervention. The fact that the post-intervention interview was conducted by the clinician-researcher who administered the therapy had the potential to introduce social desirability bias, potentially limiting the authenticity of participant feedback.

9.3 Implications of the Study

This study has implications for the study and practice of TFTs. It has provided tentative support for the effectiveness, feasibility, acceptability and appropriateness of Massed-PE for treating rape-related PTSD and comorbid depression among university students in the South African context. Endorsement of the massed version of PE is significant given its potential for reducing avoidance and dropout rates (Sherrill et al., 2023). In addition, the study shed light on the potential barriers to implementing this intensive version of PE within a university context, where students often contend with multiple, competing demands. The study indicates that the Massed-PE model proved largely adaptable to the clinical needs of individuals with complex trauma presentations and highlighted additional considerations for their treatment within the Massed-PE framework. Lastly, the study suggests that although Massed-PE may require further refinement, it demonstrates potential for meaningful adaptation within South African settings such as universities. Several recommendations were indicated to guide this adaptation process.

9.4 Implementation Recommendations

Recommendations for future implementation of Massed-PE in South African and other Global South contexts are provided. Treating traumatic stress, such as PTSD, requires a balance of therapist flexibility whilst maintaining fidelity to the Massed-PE treatment model. For instance, it may be worth implementing a supplementary phase of follow-up sessions and allowing for a greater degree of flexibility in session timing, particularly when working with more severe or complex trauma presentations. It is recommended that screening for CPTSD be included during the intake process to assist practitioners in anticipating potential treatment needs and tailoring the Massed-PE protocol accordingly, whilst maintaining treatment fidelity. It is recommended that CPTSD cases then be referred to clinical psychologists. This may support task-shifting efforts so that non-specialised mental healthcare workers are not expected to handle complex presentations.

In terms of adaptation to the South African context, PE can improve symptoms of PTSD and depression. However, it is suggested that context-specific factors be proactively addressed through meaningful integration into the manual. This may be achieved through implementing a Cultural Formulation Interview, contained within the DSM-5, during intake (APA, 2013; Mabaso & Kotze, 2020). More generally, it is recommended that Massed-PE administrators engage in cultural sensitivity training. It is further recommended that an open-ended, person-centred intake session be integrated as a standard component of PE therapy, to foster trust within the therapeutic relationship, bridge sociocultural gaps between therapist and client, and ease the intensity and rigidity which may otherwise be associated with the intervention's structured format

9.5 Value of the Study

This study investigated a vital and underexplored niche within the TFT knowledge base. To the author's knowledge, this study is the first to investigate the implementation and effectiveness of Massed-PE for rape-related PTSD and comorbid depression among university students in South Africa. There is an urgent need for nuanced, locally grounded implementation research to investigate the context-specific factors that perpetuate structural and attitudinal barriers to accessing EBTs in South African settings, such as universities, and other Global South contexts (Bantjes et al., 2023; Booysen & Kagee, 2020; Kaminer et al., 2024). The qualitative component of this study enriched the findings by adding contextual depth and dimensionality, thereby enhancing their ecological validity and contributing – albeit modestly – to bridging this know-do gap in the EBT literature.

9.6 Conclusion

The Massed-PE intervention has been shown to be relatively effective, feasible, appropriate and acceptable to implement in the treatment of university students with rape-related PTSD and depression at universities in the South African context. However, additional considerations for treating this population have emerged, particularly in relation to accommodating complex trauma presentations and sociocultural factors and managing competing demands. Here follows a quote from the PE manual which deeply impacted Nathi and which encapsulates the therapeutic power of this treatment model – referenced in the sub-theme 'Common Therapeutic Factors':

> *We truly believe in the power of talking about the worst, scariest, most shameful moments of our lives out loud to be heard by another human who is trying to be*

> *helpful. When we keep these secrets hidden and unsaid, they fester and haunt us. They're like mold, and when we expose them to the light of day and human warmth, they lose their power.* (Foa et al., 2019, p. 102)

It may be fair to conclude that the Massed-PE intervention was valued by the participants who completed it, affecting them in more dynamic and profound ways than can be captured by clinical outcome measures. Where before there had been stagnation, meaningful shifts were observed in Nathi and Lindi's ongoing journeys of recovery and healing.

