An Investigation of Mindfulness Training as a Self-Care Strategy for Trauma Counsellors

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Declaration

I, Kanthamoney Pillay do hereby declare that this thesis is my own work. Information derived from other resources, has been acknowledged and cited in this dissertation.

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Kanthamoney Pillay

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Abstract

This study investigated mindfulness training (MT) as a self-care strategy for trauma counsellors in South Africa, a social context characterised by prominent levels of crime and violence. The aim of the study was to examine the effect of MT on both negative and positive secondary trauma impacts (STI) in relation to aspects of quality of life of trauma counsellors. It was proposed that MT would both reduce negative secondary trauma impacts and increase Compassion Satisfaction and mindfulness capacities and that the beneficial outcomes of MT would be sustained three months post-intervention.

A quasi-experimental embedded mixed methods research model was used to investigate the impact of an MT intervention, areas of greatest change in response to the intervention, and the phenomenological experience of subjects during the training. The study population comprised a sample of 58 counsellors from the greater Johannesburg area in South Africa. The quasi-experimental design entailed comparison of pre-test and post-test scores across an MT intervention group and an active Psycho-Educational control group. Quantitative data was analysed using a mixed Between-Within Subjects Analysis of Variance (ANOVA). ANOVA was used to test for mean differences between the two independent groups, while simultaneously subjecting participants to repeated measures, in order to establish whether mean changes in the outcome scores on the dependent variables from pre-test to post-test differed significantly for individuals over time within the two groups. Complementary qualitative data comprising feedback reports from participants were analysed employing Thematic Analysis.

Results indicated that MT was effective in reducing negative trauma impacts and in increasing trait mindfulness and that these outcomes were largely sustained over three months post-intervention. MT was found to be associated with variable rates of change on each of the outcomes assessed, with the significant positive impact being on PTSD Checklist for DSM-5 Scale Total scores, followed in descending order by, the Non-Reactivity and Awareness facets of mindfulness, Secondary Traumatic

Stress scores, and Burnout scores. There was a relatively smaller impact on Vicarious Traumatisation and a non-statistically significant impact on Compassion Satisfaction. Thematic analysis of the supplementary quantitative data identified four major themes, these being: *Paradox or balancing of polarities*; *Therapeutic skills; Mindsight* and *Acquisition*. The research results indicate that MT is a beneficial intervention for secondary trauma in counsellors engaged in treating traumatised clients.

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Chapter One: Introduction and Background

This thesis reports on a study designed to explore the effectiveness of mindfulness training (MT) as a self-care strategy for counsellors who provide care to psychologically traumatised individuals. The purpose of the research was to explore the effect of MT on both negative and positive secondary trauma impacts (STI) in relation to aspects of quality of life of trauma counsellors. Accordingly, the study tested the hypothesis that an MT intervention may both reduce negative trauma impacts of Burnout (BO), Secondary Traumatic Stress (STS) and Vicarious Trauma (VT) and increase the positive trauma impact of Compassion Satisfaction (CS) in trauma counsellors. In addition, it was also intended that mindfulness capabilities would increase as a consequence of undergoing MT.

The following aspects are relevant to set the context for the research study. The elevated levels of crime and violence in South Africa, together with a long-standing history of political conflict and violence has prompted researchers to suggest that the country occupies the notorious position of being, a "natural laboratory in which to study the impact of traumatic events and their consequences" (Kaminer & Eagle, 2010, p. 4). The Centre for the Study of Violence and Reconciliation (CSVR) reports that statistics of violent crime in South Africa are higher than worldwide averages in relation to murder (approximately 34.1 murders per 100,000 people per year), femicide (among the highest rates globally), child homicide (twice the worldwide average), and violence among youth (nine times the global average) (Brankovic, 2019). Furthermore, Brankovic notes that around twenty-five percent of women experience intimate partner violence or non-partner violence. In general, South Africa presents with crime statistics that fall within the highest global averages in relation to both inter-personal and collective forms of violence, including homicide, gender-based violence, public protest violence and violence against children (Brankovic, 2019). Violent crime appears to be increasing rather than abating in the country. The most recent South African Police Service's annual statistics report on reported crimes revealed, for example, a

3.4% increase in murder and a 4.6% increase in sexual offences, as compared with the previous annual report (Statistics South Africa, 2019).

Atwoli et al. (2013) report that commonly experienced traumatic incidents in South Africa include criminal assaults (such as armed robbery), violence perpetrated on intimate partners, sexual violence, and the witnessing of violent acts. The problem of crime in South Africa is further exacerbated by associated factors such as unemployment, poverty, social and economic inequality, social disorganisation and deficiencies in state interventions, which remain challenging and prominent (Bhorat, et al., 2017; Eagle, 2015). It would follow from the scenario mapped thus far, that first-hand or vicarious experiences of psychological trauma associated with crime and violence, currently and historically seem to be a norm rather than an exception for the average South African. [1]"Statistics from a 2007 study on a nationally representative sample of adult South Africans highlight that almost 75% had experienced at least one traumatic event in their lifetime and that most individuals had experienced multiple traumatic events (Williams et al., 2007)." (Pillay & Eagle, 2019, p. 3). Some individuals had experienced as many as six or seven trauma experiences and over 50% of the sample had experienced more than one traumatic event, and individuals with higher trauma exposure reflected increased vulnerability to mental health problems (Williams et al., 2007). The exposure rates translate into a range of trauma-related conditions, placing a heavy burden of responsibility on those who aim to support and treat trauma victims. Not only are there high volumes of traumatised clients seeking assistance in South Africa, but the nature of traumatic events is often severe, and many clients have experienced poly-victimisation. It is also the case that victims may live in contexts in which risk of future trauma exposure is high and in which government agencies are ineffective in reducing crime and supporting victims (Stevens, et al., 2013; Eagle, 2015).

[1] Some theoretical sections of the thesis cover content are included in a published peer-reviewed journal article available online at: https://doi.org/10.1007/s12144-019-00177-1 , "Pillay, K., & Eagle, G. (2019). The case for mindfulness interventions for traumatic stress in high violence, low resource settings. *Current Psychology*, 1-15." See Appendix A. This material is referenced to this journal article publication where it appears within the thesis. It is noted that extensive use of material from the journal article is evident at some points in the literature review chapter given a degree of overlap in the objectives of the article and aspects of the review in the thesis.

For mental health workers engaging in such contexts, alongside the burden of dealing with elevated levels of severe trauma exposure, it is necessary to come to terms with the fact that they cannot protect their clients from potential harm, increasing the psychological burden of offering support in such contexts.

The problems of pervasive violence and consequential wide-spread psychological traumatisation appear even more challenging when viewed in conjunction with the evidence presented by the South African Human Rights Commission's (SAHRC) (2019) account on the current state of mental healthcare in South Africa. The report highlights serious problems concerning mental health service delivery, including state mismanagement, resource constraints, insufficient resource allocation, and, important for the context of the present study, a limited number of mental health service providers available to provide treatment to a large number of people with mental health problems (SAHRC, 2019). Significantly, some of the concerns raised in this report have direct relevance to risk factors that have been identified for the development of Secondary Traumatic Stress Impacts (STI) in counsellors, as will be discussed in Chapter Two.

While it is noted that the SAHRC report was produced from an overarching investigation into general mental health service delivery rather than focusing specifically on traumatic stress-related conditions, the findings highlight severe problems relating to the challenges of meeting the general mental health treatment requirements for South African citizens, including deficiencies in meeting the needs of psychologically traumatised individuals. Following from this report, and of relevance to this study, it may be argued that the well-being of mental health service providers who are available to offer counselling services is particularly important if they are to sustain their work productively.

In contrast to research on the impact of psychological trauma and violence on South Africans (Atwoli et al., 2013; Burton & Leoschut, 2013; Kaminer, et al., 2018; Ludick, 2013; Pelzer, 1999; Wyatt et al., 2017) and related research into contextually appropriate trauma counselling interventions, the mental health of service providers has received limited research attention. This dearth may be understandable given that limited resources have been prioritised for more direct

sufferers of traumatic stress. However, both international and local traumatology literature report evidence that individuals who provide psychological counselling services to traumatised clients become vulnerable to developing psychological injury as a direct consequence of their work (Collins & Long, 2003; Gentry, 2002; Ludick & Figley, 2017; Sprang, et al., 2007; Turgoose & Maddox, 2017). Despite awareness of these kinds of adverse effects, counsellors who offer trauma counselling services have had little attention in formal research relative to direct victims of traumatic events, and there seems to be an inadequate emphasis on identifying possible mechanisms for promoting the psychological well-being of counsellors.

It is contended that the psychological health of counsellors is of foremost importance in ensuring that traumatised individuals are offered effective and sustainable services, and in ensuring that the counsellors' own mental health is not overly compromised by engaging in such work. As noted above, this is especially critical in the South African context, where a relatively small number of trained counsellors are available to offer counselling services to a vast number of traumatised individuals. While the work impacts and mental health of South African trauma counsellors have received some attention in academic research (MacRitchie, 2006; MacRitchie & Leibowitz, 2010; Moultrie, 2004; Ortlepp & Friedman, 2001; Ortlepp & Friedman, 2002), research on evidence-based interventions that may effectively contribute to the well-being of counsellors needs to be expanded.

Rationale for This Study

As described above, the South African context is characterised by pervasive violence and consequently high rates of trauma exposure and vulnerability to a range of trauma-related conditions, and besides, there are severe mental health provision resource constraints. "Adopting interventions that are supported by research, flexible in implementation and appropriate for contexts of single, multiple and continuous traumatisation, would be very beneficial in this context" (Pillay & Eagle, 2019, p. 5). This study drew its impetus from a significant and growing international research evidence base which demonstrates that MT may arguably be an appropriate intervention in this kind of context.

Arguments for the efficacy of MT in improving mental and physical health and well-being in both clinical and non-clinical populations have growing credibility, including through the documentation of increasing empirical evidence. However, academic research on MT needs to expand and to be employed in a range of settings. To date. research pertaining to mindfulness and mindfulness practices and training in the South African context is nominal. The present research study sought to extend research into MT and into the amelioration of secondary trauma impacts in trauma counsellors by investigating the impact of MT as a holistic self-care strategy for counsellors who provide services to psychologically traumatised clients. The study was intended to make an original contribution by examining the efficacy of MT as an intervention technique which has not been widely systematically studied as a potential mechanism for containing and ameliorating STI in counsellors, despite considerable research indicating that MT may be a relevant intervention in the broad field of traumatic stress. Given that it is established that trauma counsellors are vulnerable to developing forms of secondary traumatisation and play a crucial role in meeting the needs of direct victims and survivors, it is considered important to advance effective and accessible interventions for ameliorating counsellor distress and for building resilience.

MT was chosen as the experimental intervention for STI in trauma intervention counsellors because of its potential to impact on multiple levels in contrast to some other forms of intervention. In the context of Burnout (BO) Secondary Traumatic Stress (STS) and Vicarious Trauma (VT), Mindfulness Training (MT) was hypothesised to impact on the various levels at which these conditions manifest: symptomatically, affectively, cognitively and at the level of existential meaning. The study sought to evaluate whether MT appears to have benefits in addressing the multiple effects of STI in a single intervention.

Studies show that MT impacts both at a palliative level to relieve symptoms and fosters resilience and the building of psychological resources with repeated practice (Brown & Ryan, 2003; Davidson et al., 2003; Keng et al., 2011; Siegal, 2010). Existing research into mindfulness indicates that the neurobiological and psychological transformative impact of MT may not only serve to

alleviate the immediate symptoms of STI in trauma counsellors but may also serve to increase CS and facilitate the development of greater long-term resilience and resourcefulness. Thus, MT may be effective in both ameliorating current STI and preventing future risk of STI in counsellors.

Aims and Objectives of The Study

The broad intention of this study was to investigate the efficacy of a mindfulness-based self-care intervention in ameliorating the impact of secondary trauma and promoting aspects of psychological health in South African counsellors who serve an extensively traumatised population in the course of their everyday work.

The first primary aim of the study was to assess the potential impact of MT, as a self-care strategy, on a group of mental health professionals who work with psychologically traumatised clients, using an intervention based and control group design. Secondly, the study aimed to assess possible patterns of change by comparing outcomes on a range of different dimensions. Thirdly, the study was intended to assess whether participants' mindfulness assessment scores appeared to have significantly increased post-delivery of the programme. Fourthly, the study aimed to investigate whether the effects of the intervention were enduring over a three-month period. In addition, the study was designed to gauge what aspects of MT were reported to be most helpful to and most difficult for counsellors.

Objectives.

In relation to a group of South African counsellors who routinely treat clients who have been exposed to traumatic stressors:

- To assess the impact of MT through comparing pre- and post-intervention measures of Compassion satisfaction (CS), Burnout (BO), Secondary Traumatic Stress (STS) and Vicarious Trauma (VT), across control and experimental groups.

- To assess and compare the impact of MT on the reported Posttraumatic Stress symptoms of Intrusion, Avoidance, Negative cognition and mood, and Arousal, across control and experimental groups.
- To assess whether there appeared to be a greater increase in mindfulness capacities in the experimental as compared to the control group.
- To compare the impact of MT on the various variables assessed with the intention of establishing in what domains of functioning MT appears to have the most significant effect.
- To assess the sustainability of the impact of MT three months after the start of training.
- To qualitatively assess the participants' experience of MT (for both their personal and professional benefit) based on their evaluation reports.

Research Questions and Hypotheses

In keeping with the aims and objectives presented above, the following questions and hypotheses were formulated.

Question One

Does mindfulness training (MT) appear to impact trauma counsellors' Compassion satisfaction (CS), Compassion fatigue (comprising Burnout (BO) and Secondary Traumatic Stress (STS)), Post-traumatic stress symptoms (PTSS) and Vicarious Trauma (VT), as assessed by between and within-group comparisons?

Hypothesis One. Engagement in MT will result in a significant *increase* in post-test as compared with pre-test Compassion satisfaction scores in the intervention group as compared with the control group (as measured by the CS subscale of the Professional Quality of Life questionnaire (ProQOL)).

Hypothesis Two. Engagement in MT will result in a significant *decrease* in post-test as compared with pre-test Burnout scores in the intervention group as compared with the control group (as measured by the BO subscale of the ProQOL).

Hypothesis Three. Engagement in MT will result in a significant *decrease* in post-test as compared with pre-test Secondary Traumatic Stress scores in the intervention group as compared with the control group (as measured by the STS subscale of the ProQOL)

Hypothesis Four. Engagement in MT will result in a significant *decrease* in post-test as compared with pre-test Post-traumatic stress symptoms (PTSS) Total scores as well as a decrease in all four post-traumatic stress subscale scores in the intervention group as compared with the control group (as measured by the PCL- 5).

Hypothesis Five. Engagement in MT will result in a significant *decrease* in post-test as compared with pre-test meaning-related Vicarious Trauma scores in the intervention group as compared with the control group (as measured by the TSI-BSL).

Question Two

Does exposure to mindfulness training (MT) appear to impact trauma counsellors' trait mindfulness capacities?

Hypothesis Six. Engagement in MT will result in a significant *increase* in post-test as compared with pre-test mindfulness scores in the intervention group as compared with the control group as measured by the FFMQ.

Question Three

Does MT appear to have a sustainable impact on counsellor well-being three months after training?

Hypothesis Seven. The post-test-decrease in scores on the BO, STS, VT and PTSS and increase in CS and mindfulness scores will be sustained three months after the intervention begins.

Question Four

Which aspects of STI appear to be most strongly affected by engagement in MT?

Question Five

How did the participants' experience and evaluate their engagement in the MT intervention, and how did they report that the training affected their professional work?

Having provided a brief background to the study, including the main objectives, a concise outline of the structure of the thesis is provided. In Chapter Two the heoretical framework and literature review will be presented to set the context for the study. Chapter Three, the Method section, will present details on the research design, participants, instruments, and data analyses, thus addressing questions of how data was gathered and analysed. Chapter Four reports the quantitative and qualitative results that arose from the data analysis. Chapter Five consolidates the results in relation to the hypotheses tested, existing literature and related studies in order to discuss the effectiveness of MT as a self-care strategy for trauma counsellors and presents a brief evaluation of the study assessing the strengths, limitations and proposals for future research. Finally Chapter Six presents concluding comments based on an overview of the thesis.

Chapter Two: Literature Review and Theoretical Framework

The literature review will locate the present study by elaborating on theoretical and empirical literature in two key areas: secondary trauma impact (STI) and mindfulness practice and training (MT), and will identify some apparent gaps and questions posed in existing research that provided the rationale for this study. The first section of the chapter examines various negative and positive STI concepts related to the work of trauma counsellors, including Countertransference (CT), Burnout (BO), Secondary Traumatic Stress (STS), Vicarious Trauma (VT) and Compassion Satisfaction (CS). The second section explores and contextualises mindfulness in Western Psychology. Section Three elaborates on the links between mindfulness and traumatic stress impact and proposes why MT may theoretically be an effective STI intervention for trauma counsellors and discusses existing research findings on the advantages of mindfulness for traumatised populations, including health workers suffering from secondary traumatisation.

Section One: Costs and Benefits of Working as a Trauma Counsellor

It has long been recognised in the traumatology literature that trauma counsellors become vulnerable to both personal and professional impacts as a direct consequence of their work (Sabin-Farell & Turpin, 2003). Since the mid-1990s, research on the impact of trauma counselling on caregivers has evolved from the initial recognition and definition of negative and positive STI, to the proposal of theories that explain the mechanisms of STI and subsequently, to the investigation of variables that may mediate or correlate with STI. However, there remains insufficient research on what is arguably the next logical step in this progression of enquiry, that is to develop empirically validated interventions that may facilitate self-care, prevent or buffer negative trauma impacts, increase the positive STI of working with trauma and build resilience in counsellors. Various developments in understanding and researching STI are discussed below.

Constructs relating to the professional quality of life and STI on trauma counsellors have been defined and explored in both negative and positive terms although there has been greater theoretical and empirical focus on the negative effects of conducting such work. To set the

framework for this study, concepts relating to both negative and positive STI of trauma work will be elaborated, differentiated and evaluated in terms of their apparent usefulness in thinking about the impact of delivering trauma counselling interventions.

Negative impact of trauma work

For obvious reasons, adverse trauma impacts relating to the impact of trauma work on counsellors (which also has implications for clients) have been identified and prioritised in research. Various terms have been used, such as Countertransference (CT) (Wilson & Lindy, 1994), Burnout (BO) (Maslach & Jackson, 1981), Compassion Fatigue (CF) (initially termed Secondary Traumatic Stress (STS)) (Figley, 1995), and Vicarious Trauma (VT) (Pearlman & Mc Ian, 1995). An area of contention in the literature is that these terms are sometimes used interchangeably, and there is confusion in the way these constructs are conceptualised (Russell & Cowan, 2018). Therefore, there is merit in disentangling and briefly exploring each construct independently as each has unique characteristics that offer a different perspective on STI in counsellors.

Countertransference (CT). One of the earliest references to the negative effect of caring for patients on the therapist may be found in the psychoanalytic literature. Freud first mentioned the idea of "Gegenübertragung" in a letter to Jung in 1909, a term used to describe the analyst's conscious and unconscious reactions to the patient during therapy (Stefana, 2015). Although CT was excluded from evaluation in the present study, a brief consideration of the concept is useful in exploring STI. Notably, CT is one of the first psychological concepts put forward in recognition of the fact that counsellors may have negative (or positive) responses to their patients during a therapeutic engagement.

CT is a complex and complicated construct in psychoanalysis that has undergone various revisions as formulated within the literature. CT is broadly described by Hesse (2002) as the therapist's reaction to client material influenced by the unconscious, unresolved conflicts of the therapist. Significantly, CT does not refer specifically to reactions to working with trauma clients but

is a more expansive term traditionally referring to the impact of the *counsellor's* personal history and past experiences on the work with the client, as well as the counsellor's reaction to the client's psychotherapeutic material. The focus on what the counsellor brings to the context is what tends to make this concept different from the other negative forms of STI to be discussed later.