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Appendices

Appendix A

PDS-5

Subject ID_______ **Date**_________

TRAUMA SCREEN

Have you ever experienced, witnessed, or been repeatedly confronted with any of the following:
(Check all that apply)

- Serious, life threatening illness (heart attack, etc.)
- Physical Assault (attacked with a weapon, severe injuries from a fight, held at gunpoint, etc.)
- Sexual assault (rape, attempted rape, forced sexual act with a weapon, etc.)
- Military combat or lived in a war zone
- Child abuse (severe beatings, sexual acts with someone 5 years older than you, etc.)
- Accident (serious injury or death from a car, at work, a house fire, etc.)
- Natural disaster (severe hurricane, flood, earthquake, etc.)
- Other trauma (Please describe briefly):

____

____

____

- None

*** If NONE, please STOP and return this questionnaire ***

....

If you marked any of the above items, which single traumatic experience is on your mind and currently bothers you the most:
(Check only one)

- Serious, life threatening illness (heart attack, etc.)
- Physical Assault (attacked with a weapon, severe injuries from a fight, held at gunpoint, etc.)
- Sexual assault (rape, attempted rape, forced sexual act with a weapon, etc.)
- Military combat or lived in a war zone
- Child abuse (severe beatings, sexual acts with someone 5 years older than you, etc.)
- Accident (serious injury or death from a car, at work, a house fire, etc.)
- Natural disaster (severe hurricane, flood, earthquake, etc.)
- Other trauma (Please describe briefly):

____

____

____

Page 1

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PTSD Diagnostic Scale for DSM-5

(PDS-5)

Instructions: Below is a list of problems that people sometimes have after experiencing a traumatic event. Write down the most distressing traumatic event that you checked on the last page:

Please read each statement carefully and circle the number that best describes how often that problem has been happening and how much it upset you over THE LAST MONTH. Rate each problem with respect to the traumatic event that you wrote above.

For example, if you've talked to a friend about the trauma one time in the past month, you would respond like this: (because one time in the past month is less than once a week)

Talking to other people about the trauma

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

1. **Unwanted upsetting memories about the trauma**

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

2. **Bad dreams or nightmares related to the trauma**

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

3. **Reliving the traumatic event or feeling as if it were actually happening again**

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

4. **Feeling very EMOTIONALLY upset when reminded of the trauma**

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

5. **Having PHYSICAL reactions when reminded of the trauma (for example, sweating, heart racing)**

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

6. **Trying to avoid thoughts or feelings related to the trauma**

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

PTSD Diagnostic Scale for DSM-5

(PDS-5)

7. Trying to avoid activities, situations, or places that remind you of the trauma or that feel more dangerous since the trauma

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

8. Not being able to remember important parts of the trauma

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

9. Seeing yourself, others, or the world in a more negative way (for example "I can't trust people," "I'm a weak person")

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

10. Blaming yourself or others (besides the person who hurt you) for what happened

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

11. Having intense negative feelings like fear, horror, anger, guilt or shame

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

12. Losing interest or not participating in activities you used to do

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

13. Feeling distant or cut off from others

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

14. Having difficulty experiencing positive feelings

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

15. Acting more irritable or aggressive with others

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

PTSD Diagnostic Scale for DSM-5

(PDS-5)

16. Taking more risks or doing things that might cause you or others harm (for example, driving recklessly, taking drugs, having unprotected sex)

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

17. Being overly alert or on-guard (for example, checking to see who is around you, being uncomfortable with your back to a door)

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

18. Being jumpy or more easily startled (for example when someone walks up behind you)

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

19. Having trouble concentrating

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

20. Having trouble falling or staying asleep

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

DISTRESS AND INTERFERENCE

21. How much have these difficulties been bothering you?

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

22. How much have these difficulties been interfering with your everyday life (for example relationships, work, or other important activities)?