Of relevance to the present study is the model of CT proposed by Wilson and Lindy (1994) who describe the kind of CT responses that may likely arise in relation to trauma work (recognising that these responses will be individually mediated). Wilson and Lindy (1994) propose a useful, descriptive "empathic strain" model of counsellor CT responses in the context of trauma work. To illustrate, the counsellor may display polarised responses that involve either withdrawing empathy and detaching from the patient or losing boundaries and over-identifying with the patient. These kinds of counsellor responses are viewed as being associated with a transfer of trauma symptoms from the patient to the therapist reflecting difficulties with under or over-identification.

Interestingly, Wilson and Lindy's (1994) description of the therapist's responses of over-involvement versus detachment, to some extent appears to relate to the Post Traumatic Stress Disorder (PTSD) symptoms of arousal and over-reactivity versus avoidance and numbing. A patient with PTSD may vacillate between becoming immersed in traumatic memories that create severe emotional distress and detaching emotionally and cognitively from the traumatic memories as a way of avoiding emotional distress. It appears that caregivers' responses may mirror these patterns in some respects. The above assertion is validated in recent research by Wentzel, et al. (2019) who reported that South African oncology nurses employ either detachment or over-identification as two extreme forms of coping methods in response to STI associated with their work contexts.

Wilson and Lindy's description of "empathic strain" resonates with other concepts of negative STI, highlighting the fact that the professional capacities of the therapist may become compromised in response to engaging with difficult client material. Both the compromising of therapeutic boundaries in over-involvement and the failure to retain empathic presence are

problematic features of response commonly encompassed in some other constructs that have arisen to describe negative trauma impacts.

Burnout (BO). A second STI and occupational hazard of trauma counselling concept relevant to this study is Burnout. At first, psychoanalyst Freudenberger (1974) wrote of BO in relation to the physical, behavioural, and emotional symptoms reported by staff at clinics and crisis intervention institutions. BO largely refers to the negative impact of the working environment on the worker. Freudenberger's (1974) introduction of the construct of BO, was followed by a proliferation of writing and theorizing about BO in diverse kinds of work contexts. Whereas BO was originally conceptualised in relation to human services or working with people, currently the notion of BO remains popular in the business sector, particularly in relation to optimising worker stamina and productivity and in identifying obstacles to worker efficiency in a variety of work contexts.

Most appropriate for the context of this study, Maslach (1982) offers a comprehensive description of BO as a progressively developing pattern of emotional and physical exhaustion in response to chronic work-related stressors characterised by three key components: emotional exhaustion in response to emotional overload; depersonalisation (defined as a negative or cynical attitude towards clients), and reduced sense of personal accomplishment or commitment to the helping profession. This formulation resonates with the World Health Organization (WHO) definition of BO as resulting from enduring workplace stress and being characterised by three dimensions: energy depletion or exhaustion, cynicism related to one's job; and reduced professional efficacy (World Health Organization, 2019). Currently, BO is recognised by the WHO as being a serious occupational syndrome and has therefore been included in the most recent revision of the International Classification of Diseases (ICD-11) (World Health Organization, 2019).

A simple and succinct explanation of the mechanisms of BO may be derived from "Conservation of Energy" theory which contends that people tend to protect and preserve resources related to survival and well-being (Hobfall & Freedy, 1993). Stress and ultimately BO may arise under

certain conditions when an individual's resources are either lost or threatened or when individuals fail to gain resources even after significant investment in resource building. BO is an example of a stress outcome which usually follows from a steady process of resource depletion without resource renewal (Gorgievski & Hobfoll, 2008).

To further illustrate the process whereby stress develops into BO in demanding work situations, reference to an earlier theory (Cherniss, 1980) allows for elucidation of the three progressive stages of BO. In the first stage, "stress" emerges as the result of a lack of balance between resources and demands. In the second stage, "strain" develops and reflects the short-term emotional impact of work or other activity characterised by anxiety and fatigue. Finally, in the third stage of BO "defensive coping" becomes apparent when the individual's attitude and behaviour changes and s/he distances psychologically from his or her work context and become apathetic to work demands, in the case of counsellors this translates into being indifferent to clients' problems (Capner & Caltabiano, 1993). The potential for BO to move into phase three highlights the potential risk for both counsellors and clients as this stage and involves counter-therapeutic changes in attitudes toward the client, translating into unhelpful behaviour such as treating clients in a cynical fashion. It is evident that this final stage of BO is suggestive of the description of the detached "empathic strain" aspect of CT referred to by Wilson and Lindy (1994).

The idea that BO may be associated with an interplay and imbalance in both work demands, and work-related resources is echoed in the Job Demand-Resources model of BO developed by Demerouti et al. (2001). As an alternative to the three-phase model described above, the authors proposed a two-factor theory of BO comprising exhaustion and disengagement. They suggest that job demands (such as physical, social and organisational factors that require sustained effort) are linked with exhaustion, while insufficient job resources (such as job control, task variety, participation in decisions and promotion opportunities) are associated with dis-engagement. The authors proceeded to empirically validate this model with a substantial sample of 374 employees of

various occupations (including health care workers) using data combining self-reports and independent observer ratings. The conclusion of this research was that BO occurs in situations of high demand and low resources which may simultaneously lead to exhaustion and disengagement.

While Maslach's (1982) early theorisation initially dominated the field of BO research, it is evident that other theorists have offered revised models proposing related but somewhat different explanations on the primary components and mechanisms of BO. Nonetheless, there appears to be consensus among theorists on the debilitating impacts of BO on people's work capacities, including upon those engaged in counselling and therapeutic work, and consequently agreement also on the negative costs to clients who are in their care, and to the organisations that counsellors serve.

In terms of prevalence rates and determinants of BO in counsellors, a variety of studies have demonstrated that mental health care workers are prone to BO (Newell & McNeill, 2011). The evolution of BO seems to be related to contextual elements such as large caseloads and institutional stressors (Killian, 2008; Stamm, 1997). Alarcon's (2011) meta-analytical study presents evidence of significant associations between BO and risk factors such as high work-related demands or low work-related resources. Other BO risk factors that have been identified relating specifically to trauma counsellors include the level of exposure to trauma cases, a personal history of trauma, inadequate training, and a lack of interpersonal resources (McKenzie Deighton et al.,2007).

More recently, O Conner, Neff, and Pitman's (2018) attempted to establish prevalence rates and investigate contributing factors through their meta-analysis of studies conducted into BO. This was a broad-ranging systematic review that included 62 empirical and quantitative studies from across 33 countries, all using validated measures of BO and conducted on a variety of mental health workers including psychologists and counsellors. The review concluded that mental health care professionals present with elevated levels of BO, reflecting double the rates of the general population. These findings validate the argument that counsellors are at elevated risk for developing BO associated with their professional roles.

When compared with the international research base, South African studies on BO appear to be scant. Rothman (2003) argues that research on BO is scarce for all occupational groups in South Africa and suggests that existing studies are compromised by methodological shortcomings (such as inadequate and non-representative sample sizes and a lack of appropriate statistical analyses). Given this current state of the field, Rothman calls for further South African based research on the causes, impacts and dynamics of BO. One of the few existing South African studies was conducted on psychiatric nurses and investigated the relationship between the three dimensions of BO and the four variables often theorised to be associated with BO - lack of collegial support, large workloads, role conflict, and role ambiguity (Levert, et al., 2000). The findings provided empirical support for the contention that BO is positively correlated with challenging work environment factors such as elevated workloads, low collegial support, high role conflict, and high role ambiguity (Levert et al., 2000). A key finding from this study is that BO levels among SA based psychiatric nurses were significantly higher than those of their overseas counterparts.

Levert et al. s' (2000) findings were validated by another South African study with a sample of 83 nurses from six hospitals across the country in which it was reported that as many as 92% of the sample presented with moderate BO (Mashego, et al., 2016). Similarly, a systematic review of research studies on the well-being of healthcare providers in sub-Saharan Africa reported concerning levels of BO with prevalence estimates ranging from 40 to 80% and concluded that BO impacted greatly on the standard of patient care, affected the functioning of healthcare systems, and had serious personal and professional consequences (Dubale et al., 2019). These assertions are validated by the findings from a study of South African social workers by Kheswa (2019) who reported that STS and BO are endemic in this population and may be attributed to the experience of debilitating resource constraints and related work stressors, as well as inadequate support from management personnel. Other researchers offer related explanations for the prevalence of BO in care workers in South Africa, proposing that elevated levels may be related to the difficult working

circumstances in under-resourced hospitals (Levert et al., 2000), as well as adverse working conditions in other contexts, elevated job demands, and limited job satisfaction (Dubale et al., 2019).

From the studies discussed, it is feasible to argue that BO may be a widespread problem for trauma counsellors in South Africa. While the research cited is related to nurses and social workers, the conclusions from studies related to these populations are arguably applicable to counsellors working with traumatised populations who face similar kinds of job environment pressures. South African trauma counsellors, the subjects of the present study, often work in under-resourced institutions with high caseloads, limited resources and minimal social and state support, conditions which appear to pre-dispose to BO. Consequently, reflecting on the theories, determinants and prevalence of BO presented above, BO was identified as being an important outcome variable for this study.

Secondary Traumatic Stress and Compassion Fatigue. The next STI construct identified in the literature was initially termed either Secondary Traumatic Stress (STS) or Compassion Fatigue (CF) (to represent the same phenomenon), thus demonstrating further the confusion around terminology that is prevalent in research on negative STI. Subsequently, the term CF was refined and adopted as an umbrella term representing both BO and STS (as is discussed later). This contemporary interpretation of the concept of CF was embraced for the purposes of describing and assessing this aspect of STI within the present study.

Initially, one of the most prolific authors and researchers on negative STI, Figley (1995), employed the terms STS and CF inter-changeably to describe the possible outcome of counselling a traumatised client. He introduced the concept of STS to describe a syndrome reflecting the symptoms of PTSD that present in trauma counsellors, as being similar to those that present in direct victims. Figley (1995) established the phrase “the cost of caring”, suggesting that counsellors who bear witness to clients’ reports of suffering may consequently experience similar distress that approximates the symptoms of PTSD. In short, STS is proposed to affect people who have not been direct victims of a traumatic experience but who hear of the trauma experience of others or counsel

trauma victims and respond by developing debilitating symptoms that closely resemble PTSD symptomology (Bride, 2007; Figley, 2002).

To demonstrate the profound impact of STS on counsellors and their work efficiency Dutton and Rubinstein (1995) describe the pervasive dysfunction and possibly debilitating impact as manifesting in three main forms: cognitive shifts, psychological distress and relational disturbances. Adams and Shelley (2008), building on Dutton and Rubinstein's (1995) observations on the incapacitating nature of STS, note that STS may compromise the counsellor's effectiveness and lead to severe complications such as clinical errors associated with compromised judgement and poor treatment planning. Furthermore, in their review of existing studies, Molnar et al. (2017) note that STS is widely recognised as an occupational hazard for trauma counsellors who may present with symptoms of intrusion, avoidance, and emotional numbing.

Regarding the aetiology and development of STS, various models have been proposed (Beaton & Murphy, 1995; Dutton & Rubinstein, 1995; Stamm, 2010). As one of the most influential contributors to theory in this field, Figley has put forward a series of revised theories expanding on his identification of STS as a 'syndrome' in trauma counsellors. In the most recent evolution of his theory of negative effects of counselling on trauma practitioners, Figley (2017) developed The Compassion Fatigue Resilience Model (CFRM), aimed at predicting both vulnerabilities and resilience in relation to STS. In the CFRM he identified risk factors associated with STS such as empathic response-related stress, trauma memory-related stress, over-exposure to trauma-related stress, and stress related to challenging life events, as well as protective factors such as self-care, optimal detachment, sense of satisfaction, and social support. This model presents a useful comprehensive theoretical presentation on factors leading to STS and offers some ideas as to how the counsellor may develop resilience.

There are a few themes arising from Figley's work (and related research on STS) that are particularly pertinent to the present research. Firstly, Figley presents CFRM as a guiding theoretical tool to foster resilience against developing STS. However, his CFRM model has not yet been subject

to empirical validation that is available in published literature. Secondly, Figley's model of STS describes the possible onset of symptoms as being much like PTSD, which generally tends to occur as a rapid response to trauma. A key distinction between BO and STS becomes apparent here as BO is theorised to develop more gradually and cumulatively than STS which may arise, for example, in response to a particularly impactful recounting of a traumatic event in a single session. Also, importantly for the theoretical framework of this study, a fundamental element of Figley's proposals on the development of STS is the central role played by empathy (as was highlighted earlier in relation to Wilson and Lindy's (1994) theorisation of "empathic strain"). Notably, in the various models proposed, Figley (2017) emphasises that while empathy is a vital element of the therapeutic relationship, it is also viewed as the primary channel of trauma transmission. Empathy may easily translate into over-identification, leaving counsellors with feeling states and symptoms that replicate those of the client whose experiences they have attempted to comprehend and share in the service of healing.

The focus on empathy as a principal element in the development of STS is echoed by many theorists. STS develops in response to the counsellor's exposure to the details of trauma communicated by the client combined with their empathy for the emotional experiences of their clients (Collins & Long, 2003). The role of empathy as both a protective and risk factor in the development of STS and VT (discussed below) is considered relevant in the context of this study.

Empathy is widely recognised as being an essential skill, and a key therapeutic element in any counselling relationship (Rogers, 2007) and novice counsellors across theoretical orientations receive early training in the development of this core skill. Studies have also demonstrated the role played by empathy in transmitting trauma symptoms from the client to the counsellor and researchers have proposed that counsellors who experience higher levels of empathy toward traumatised clients become more susceptible to experiencing CF (Adams & Shelly, 2008; Cherniss, 1980; Figley, 2002). Yet there are incongruous findings that suggest that intense empathic engagement with traumatised clients may not be problematic for counsellors. For example, a study

by Harrison and Westwood (2009) identified empathy as being a defensive factor for the development of STS. Turgoose and Maddox (2017) in their review on the predictors of CF, conclude that it is inconclusive whether empathy correlates positively or negatively with CF. Many other researchers corroborate this finding, recognising the paradoxical nature of empathy as it is both a crucial component of effective counselling and yet may also play a role in increasing the counsellor's susceptibility to developing STS (Figley, 1995; Rothschild, 2006; Sabo, 2011). Figley argues that there is an optimal level of empathy that counsellors may experience but that in trauma work there is increased risk of CF (and consequently STS) as empathy requires engaging with often life-threatening and horrifying imagery and very intense client affect associated with the narrating of their experiences. It can be concluded that generally, studies on empathy have been contradictory in identifying whether empathy predicts or protects from STI.

The inconsistent findings on empathy may be explained by the possibility that different conceptualisations and operational definitions of the concept were used in the various studies. Additionally, the mixed findings may imply that the effective *modulation* of empathy is necessary for the prevention of STS in counsellors and for effective therapy. The concept of modulation becomes key in the present study because the regulation of empathy (and other mental processes) relate to the executive features of the Pre-frontal Cortex (PFC). Another portion of the literature review will highlight the role of MT in galvanising the executive functions of the PFC, which is essential for the modulation of empathy and other key psychological functions. In addition, the contradictory findings on empathy and risk of STS may also be explained further with reference to the related concept of "compassion" which occupies a central role in the mindfulness literature, as also discussed in a subsequent section.

Following the identification of STS as a syndrome reflecting trauma transmission from client to counsellor, studies have reported prominent levels and widespread prevalence of STS in counsellors. For example, Pearlman and Mac Ian (1995) reported that in a sample of 188 trauma therapists, 62% presented with STS in the form of significant levels of PTSD-like symptoms. Several

subsequent studies have reported on the high incidence of STS in mental health workers (Diehm et al., 2018; Makadia et al., 2017).

In terms of the risk and protective factors associated with STS, Diehm et al. (2018) studied a sample of 77 Australian psychologists and reported that frequencies of secondary exposure to trauma, a history of personal trauma, and perceptions about the absence of trauma resolution were positively related to STS, while social support moderated STS. Additional factors were recognised in the few studies of STS in South African trauma counsellors in which it emerged that increasing age and a strong sense of coherence were resilience factors against STS, while previous history of trauma, more hours of counselling work performed per week, and excessive engagement or investment in the work role as counsellor were predictive of STS levels (Caldos da Costa, 2001). Another South African study explored the association between empathy, social support and prior trauma exposure and STS in a sample of 64 trauma counsellors (MacRitchie & Liebowitz, 2010). While the authors described that trauma workers reported symptoms associated with STS "to some extent", they did not report on the actual prevalence of STS in this sample. They resolved that there was a significant relationship between increased risk of STS and the counsellor's previous exposure to personal trauma and their level of empathic engagement, and reduced risk of STS with stronger levels of perceived social support (MacRitchie & Liebowitz, 2010). In this study, it was evident that higher levels of empathy were linked with increased vulnerability to developing STS, reinforcing related research findings on the risks associated with high empathy levels in trauma counselling. It is apparent that while researchers have identified various risk and protective factors associated with STS, findings have been inconclusive and sometimes contradictory, indicating that further research is necessary.

However, despite the inconsistent findings on determinants, there have been several studies reporting a high prevalence of STS in personnel conducting trauma counselling, and consequently, the construct of STS was viewed as having direct relevance to the assessment of trauma impacts in this study. As noted above, STS encompasses the possibly debilitating PTSD-like symptoms that may

arise within the counsellor as a direct negative consequence of trauma counselling work and as such, was selected as an outcome variable for this study.

Vicarious Trauma (VT). A further significant STI construct is related to but different from STS. STS focuses primarily on the PTSD like symptoms associated with trauma transmission from client to the counsellor, while the VT concept, introduced by McCann & Pearlman (1990), offers a different perspective on trauma impacts. Theorists like Janoff-Bulman (1989) have proposed that traumatic experiences may disrupt core belief systems or cognitive schemas regarding basic assumptions that individuals tend to hold to make sense of the world, for example, that the world is generally benign and operates according to predictable premises. Building on the idea that trauma exposure fundamentally challenges and alters core schemas, MacCann and Pearlman locate their VT model within the context of Constructivist Social Development Theory (CSDT) which they advanced to describe and explain the development of trauma symptoms. CSDT was originally proposed to explain the dynamics of primary trauma experiences in survivors and was later broadened to include VT responses (Pearlman & Mac Ian, 1995).

CSDT is an integrated theory combining psychoanalytic and cognitive elements proposed to explain the individual's world view and evolution of the sense of self in response to life experiences and influences of significant others and the larger socio-cultural cultural community (Pearlman & Saakvitne, 1995). The theory of VT echoes Janoff-Bulman's (1989) earlier proposal that trauma has the potential to profoundly disrupt the individual's sense of safety and security, purpose and meaning, and sense of validation as a human being.

VT encompasses two central psychological manifestations: intrusive trauma-related imagery and transformed cognitive schemas. In the first instance, the counsellor internalises traumatic images described by traumatised clients and may experience intrusive memories or flashbacks of these images (McCann & Pearlman, 1990). This aspect of VT may be viewed as a more symptomatic element in keeping with STS as it acknowledges that trauma counsellors can also experience trauma-material related intrusions and may attempt to cope with this through avoidance. However, it is in

relation to parallel shifts in belief systems that McCann and Pearlman extend the notion of how therapists may be vicariously traumatised. Linking once again to empathic engagement, Pearlman & Saakvitne, (1995) define VT as also resulting in a permanent transformation of the counsellor's core positive beliefs given empathic resonances with the client's experiences. For example, if a client describes being subject to cruel and degrading treatment, it may be difficult for the counsellor to retain a view of other people as generally benign.