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

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 B

PHQ-9

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME:______________________ DATE:____________

Over the last *2 weeks*, how often have you been bothered by any of the following problems? *(use "✓" to indicate your answer)*	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite—being so figety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3
	add columns	+	+	
(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card).	TOTAL:			

10. If you checked off *any problems*, how *difficult* have these problems made it for you to do your work, take care of things at home, or get along with other people?	
	Not difficult at all ________
	Somewhat difficult ________
	Very difficult ________
	Extremely difficult ________

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Appendix C

PCL-5

PCL-5

Instructions: Below is a list of problems that people sometimes have in response to a very stressful 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 stressful experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
3. Suddenly feeling or acting as if the stressful 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 stressful experience?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4
8. Trouble remembering important parts of the stressful 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 stressful 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 behavior, 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 "superalert" 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 D

Implementation Measures

Additional File 3. Final version of the Acceptability of Intervention Measure (AIM), Intervention Appropriateness Measure (IAM), and Feasibility of Intervention Measure (FIM)

GENERAL INSTRUCTIONS: These measures could be used independently or together. The IAM items could be modified to specify a referent organization, situation, or population (e.g., my clients). Please check and report the psychometric properties with each use or modification.

Acceptability of Intervention Measure (AIM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. (INSERT INTERVENTION) meets my approval.	①	②	③	④	⑤
2. (INSERT INTERVENTION) is appealing to me.	①	②	③	④	⑤
3. I like (INSERT INTERVENTION).	①	②	③	④	⑤
4. I welcome (INSERT INTERVENTION).	①	②	③	④	⑤

Intervention Appropriateness Measure (IAM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. (INSERT INTERVENTION) seems fitting.	①	②	③	④	⑤
2. (INSERT INTERVENTION) seems suitable.	①	②	③	④	⑤
3. (INSERT INTERVENTION) seems applicable.	①	②	③	④	⑤
4. (INSERT INTERVENTION) seems like a good match.	①	②	③	④	⑤

Feasibility of Intervention Measure (FIM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. (INSERT INTERVENTION) seems implementable.	①	②	③	④	⑤
2. (INSERT INTERVENTION) seems possible.	①	②	③	④	⑤
3. (INSERT INTERVENTION) seems doable.	①	②	③	④	⑤
4. (INSERT INTERVENTION) seems easy to use.	①	②	③	④	⑤

Pragmatic Qualities:

- Readability tested by substituting "This EBP" for "Insert Intervention." Flesch reading ease score (and grade level) is 95.15 (5th grade) for AIM, 99.60 (5th grade) for IAM, and 94.17 (5th grade) for FIM.
- No specialized training is needed to administer, score, or interpret the measures.
- Cut-off scores for interpretation not yet available; however, higher scores indicate greater acceptability, appropriateness, or feasibility.
- Norms not yet available.
- Scales can be created for each measure by averaging responses. Scale values range from 1 to 5. No items need to be reverse coded. Good measurement practice: assess structural validity to confirm the unidimensionality of each measure and calculate alpha coefficient to ascertain reliability.
- There is no cost to use these measures.
- Time to complete: less than 5 minutes per measure.

Appendix E

Semi-structured Post-Intervention Interview Schedule

Interview Schedule

1. How did you experience the therapy in relation to your cultural context? (including university culture, religion, background, aspects of culture tied to ethnicity)
2. How did this therapy align or not align with your day-to-day life? (particularly life on campus, but also more generally)
3. How did this process measure up to other experiences of therapy or perceptions of therapy that you may have had at the outset?
4. What has this therapeutic process meant to you, how would you describe its impact on you and the different aspects of your life?
5. How if at all do you feel that rape-related stigma impacted your mental health and your experience of the therapy? (rape-related stigma on campus but also in broader society, specific focus on symptoms of PTSD and depression)
6. Was the therapy effective in helping you work through the effects of your experience of rape-related stigma? (if rape-related stigma was a salient aspect of their experience, as per question 5)
7. What was your experience of your therapist and the role they played in the therapy process? Were there things that they did that were more or less helpful? (explore the impact that differences in factors such as culture and ethnicity may have had)
8. How did you find the structured nature of the therapy process?
9. How did you experience the in-between session tasks that you were given to do, including exposing yourself to the stress-evoking things associated with your trauma memory. (explore capacity and motivation to complete the tasks, and perceptions regarding how this affected them)
10. The therapy sessions consisted of different components, what was your experience of each of them? (go through each of the different components in turn, explore whether certain aspects were found to be more helpful than others, easier or harder to complete, more or less intuitive)
11. What were your thoughts and feelings when faced with the prospect of attending a session? (Explore whether this varied throughout the process, explore questions related to treatment adherence and drop-out)
12. How has this process impacted your understanding of PTSD? How helpful and relatable did you find the information-sharing aspect of the therapy sessions? (explore the cultural relevance of the way the therapy approach understands and presents common reactions to trauma)
13. What was it like for you to talk about your trauma memory, how did this impact you?
14. Are there any other thoughts that you would like to share regarding this therapy process?