With reference to the CSDT model VT as a construct encompasses the disturbances in cognitive schemas (i.e., core beliefs about self, others and the world) and emotional and behavioural transformations experienced by counsellors who treat traumatised clients. This inner transformation of meaning systems resulting from VT may manifest in disruptions to key cognitive schema. According to McCann and Pearlman (1990). The authors contend that the manifestation of VT in counsellors is in many respects equivalent to the psychological impacts observed in their traumatised clients. They describe fairly extensive disruptions to counsellor's functioning that may be observed including disruptions to "self-capacities, or the ability to tolerate strong affect and regulate self-esteem; cognitive schemas, or beliefs and expectations about self and others in the areas of frame of reference (or identity and world view), safety, trust, esteem, intimacy, power, and independence; and intrusive trauma memories and related distressing affect" (McCann and Pearlman, 1992, p. 186). VT in counsellors can consequently be debilitating.

The findings of a study in the 1980s on the reactions of trauma counsellors appear to be consistent with the conceptualisation of VT. A content analysis of interviews with 61 counsellors working with Nazi holocaust survivors and their families conducted by Danieli (1980) revealed reactions that seemed to approximate VT responses. Some themes that emerged included counsellor reactions of numbing, rage, avoidance, horror, denial, guilt, shame, grief and viewing the client as either the victim or as the hero. These cognitive and feeling states were accompanied by various shifts in meaning related beliefs and evaluations. The severity of the counsellors' reactions

may be interpreted as reflecting disruptions in the counsellor's own perceptions of safety, trust, self-esteem, dependency, intimacy, and control.

Sexton (1999) contested the inferences about VT that were drawn from Danieli's study arguing that the schema shifts observed in this group of counsellor were likely to be reactions to trauma work specifically with Holocaust survivors and were probably not generalizable to treating other traumatised people. However, Straker and Moosa (1994), in a study exploring the reactions of psychotherapists working with trauma survivors in the context of conflict and repression in Apartheid South Africa, also reported therapists' responses as reflecting themes of powerlessness, fear, anxiety, and anger. Additionally, Finklestein et al. (2015) further validated aspects of Danieli's (1980) findings in reporting elevated levels of both PTSD and VT symptoms in a sample of counsellors working with traumatised communities in the Gaza Strip. They proposed that work with victims and communities who have undergone extreme forms of trauma, including human rights abuses and deliberate cruelty, is highly likely to affect the belief systems of those who are called to intervene. However, it is possible that exposure to both individual and collective forms of trauma as a counsellor can produce shifts in personal belief systems that may be experienced as challenging and discomforting. Numerous related studies have corroborated the findings on VT in counsellors as evidenced by changed belief systems following exposure to client's traumatic narratives (Branson, 2019; Long, 2019; Quitangon et al., 2016).

Research on VT in South African trauma counsellors is scarce. One of the few available studies made a useful contribution to the understanding of VT from the phenomenological perspective of the counsellor (Sui & Padmanabhanunni, 2016). The researchers conducted an intensive qualitative study, albeit with a small sample of six South African psychologists, to offer insight into their experiences of working with trauma survivors. In addition to experiencing sub-clinical symptoms of PTSD, all the participants presented with a full spectrum of VT symptoms including disruptions in cognitive schemas, increases in arousal and reactivity levels, significant somatic symptoms, recurring intrusive memories of client's trauma material and enduring negative

emotions. The researchers also concluded that exposure to traumatised clients has a profound impact on treating professionals and may result in VT.

Pearlman & Mac Ian (1995) identified certain correlates of VT when they measured psychological well-being in a group of 188 trauma therapists based in the USA. Therapists who had reported a history of personal trauma (60% of the sample) evidenced greater VT and were more negatively affected by increased duration of conducting trauma work and by the percentage of trauma clients in their caseload as compared with therapists with no history of personal trauma. A more recent study on mental health workers who delivered services to New York residents following the 9/11 terror attacks found similar kinds of patterns (Quitangon et al., 2016). The authors found that VT related to risk factors such as a history of personal trauma and larger caseloads, while possible preventative factors included professional and social support systems. Pearlman & Saakvitne (1995) offer an explanation as to why prior trauma exposure may place counsellors more at risk for VT, suggesting that while therapists who experienced personal trauma may display greater sensitivity and insight in working with trauma clients, their history may also make them more vulnerable to over-identification or to re-evocation of their own traumatic experiences. As with other related STI, there have been inconsistencies in the literature in relation to correlates of VT (Palm et al., 2004). As with the "empathy paradox" referred to earlier, it seems that apparent strengths in the therapist may pre-dispose them to negative STI if not effectively modulated.

In comparing STS and VT, it is noted that in keeping with Figley's description of STS, VT is proposed to cause comparable effects as one may find in primary, direct traumatisation. In contrast to Figley's understanding of STS, VT theorists focus on cognitive schema changes in addition to observed symptoms. Unlike the STS model, which focuses primarily on symptoms, the VT model appears to offer a more comprehensive description and theoretically formulated model of negative trauma impacts on counsellors. Dunkley & Whelan (2006) highlight a shortcoming of the CSDT model of trauma impact on counsellors, noting that it tends to understate the potentially positive effects of trauma work. However, the emphasis on distressing impacts in VT is reflective of a prevalent trend in

the literature which tends to focus predominantly on the negative impacts of trauma counselling. The section below will elaborate on some positive secondary trauma impacts with a focus on Compassion Satisfaction, the variable that was identified for investigation in the present study.

Positive Impact of Trauma Counselling

As mentioned just previously, the potential benefits of trauma work on the counsellor have received less research attention than those that appear to compromise the counsellor's functioning This is understandable given that the impact of negative STIs on counsellors are generally of greater concern for both counsellor and client than those that might be positively transformative. Nevertheless, it may be argued that paying attention to positive elements associated with trauma work may offer insight into building resilience for counsellors and for buffering the impact of negative STI on both counsellors and clients.

Similar to the case with the conceptualisation of negative effects, there have been a few terms identified in the literature on positive STIs which have not been clearly conceptually distinguished and appear to refer to the same phenomenon. These terms include vicarious resilience (VR) (Hernandez et al. 2007), vicarious posttraumatic growth (VPTG) (Arnold et al., (2005) and compassion satisfaction (CS) (Stamm, 2010). After a brief introduction to VR and VPTG, the review will focus primarily on CS as this construct was investigated in the current study and is a variable included in the professional quality of life (ProQOL) instrument that is extensively employed to assess counsellor responses to their work.

Vicarious Resilience and Vicarious Posttraumatic Growth. Initially, the term "vicarious resilience" (VR) was introduced in research investigating the experiences of therapists who counselled victims of kidnapping and political violence to describe positive impacts of such trauma work (Hernandez et al., 2007). Specifically, VR refers to the transformations in the therapists' inner experience resulting from empathetic engagement with the client's trauma material that appears to offer them some benefit (Hernandez et al., 2007). For example, VR suggests that counsellors may

learn about surviving and coping with life challenges and adversity by witnessing how their patients are able to overcome extremely difficult life experiences. The entertainment of the idea that counsellors may share in the transcendence of traumatic events also complements the observations of McCann & Pearlman (1990) in this regard.

Similarly, the term vicarious posttraumatic growth (VPTG) is a construct that was identified by Arnold et al. (2005) in a study of trauma counsellors. They found that 86% of participants reported that their work with trauma survivors had increased their sensitivity, tolerance, compassion, insight and empathy, and had expanded their appreciation for the resilience of human beings. These results further support the notion that there are potentially both positive and harmful effects of working with traumatised clients. However, there is limited research on VR and VPTG and an absence of psychometrically validated instruments to measure them. In contrast, CS as a construct has enjoyed greater research attention and is therefore, better validated. The measurement of CS has been operationalized in a sub-scale of the Professional Quality of Life Scale (ProQOL) (Stamm, 2010), an instrument designed to holistically assess both adverse and positive impacts of conducting work with traumatised clients.

Compassion Satisfaction (CS). McCann & Pearlman (1990) observed that trauma counsellors might experience greater empathy, increased sensitivity to suffering, personal growth, deeper connections with others, increased self-esteem, and hopefulness in human endurance, because of their work exposure. This would suggest that trauma work may increase resilience and the sense of meaning and purpose for the counsellor both in relation to their work and on a broader philosophical and existential level.

In keeping with McCann and Pearlman's observations and drawing upon Figley's earlier writing on CF, Stamm (2010) proposed the term "Compassion satisfaction" (CS) in reference to the affirmative impact of trauma work. CS refers to enjoyable, satisfying and meaningful aspects of working with traumatised clients (Elkonin & Van der Vyver, 2011) and is associated with positive work attitudes such as engagement, enthusiasm and dynamism (Mason & Nel, 2012). The

determinants of CS relate to various personal, interpersonal, and organisational factors, such as witnessing clients' positive changes, being instrumental in their therapeutic process, experiencing the support of a multi-disciplinary team and clinical supervision, observing the creativity, strength, and resilience of clients, observing one's growth and change as a therapist, and being aware of positive affect and increased sociality (Schauben & Frazier, 1995). Self-care practices and positive, sustained personal relationships have also been found to be associated with increased CS in counsellors (Stamm, 2010).

A study of volunteer trauma counsellors in South Africa found evidence of the positive impact of trauma work. The authors report that trauma counsellors showed increased self-esteem, personal growth, deeper connections with others, and increased hope for human resilience (Ortlepp & Friedman, 2002). These findings support McCann & Pearlman's (1990) description of the potential positive impact of trauma work. Comparable results were derived from Mason and Nel's (2012) investigation of the prevalence of CF, BO, and CS among South African nursing students. The authors reported that while 60% of the total sample evidenced an elevated risk of CF, at the same time, 92.5% reported moderate to high levels of CS. The latter evidence validates Stamm's (2010) proposal that CS, BO, and STS may co-exist as trauma impacts, although she does argue that CS may be a protective factor against STS. Other studies have also corroborated the finding that CS is negatively associated with CF indicating that CS is potentially a buffering or shielding factor against the development of BO and STS (Collins & Long, 2003; Elkonin & Van der Vyver, 2011; Figley, 2002; Turgoose & Maddox, 2017).