Appendix F

Trauma Interview

Appendix A

Trauma Interview

(For therapist's use in Session 1.)

Patient: ______________________ Date: __________

Therapist: ______________________

Note: This interview is structured on the assumption that a thorough assessment or intake has already been conducted, that this evaluation confirmed the experience of at least one DSM5 Criterion A trauma and the diagnosis of posttraumatic stress disorder (PTSD) or significant symptoms of PTSD, and that the therapist has reviewed this information.

SAY TO THE PATIENT: I want to ensure that we have a full picture of your experience with traumas over your life. Have you had other experiences where you feared for your life or the lives of others or experienced sexual or physical assault? Have you ever experienced, or witnessed, or been confronted with other traumatic events?

____

____

____

____

____

IDENTIFICATION OF TARGET (INDEX) TRAUMA (i.e., the trauma that is upsetting the patient the most at the present in terms of intrusive thoughts and functional interference over the past 2 weeks). SAY TO THE PATIENT: Of all these things that happened to you *[summarize traumatic events endorsed by patient]*, which one is currently bothering you the most? Which causes you the most distress? *[Use additional probe questions as needed if the client has difficulty identifying an event:* e.g., *"Which one most often comes into your thoughts when you don't want to think about it? Which one upsets you the most? Which one is the worst?"]*

Specify target trauma: ______________________

____

Specify the beginning and the end of the trauma:

____

How is your support system? Who do you like to spend time with or talk to? Have you been connecting with your friends and family lately?

____

____

____

____

How has your mood been since the trauma? *[Or, if trauma was long ago: How has your mood been lately?]* Have you been feeling down or depressed? Are you as interested in things as you usually are?

____

____

____

____

Note: Even if patient does not endorse depressed mood, ask the following questions about suicidal ideation and behavior and assess further as needed and implement a safety plan when indicated: Since the trauma, have you ever thought that life is not worth living or thought about suicide? If yes, how often?

____

____

____

____

Have you gone so far as to make a careful plan as to how you would kill yourself? Have you taken any action on this (e.g., selected a location or date, bought a gun, obtained pills)?

____

____

____

____

Have you made a suicide attempt since the trauma or at any time? When? *[Assess further as needed.]*

____

____

____

____

Do you intend to act on this plan or intend to hurt yourself?

____

____

Have you ever deliberately hurt yourself in any way? *[If necessary:* For example, people sometimes scratch or cut or burn themselves on purpose, or otherwise act in potentially self-harming ways. ***Ask as needed:*** What do you do to harm yourself? When did you last hurt yourself? How do you manage the urges now if you don't act on them?]

If yes, describe:

____

____

____

____

Have you sought psychiatric or psychological help as a result of the trauma? Crisis intervention? (not including this treatment)

No ☐ Yes ☐

If yes, describe:

____

____

____

____

Have you been to the hospital since the trauma for an emotional or nervous condition? Suicide attempt? Alcohol or drug treatment?

No ☐ Yes ☐

Tell me why you were hospitalized:

____

____

____

____

Summarize current risk assessment and Plan for Safety if indicated. VA Community Provider Toolkit Training and Resources are recommended. (https://starttheconversation.veteranscrisisline.net/pdf/what-is-a-safety-plan/):

____

____

____

____

ALCOHOL AND DRUG USE

I'd like to ask you about your use of drugs or medications. In the past month, how often have you used (go through each of the listed categories):

Prescription medications (Note specific medications and frequency of use)

____

____

____

Street drugs (Note types and frequency and quantity of use)

____

____

____

Over-the-counter medications (Note type and frequency and quantity of use)

____

____

____

Alcohol (Note frequency and estimated quantity per occasion)

____

____

____

On average, about how many drinks containing alcohol do you have per day? (Consider one drink to be a 12-ounce can of beer, one cocktail, or a 4-ounce glass of wine.) Has your pattern of use changed since the trauma? If yes, how so?

____

____

Have you ever had legal, social, or employment problems because of your alcohol or drug use?

No ☐ Yes ☐

Do you consider yourself to have a drinking or a drug problem?

No ☐ Yes ☐

Does anyone close to you think you might have a drinking or a drug problem?

No ☐ Yes ☐

Is there anything else about your life now or about how the PTSD is affecting you that you think I should know now?

____

____

____

____

Appendix G

In Vivo Exposure Hierarchy

Name: ______________________

Date: ______________________

Therapist: ______________________

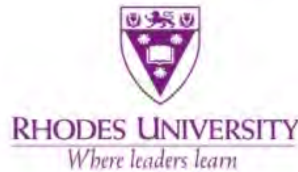
SUDS Anchors

0________________50________________100________________

Item	SUDS (Sess. 2)	SUDS (Final Sess.)
1. ______________________	________	________
2. ______________________	________	________
3. ______________________	________	________
4. ______________________	________	________
5. ______________________	________	________
6. ______________________	________	________
7. ______________________	________	________
8. ______________________	________	________
9. ______________________	________	________
10. ______________________	________	________
11. ______________________	________	________
12. ______________________	________	________
13. ______________________	________	________
14. ______________________	________	________
15. ______________________	________	________
16. ______________________	________	________
17. ______________________	________	________
18. ______________________	________	________

Appendix H

Ethical Approval from the RU-HREC



Rhodes University Human Research Ethics Committee
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https://www.ru.ac.za/researchgateway/ethics/

4 September 2023

Dr Duane Booysen

Email: D.Booysen@ru.ac.za

Review Reference: 2023-5515-8006

Dear Dr Duane Booysen

Re: Human ethics renewal application: Massed-Prolonged Exposure Therapy for PTSD in a semi-rural setting in the Eastern Cape: An effectiveness and feasibility trial

Researcher: Dr Duane Booysen

Supervisors: ,

This letter confirms that the above Annual Report has been reviewed and **APPROVED** by the Rhodes University Human Research Ethics Committee (RU-HREC). Your Approval number is: 2023-5515-8006

Approval has been granted for 1 year. An annual progress report will be required in order to renew approval for an additional period.

Please ensure that the Human Research Ethics 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 Human Research Ethics 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,

Janet Hayward

Dr Janet Hayward

Chair: Rhodes University Human Research Ethics Committee, RU-HREC

cc: Ethics Coordinator

Appendix I

Participant Informed Consent Form

Rhodes University Trauma Support: M-PE Project

Thank you for the interest in accessing trauma support via this research study. The following section will provide you with the relevant information of the study.

If you are interested, please complete the consent form below and complete three questionnaires related to assessing symptoms of traumatic stress, depression, and alcohol use.

Once completed and submitted, the form will go directly to Dr Duane D Booysen and he will make contact with you to take the next step.

CLIENT CONSENT TO PARTICIPATE IN RESEARCH

You are asked to participate in a research study
conducted by Dr. Duane D. Booysen (Principal investigator) from the department
of psychology at Rhodes University. The
results of the study will contribute to academic publication(s), conference
presentation(s), and further implementation of trauma therapy within the said community.

PURPOSE OF THE STUDY

The primary aim of the study is to investigate whether brief two-week trauma counselling model, known as massed-prolonged
exposure therapy, is an effective, feasible, and acceptable treatment for Post-traumatic Stress Disorder (PTSD) in a resource-constrained setting.