Theoretical and research observations that trauma counsellors may experience both adverse and positive impacts of their work simultaneously resulted in the development of the Professional Quality of Life Scale ProQOL (Stamm, 2010). This instrument was selected as part of the assessment battery for the present study as it offers a holistic assessment of both the negative and positive STIs on counsellors as will be elaborated in the chapter on the research methods employed to conduct the study. Having discussed the range of impacts that have been formulated to define the impact on

counsellors of conducting work with traumatised clients, as well as research findings associated with such formulations, it is important to look at research findings with regard to how negative impacts may be ameliorated and positive impacts sustained or enhanced.

Interventions for Trauma Impacts

Based on scrutiny of existing literature in the field there appears to be a deficiency of evidence-based interventions that may impact positively on the professional life of trauma counsellors, and that may ameliorate negative STI (Miller & Sprang, 2016; Newell & McNeil, 2011). Proposals for STI interventions have tended to be theoretically driven and under-researched, and recommendations appear to be commonly associated with an over-generalised approach to self-care.

Broadly speaking self-care refers to any practice that is directed towards promoting the counsellor's psychological and physical well-being (Hughes, 2014). In response to the recognition of STI, researchers such as Coleman et al. (2017) described an array of activities that may broadly constitute self-care for counsellors, which they define as comprising purposeful efforts to attain and maintain well-being in multiple domains. These include, for example, healthy eating, exercise, hobbies, and an adequate sleep schedule. Other suggestions have included seeking supervision and developing firm personal and professional boundaries (Hughes, 2014). As evident in the above description, the recommendations for self-care do indeed make intuitive sense. However, especially in relation to self-care for STI, the interventions proposed tend to be non-specific and in general, are either empirically untested or have minimal evidence to support their efficacy. Authors have tended to make suggestions for STI interventions based on clinical observations rather than from a strong evidence base.

Gentry (2002) reported on the dearth of empirically supported interventions to treat STI in the early two-thousands. Over ten years later, Bercier and Maynard (2015) concluded in their research review that there are currently no evidence-based interventions to inform the

management of STI. Most recently, Molnar et al. (2017) investigated the status of research in this area and echoed the conclusion that there is a deficiency of research available to validate the emerging suggestions for treatment and prevention of STI.

Those proposals for STI interventions that have been identified in the literature are reviewed below. Figley (1995) advocated the Ecological model of Secondary Trauma Prevention that integrates various general recommendations made by writers in the area. His model identifies individual and environmental mechanisms necessary for preventing STI reactions. These include personal and professional self-care behaviours relating to physical health, work-life balance, creative pursuits, nutrition, relaxation, skill development, spiritual practices, social support, self-awareness, and clinical supervision. This model appears to address the various theorised causes of secondary trauma impacts within the individual and the work context.

Building on the theoretical proposals of Figley's model, Gentry (2002) devised a five-session CF treatment protocol, the 'Accelerated Recovery Programme' (ARP). ARP includes various treatment modalities like trauma therapy; Hypnotherapy, Video-Dialogue, Eye-Movement Desensitization, and, combined with assessment procedures such as the Compassion Fatigue Test; Solution-Focused Trauma Recovery Scale, and a Structured Clinical Interview in to assess areas of greatest difficulty and improvements over time. While ARP appears to be a comprehensive and theoretically sound intervention, there is limited evidence of its value. As Molnar et al. (2017) argue, there are no published study results on the effectiveness of ARP. Additionally, ARP is a multiple component-based intervention and requires training on numerous different therapy modalities for implementation.

Finally, a more recently proposed "components for enhancing clinician engagement and reducing trauma or (CE-CERT) "model by Miller and Sprang (2016) offers guidelines on skills that counsellors may employ during sessions with traumatised clients to safeguard against STI. The authors based this model on the assumption that counsellors who maintain affective and cognitive

regulation while mobilising other vital skills could protect themselves from depletion and distress associated with STI during trauma counselling. The five skills proposed were experiential engagement (maintaining connection with the client while acknowledging feelings that arise in response), regulating rumination (intentional control of cognitive processes), conscious narrative (constructing and assimilating the trauma narrative), reducing emotional labour (nurturing skills to decrease the emotional burden of clinical work) and focusing on parasympathetic recovery (attunement and regulation of internal states of sympathetic arousal) (Miller & Sprang, 2016). While this more focused model is derived from components drawn from the existing trauma treatment evidence-base, it has not been empirically validated. However, this model does appear to have synergy with MT, the intervention chosen for the present study. Arguably, MT supports the promotion of all the skills that are theorised by Miller and Sprang as being important in promoting resilience and buffering the counsellor against the impact of STI as will be further elaborated in section two which explores the mechanisms of action of mindfulness related practices. It is evident from the literature that there is an absence of empirically validated efficient and effective interventions for the treatment and prevention of STI.

The Debate on Secondary Trauma Impacts

Two significant areas of controversy of relevance to this study have been identified in the literature regarding STI on counsellors. Firstly, some scholars have questioned the existence of STI, such as STS and VT. Secondly, attempting to clearly distinguish the terms used in the research literature to describe trauma impacts has revealed considerable confusion and debate. While some researchers recognise the lack of consensus on the meaning of terms, others tend to use terms interchangeably without acknowledging that there may be differences in conceptualisation of the constructs. This assertion is supported by Russell and Cowan's (2018) review on the theorisation of STI to date, and their conclusion that there are a multitude of overlapping concepts and a variety of aetiological attributions for the presence of negative STI in caregivers. The two key controversies concerning STI will be further engaged to clarify the context and assumptions for the present study.

Firstly, since the 1990s, there has been extensive theoretical and empirical evidence supporting the notion that trauma counsellors are susceptible to STI as an occupational hazard (Sabo, 2011). In contrast to the vast compilation of evidence supporting the notion of STI, there have been dissenting voices that argue against their existence. For example, Kadambi and Ennis (2004) compiled a review of the literature on STI on mental health practitioners and argued that there is insufficient evidence to conclude that counsellors are significantly affected by their work with traumatised clients. The authors pointed to methodological problems in reviewed research studies reporting incongruities between quantitative and qualitative research concerning the severity, prevalence and scope of STI, which they claimed challenged the validity of findings of existing studies (Kadambi & Ennis, 2004). Sabin-Farrell and Turpin (2003) also noted that methodological limitations, lack of baseline data and disparate results have raised questions about the validity of research findings in relation to secondary trauma impacts on counsellors.

To illustrate their argument further, Kadambi and Truscott (2004) studied 221 mental health workers who treated clients from three diverse populations (general practice, cancer, and sexual violence). The investigation concluded that, as that most of the sample was not suffering from VT or BO, there was insufficient evidence to support VT as a work-related threat specific to therapists working with trauma survivors. The authors question the current conceptualisation of VT, pointing out that there are conceptual and psychometric questions which necessitate ongoing research around secondary trauma counselling impacts. The promotion of ongoing research seems valid in response to these kinds of critiques.

In a similar vein, Elwood et al. (2011) argue that findings on the specificity and prevalence of secondary trauma symptoms in clinicians are inconclusive. The authors add that trauma counsellors' reports of symptoms are not "clinically significant" and may not associated with trauma therapy and treatment. They recommend that further justification and research on identification criteria, course, and associated dysfunctions of STI, are needed (Elwood et al., 2011).

A further study that challenged research findings that exposure to trauma cases has deleterious effects on counsellors was conducted by Devilly et al. (2009) on 152 Australian mental health care specialists. In this sample, it was concluded that trauma-related workload was not related to the development of STI among therapists. The authors reported that STS, BO, and VT are highly convergent constructs and that measures for these constructs do not display adequate construct validity. They conclude by arguing that STI in trauma therapists is over-estimated (Devilly et al., 2009). The authors' assertion seems controversial in relation to the substantial research base of contradictory evidence that lends support for the existence of STIs.

In the last few decades, numerous studies in various contexts have been conducted that confirm the presence of STI in mental health professionals (Bercier & Maynard, 2015; Merriman, 2011; Molnar et al., 2017; Turgoose & Maddox, 2017). Studies have acknowledged the effects of counsellors' exposure to a variety of their clients' trauma experiences including physical and sexual assault, natural disasters, domestic violence, childhood sexual abuse, as well as work and school related violence (Jordan, 2010). Although greater research rigour should be encouraged, there is clear indication that in numerous trauma counsellor populations, that there is evidence of secondary or vicarious effects related to the intervention work they undertake.

With reference to the criticism pertaining to lack of adequate refinement of constructs used to describe and research STI, Sabo (2011) convincingly argues that utilising the three constructs of BO, STS and VT is not redundant as there is satisfactory empirical evidence to establish the validity of each as a discrete concept capturing specific, even if inter-related, dimensions of STI. The previous discussion of each of the three constructs has outlined that there is a different weight of emphasis on various aspects of possible impact, from work disengagement, to developing parallel symptomatology, to experiencing shifts in core schemas. While a few researchers have questioned the construct validity of these three constructs, other researchers' have demonstrated compelling evidence of their existence as they are currently conceptualised (Canfield, 2005; Jenkins & Baird, 2002). In a review of research papers on STI, Stamm (1997) acknowledges that the impact of client

trauma on counsellors is well recognised in the literature and concurs with the observation that the terms used to describe these constructs are poorly delineated. The terms describe similar phenomena from different perspectives, levels of severity and theoretical depth. Despite controversy, there is considerable consensus in the literature that the use of the concepts BO, STS and VT as distinct descriptors of adverse STI is useful and valid.

In summarising conclusions arising from the discussion of existing controversies concerning aspects of STI research, the following seem pertinent. Based on both theorisation and clinical observation, there are enough grounds to argue for the existence of STI and there is ample empirical evidence to support this contention. Further, in support of the argument proposed by Sabo (2011), it seems that STI from engaging in counselling work is inevitable as features crucial to effective therapy, such as empathic engagement, have been implicated in rendering counsellors vulnerable to negative impacts. However, it is acknowledged that there is some uncertainty in relation to descriptor terminology and exactly how different constructs may be related to each other.

As mentioned earlier, the terms STS and CF have frequently been used interchangeably in the literature. More recently, a distinction between the terms STS and CF has been refined and is of relevance for the present study. Like Stamm (2010), several authors have adopted CF as a more comprehensive term relating to the holistic experience of physical and physical fatigue; consisting of the combined symptoms of burnout and secondary traumatic stress (Adams et al., 2006; Bride et al., 2007; Newell & MacNeil, 2010).