PROCEDURES

If you volunteer to participate in this study, you will be asked to complete the following things:

1. Complete brief screening questionnaires to assess whether you meet the minimum requirements to participate in the study (See below). Should you meet the minimum requirements, you will be contacted by Dr Booysen or someone else on our team to provide you with more information and to answer any questions you might have regarding your participation.

2. Then, you will be assigned to a trainee clinical psychologist or registered counsellor (hereafter referred to as clinicians). The clinicians have been trained to provide ethical and competent therapy. Your therapy will consist of daily 90 minute sessions of massed-prolonged exposure therapy over a two week period (Monday to Friday).

3. Upon the completion of the therapy, you will be invited to complete a questionnaire. In addition, you will also be invited to be interviewed about your experience of the therapy. This information will contribute to the literature surrounding the feasibility and acceptability of massed-prolonged exposure therapy in the stated context.

POTENTIAL RISKS AND DISCOMFORTS

This research project has obtained ethical clearance by the Rhodes University Human Research Ethics Committee (Approval number: 2022-5515-6982). The study will prioritize the rights and dignity of all persons involved in this project.

Please note the following:

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 available to you in the community and or university campus.
Thirdly, if you decide to decline or withdraw from the study you will not be
treated unfairly. Lastly, if you feel it is necessary and based on your
psychological functioning, you can apply for further services at the RU Counselling Centre or ADC Counselling Hub or any of the online services (i.e., South African Depression and Anxiety Group) available once
you have completed your participation in the project.

POTENTIAL BENEFITS

You
will have the opportunity to receive a minimum of 10 daily sessions of trauma support counselling over a two-week period, which is an evidence-based trauma
therapy for the treatment of Post-traumatic Stress Disorder (PTSD). In addition, you will also have the opportunity
to speak about your experience of the therapy. This research
will contribute to the literature on evidence-based practices in South African
psychology, with a specific focus on treating traumatic stress in resource-constrained settings.

PAYMENT FOR PARTICIPATION

You will not be reimbursed for your participation in the study.

CONFIDENTIALITY

Any information that is obtained from 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 the use of a
participant number for each person. All paper documents will be safeguarded in the personal office
of the principal investigator, and electronic data will be encrypted
and stored on Dropbox storage owned by the principal investigator. These storage spaces will have
controlled access. The principal investigator and research coordinator will
have access to the Dropbox's stored data.

Post-intervention interviews will be audio recorded, transcribed, and stored. Dr Booysen will
oversee that these recordings and interviews are stored on a
password protected Dropbox account. The information will also be encrypted and protected
and only accessible to the principle investigator (Duane D. Booysen). You have
the right to listen or request a copy of the audio recordings.

The results of the research will be prepared for academic
publication and presentation at conferences. Your identity will remain anonymous.

IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the
research, please feel free to contact Dr D. Booysen (Principal investigator)
on his office number: 046 603 8507 or send him an email at: d.booysen@ru.ac.za

Dr Booysen: https://www.ru.ac.za/psychology/people/drduanebooysen/

**RIGHTS OF
RESEARCH PARTICIPANTS**

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 ethics-committee@ru.ac.za or (+27)
046 603 7727 at the Research Office, Rhodes University.

* Indicates required question

1. Email *

2. Contact number (in case you cannot be reached on the provided email) *

3. I hereby consent voluntarily to participate in this study *

Check all that apply.

- [ ] Yes
- [ ] No

Rhodes University Trauma Support: M-PE Project

4. Contact number (in case you cannot be reached on the provided email) *

5. I hereby consent voluntarily to participate in this study *

Check all that apply.

- [ ] Yes
- [ ] No

Demographic Information

The following section will collect basic demographic information but not ask for your name and surname.

6. Age *

Mark only one oval.

- ( ) 18 - 25
- ( ) 26 - 30
- ( ) 31 - 40
- ( ) 41 - 50
- ( ) 51 - 60

7. Status of occupation *

Mark only one oval.

- ( ) Employed
- ( ) Unemployed
- ( ) Student
- ( ) Other: ____________________

8. Please elaborate on your status of employment (i.e. Year of study, type of work, years unemployed etc) *

____

____

____

____

____

9. Gender *

Mark only one oval.

- ( ) Male
- ( ) Female
- ( ) Other: ____________________