In keeping with this more recent literature for the intentions of this study, the term "Compassion Fatigue" (CF) was adopted as the umbrella term for the experience of both STS and BO. This aligns with the description of CF as being a combination of extreme emotional distress associated with the PTSD-like symptoms of STS that may result from working with traumatised clients, coupled with the physical and emotional exhaustion produced by a reduced capacity to cope

with the demands of the working environment associated with BO (Cocker & Ross, 2016; Stamm, 2010).

While the umbrella term CF was adopted for this study for both conceptual and empirical purposes, it is worthwhile to clarify further the distinctions between the associated concepts of BO and STS. In BO, the emphasis is on environmental and organisational stressors while STS refers to the psychological and emotional processes within the counsellor associated with exposure to the trauma of the client (Turgoose and Maddox, 2017). Valent (2002) offers an additional perspective when he proposes that distinctions between BO and STS are related to failures in different counsellor survival strategies, where BO arises as a result of failed assertiveness-goal achievement responses, and STS, in contrast, is linked to failed rescue-caretaker responses. Thus, BO is related to the counsellor's frustrations at not being able to attain goals while STS is related to guilt and distress at not being able to protect or save the client.

From an aetiological and descriptive perspective, STS may result from exposure to a single traumatic case and may have a rapid onset of symptoms, unlike BO which is generally viewed as having a gradual and cumulative origin. STS results in a reduced capacity to empathise with patients and is characterised by intrusive imagery, avoidance or numbing, high anxiety, hypervigilance, re-experiencing, irritability and or anger (Bride et al., 2007; Figley, 1995; Rothschild, 2000). This description of STS symptoms is like primary PTSD symptoms described in the DSM 5 (American Psychiatric Association, 2013). Interestingly, with the introduction of negative alterations to cognition as one of the core symptoms of PTSD in DSM 5 there is greater scope to consider changes to cognitions in therapists as also part of the symptomatic effect of working with traumatised clients, whereas to date this dimension has conventionally been more strongly associated with VT theorisation.

It is clear from the preceding discussion that negative impacts associated with trauma counselling may result in debilitation at various levels and in various domains of the counsellor's

functioning. The onset of negative trauma impacts may be rapid or gradual. Counsellors may experience somatic, affective, cognitive, relational, and existential meaning-related secondary trauma impacts as a direct result of trauma work.

Section Two: Mindfulness

Following from the discussion in the previous section of the key constructs and research related to the study of secondary traumatic stress in the trauma counsellors the second major area of discussion that underpins and informs the study concerns mindfulness, and mindfulness practice and training. The section begins with a discussion of definitions and descriptions of MT, followed by the historical expansion of MT in the West and the incorporation of mindfulness into psychology. Material on the research base of MT focusing on the significant areas of relevance for this study will then be presented, and finally, criticisms of the mindfulness movement will be explored.

Definitions and Descriptions of Mindfulness

The many and varied definitions of mindfulness found in the literature are a testament to the fact that mindfulness is a complex construct. It is challenging to translate a largely phenomenological experience into words that comprehensively capture the multi-faceted nature of the phenomenon. To this end, descriptions, and definitions of mindfulness and how it is consensually understood explicitly in the West will be explored below.

Mindfulness originates from ancient Buddhist traditions of self-awareness and insight development. Clues to the meaning of mindfulness may be found in the ancient Buddhist word "sati" from which it was translated. "Sati" connotes "awareness, "attention" and "remembering" (Siegal, et al., 2009) which may be interpreted as "remembering to be aware and pay attention" to present experience. This description conveys the broad meaning of mindfulness. For centuries Buddhists have proposed that the key to ending human suffering lies in understanding and developing the mind and expanding states of awareness. Systems of knowledge on personal and interpersonal functioning and specific practices for life improvement and mental mastery were developed to this end. The cultivation of mindfulness is one component of the eight-fold path that

was proposed by Buddhism as the route to ending human suffering. Here the commonality between ancient Buddhist philosophy and Western psychology becomes evident because, like Buddhism, psychology has focused on developing interventions to alleviate human suffering and enhance the quality of life through various therapeutic modalities.

In Western Psychology “mindfulness” is a broad term used concerning specific practices involving attention, awareness, memory, and acceptance (Van Dam et al., 2018). Recognising that the term can be broadly deployed, Davis and Hayes (2011) contend that the term is used to define a state of psychological awareness, a training that enhances such awareness, a method of information processing and a personality characteristic. Writers defining mindfulness have focused on different related elements of this construct such as the intentional self-regulation of attention (Goleman & Schwartz (1976) and the quality of awareness or consciousness associated with being in states of mindfulness (Brown & Ryan, 2003; Kabat-Zinn, 1982). Thus, various theorists seem to have proposed definitions highlighting different dimensions of mindfulness which, when viewed together, offer a holistic perspective on the construct. In general, although there are clearly distinctions between the abstract concept of mindfulness and mindfulness training, which focuses on helping individuals to grasp and cultivate states associated with being mindful, for ease of language use and because the research study is focused on mindfulness training the terms “mindfulness” and mindfulness training (MT) tend to be used interchangeably in the thesis. MT is used as the umbrella term referring to mindfulness-based interventions in general, under which there are specific formats of training such as mindfulness-based stress reduction (MBSR), for example.

For this study, Kabat-Zinn’s (1994) commonly quoted definition of mindfulness was adopted as it seems to capture the essential dimensions of the construct: ‘‘the awareness that emerges through paying attention, on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment by moment’’ (p. 145). According to Shapiro, et al. (2006), there are three core components of mindfulness: firstly, “intention” or consciously focusing on paying attention; secondly, “attention” or the cognitive processes of concentrating and thirdly; “attitude”

referring to the non-judgmental and compassionate qualities that infuse the process. Bishop et al. (2004) elaborate on these three aspects with their description of mindfulness as being an attention regulation process of non-elaborative awareness, coupled with an attitude of curious and open acceptance, whereby the individual gains insight into and greater understanding of the fleeting and ever-fluctuating nature of mental contents.

Likewise, writers such as Nagy & Baer (2017) attempt to illuminate the construct of mindfulness in relation to its polar opposite state of mindlessness or "autopilot", a state which is associated with automated behaviour, with little awareness of thoughts, action or sensation, and where attention drifts away from the present moment and resides in memories or future anxieties (Brown & Ryan, 2003). Kabat-Zinn (1994) elaborates that the "autopilot" mindlessness mode is often associated with ruminative thoughts, leading to distressed states of mind and the repetition of dysfunctional coping patterns

From a neuro-science viewpoint, the "autopilot" state is linked with brain activity structures known as the default mode network (DMN) which are connected to past recollections and future planning (Vatansever et al., 2017), as well as with self-referential and emotional processes linked with anxiety and depression (Coutinho et al., 2016). On the other hand, present moment awareness is allied with reduced DMN activity and increased activity of the executive and integrative functions of the prefrontal cortex (PFC) (Siegal, 2007), which is associated with conscious awareness, executive functions and purposive behaviour. The role of the PFC in MT is central to the theory underpinning the present study and will be discussed further.

Linked to the study of mindfulness there are numerous types of meditation practice referred to in the literature, and conceptual confusion is evident as the term "meditation" often refers to various types of practices as a homogenous group. Therefore, it may be beneficial to distinguish MT from other types of meditation-oriented practice. A suitable approach to differentiate MT from other forms of meditation is with reference to Olendzki's (2009) metaphoric description which likens

MT to a floodlight that may at first require a concentrated focus on a single object. MT entails firstly intentionally attending to a chosen object and then endeavouring to sustain attention over time. The next step in MT is to expand attention and awareness to a wider array of phenomena, such as internal body sensations like the heartbeat, externally arising body sensations (like smell and sound), and cognition, emotions, and other aspects of experience, rather than confining the focus to a singular object. “Like a floodlight rather than a spotlight, mindfulness illuminates a more fluid phenomenological field of ever-changing experience rather than isolating a particular object for intensive scrutiny” (Olendzki, 2009, p.42). Similarly, Lutz et al. (2008) propose that mindfulness begins with “focused attention” which stabilises awareness onto a single object and is then followed by “open-monitoring” which opens attention to broader awareness and finally develops into a meta-awareness of being aware.

This meta-awareness and sustained attention and focus on the contents of the mind is believed to help develop specific skills which Siegal (2010) terms “Mindsight”, a term referring to the learned ability to “see” the mind, and over time, and with practice, to develop the capacity to regulate the flow of the contents of mind. Thus, the concentrated awareness of mental contents is seen to create insight into the mechanisms of the mind and promote compassion, non-judgement, and acceptance. The awareness of, insight into, and acceptance of what arises is seen as an antecedent to the individual’s dis-identification from what is being experienced. This state is believed to promote self-regulation, mental flexibility, creativity and greater integration of mental functioning, allowing the individual to respond more skilfully and effectively to whatever is being experienced (Siegal, 2009).

From a practical perspective, MT encompasses concentrating attention on objects such as breath, sensory perceptions, bodily sensations, and emotions cognitions, or all of the above, while maintaining a non-judgmental, curious, tolerant and compassionate attitude toward self and others (Bishop et al., 2004; Shapiro et al., 2006). Accordingly, the practice of MT may be formal and externally mediated by a trainer, where focused time is devoted to learning how to be mindful

through exercises like breathing meditation and sitting meditation. Alternatively, MT may also be informal, where a mindful attitude is deliberately incorporated into daily activities like walking, doing chores or eating. Kabat-Zinn (1990) views formal MT practices as the foundation for developing mindful states during daily activities and consequently cultivating enduring mindfulness traits in daily life.

While the Western psychotherapy approach toward suffering may be encourage change in the client's disturbing or distressing internal or external situation, MT endorses the awareness and acceptance of the internal and external world as it is, without the obligation to change it to something more desirable. Thus, rather than promoting attempts to change distressing mental contents, MT may be viewed as facilitating a shift in the way an individual process these experiences (Davis & Hayes, 2010). MT facilitates a specific relationship with the contents of the mind where thoughts and emotions are perceived as separate from the self as the observer and the observed become dis-entangled (Pillay & Eagle, 2019). This process of meta-awareness, referred to previously, is seen as an essential aspect of mindfulness and various terms are employed to describe it, as will be explored below in the section on mechanisms of mindfulness.

Developing Status of Mindfulness in The West and in Psychological Practice

Mindfulness, estimated to be 2 600 years old, was extracted from its Buddhist roots, secularised for western consumption, and first transplanted into the field of psychology in approximately 1979 (Shonin, & Van Gordon, 2016). Since then, there has been a steady growth in the acceptance and practice of mindfulness in Western popular culture, academic research, and clinical practice. Mindfulness has been lauded as the third wave in cognitive behavioural therapies (Didonna, 2009) and Stanley, Purser and Singh (2018) argue that it has currently moved beyond a therapeutic intervention to become a mass movement and worldwide industry. The latter claim appears valid judging from the exponentially increasing quantity of peer-reviewed scientific papers on mindfulness and the rapidly advancing status of MT in popular culture. To illustrate: while there

were around 39 studies published prior to 2000, in 2019 there were close to 6000 scientific publications available on MT (Bernstein et al., 2019) and this upward trend shows no sign of abating (American Mindfulness Research Association, 2017).

In addition to the growing evidence base, researchers have cited several reasons for the proliferation of interest in MT in clinical, non-clinical and research settings. Walsh and Shapiro (2006) report that meditation is one of the most extensively researched psychotherapeutic interventions while Siegal (2009) contends that the increasing validation of Eastern contemplative practices by scientific research has led to a rapid escalation in the status of mindfulness.

Another reason that mindfulness has become a focal point of research attention is that it may be deemed a trans-theoretical construct (Didonna, 2009) which has been incorporated into various therapeutic and theoretical schools of psychotherapy (Brown et al., 2013). According to Siegal (2009), the cultivation of aspects of mindfulness is arguably a fundamental perceptual process underlying psychotherapy. Additionally, Bernstein et al. (2019) cite the increasing prevalence of physical and emotional disorders and health problems related to escalating social stressors, the de-stigmatisation of complementary mental health care, and the growing interest in the interdependence between mind and body as facilitative of a greater interest in mindfulness in contemporary westernised societies. Given the multiple reasons just presented, it is not surprising that mindfulness has come to occupy a mainstream position to such an extent that Wasserman and Wasserman (2019) argue that the use of MT in psychotherapy practice is the single most significant trend in mental health since the beginning of the millennium.

The prominence and legitimacy of MT as a therapeutic modality is further validated by the decision made by the National Health Service of the United Kingdom in 2015 to include MT as a standard psychotherapeutic intervention following a review of its benefits by a special parliamentary committee (Hyland, 2016). Together with the rise in scientific interest and clinical use, several international business corporations such as Google, General Mills and Intel have recognised the

benefits of MT in the workplace and now offer MT to both their management and employees (Schaufenbuel, 2015). Furthermore, MT interventions are being increasingly offered in non-clinical settings as diverse as government departments, prisons, the American military services, schools, and police services (Cullen, 2011).

Historically, the growing trend of integration of MT into popular culture is reflected in its increasing coverage in mainstream news magazines. For example, in February 2014, after several decades of MT practice in America, Time magazine carried a cover story titled “The Mindful Revolution”, highlighting the burgeoning interest in mindfulness and how it is being assimilated into various facets of American society (Pickert, February 2014). Then in September 2017, Time magazine launched a special edition entitled “Mindfulness the new science of health and happiness” (Corbet, 2017). This was followed in October 2017 by Newsweek magazine’s special edition entitled “Mindfulness, live in the moment” (Newsweek Magazine, 2017). Significantly, the latter took a more critical approach to mindfulness by including an article by Sheridan (2017) entitled: “Mindfulness is a meaningless word with shoddy science behind it”. This seemed to reflect the emergence of a more critical and sometimes cynical approach to the expanding mindfulness movement.

The changing presentation of mindfulness in the popular press seems to mirror varying trends in the status of the mindfulness construct and practice since its introduction to the West. At first, mindfulness appeared to be greeted with zealous enthusiasm and extolled as a panacea for a diverse range of problems. Later the fervour became somewhat dampened as critics began to question the veracity of claims being made about its extensive benefits. Similarly, in the scientific community, while there are escalating numbers of scientific reports validating the many benefits of MT, there is also a more critical line of thinking highlighting the need to be judicious in the promotion of the benefits of mindfulness for various reasons. These criticisms will be elaborated later in this chapter.

To move focus to the South African context, unlike the case in many other developed parts of the world, it is only in the last few years that MT began to make an impact on mainstream culture. In August 2014, Discovery Health, a South African medical aid service provider, invited a leading Harvard University academic and founder of The Langer Mindfulness Institute, Dr Ellen Langer, to deliver the keynote speech for the annual Discovery conference. The title of Discovery's press release advertising Dr Langer's talk was: "Mind over matter – how mindfulness can fix, virtually, everything" (Discovery, 2014). The press release title highlights that MT is becoming recognised as a mainstream intervention for health in South Africa, as well as the fact that extravagant claims continue to be made about the impact of mindfulness.

While the impact of secularised MT in South Africa appears to be minimal relative to its apparent international status, MT does continue to grow. Notably, the Medicine and Health Sciences Faculty at Stellenbosch University currently offers the first South African University-based certificated MT programme (Whitesman & Mash, 2015) and Discovery Health is set to launch a mental wellness programme for its members in 2020 which will incorporate MT as an important element of its wellness goals for members (Discovery, 2019). The latter developments indicate that MT is being recognised as potentially important to health and well-being goals in South Africa and relates to a key impetus point for the present study, i.e., that MT needs to be empirically investigated and validated further within this context.

In focusing specifically on the incorporation of mindfulness into Western psychology and psychotherapy, this development has been progressive but not without challenges. At first, Eastern meditation practices had been regarded with cynicism and considered, for many years, to be associated with fraudulent mysticism (Kabat-Zinn, 1990) in both western popular culture and in psychology. For example, Freud considered meditative states an "artificial schizophrenia" associated with regressive primitive urges (Epstein & Lieff, 1981). This statement represents a long-held opinion in psychology that Eastern meditation was a dubious practice bordering on the pathological. Consequently, meditation practices were stigmatised and resisted in psychology for many years after

Freud. However, as discussed earlier, the status of MT appears to have changed dramatically in the last 30 years.

Kabat-Zinn (1982) is acknowledged as being the first researcher to introduce MT, as modified version of the principles of Buddhist meditation, to western clinical practice in the form of the Mindfulness-Based Stress Reduction Programme (MBSR) at the University of Massachusetts Medical Centre in 1979. MBSR is an eight-week group intervention, representing a secularised version of Buddhist meditation practices designed to be more accessible to western clinical practice (Kabat-Zinn, 1990). MBSR was empirically validated as an effective intervention for reducing chronic pain. Subsequently, the first MBSR programme provided the impetus for further research studies and inter-disciplinary research collaborations on the impact of MT and there is currently a large international body of research demonstrating that MT may be an effective intervention for a wide variety of medical and psychological conditions.

Since the successful introduction of MBSR, MT has been practically incorporated as a psychotherapeutic intervention into various schools of psychology. For example, Teasdale, Segal, and Williams (1995) developed Mindfulness-Based Cognitive Therapy (MBCT) to help prevent relapse in cases of major depression. Depressed patients are taught to view their cognitions and emotions non-judgmentally, as transient mental objects rather than reflections of objective reality, and MT is proposed to prevent rumination on depressing thoughts that may lead to depressed affect. In evaluation studies, MBCT has been found to substantially reduce rates of depressive relapse relative to usual care or placebo (Kuyken et al., 2012).

Similarly, in Acceptance and Commitment Therapy (ACT) (Hayes et al., 1999) patients are taught mindfulness in order to develop a non-judgmental observing self that is seen as being separate from the observed thoughts, feelings and sensations. Likewise, Linehan (1993) included aspects of MT into Dialectical Behaviour Therapy (DBT) which she formulated as an intervention to treat Borderline Personality disorder (BPD). DBT was demonstrated to be effective in training

patients to develop emotional modulation and response flexibility and is supported by extensive empirical evidence (Scheel, 2000). Linehan's work highlights the impact of MT on improving PFC functioning in BPD.

Elements of MT have even been incorporated into psychoanalytic schools of therapy such as relational and attachment-focused psychoanalysis wherein the therapist employs MT practices to facilitate the attachment relationship with the patient and the therapeutic process. (Grecucci et al. 2015). Thus, it may be concluded that since its introduction into western clinical practice, MT has received considerable research attention, been introduced into diverse schools of psychotherapy and has been repeatedly recognised as an effective intervention.

The Expanding Research Base on MT

As discussed previously, there is a large and expanding research base on MT interventions. This section will present research areas relevant to the context of the present study as follows. Firstly, a summary of general research on MT will be presented, followed by research on health care workers, then research on MT and trauma, and finally, research on MT and STI will be reviewed.

Since Kabat-Zinn's introduction of MT, numerous empirical studies have demonstrated the effectiveness of MBSR and related variants of MT on psychological conditions as diverse as anxiety disorders (Hoffman et al., 2010; Finucan et al., 2006); depression (Chiesa et al., 2015; Teasdale et al., 2002); depression relapse prevention (Piet & Hougaard, 2011; Segal et al., 2002), alcohol dependence (Garland et al., 2010), generalised anxiety disorder (Hoge et al., 2013), social anxiety disorder (Jazaieri et al., 2012), social phobia (Piet et al., 2010), borderline personality disorder (Linehan, 1993), eating disorders (Tapper et al., 2009) and addiction (Bowen, et al., 2006).

Additionally, various forms of MT more generally, have been found to have an ameliorating impact on medical conditions such as fibromyalgia and psoriasis (Siegel, 2007), insomnia in cancer survivors (Nakamura et al., 2013), chronic primary insomnia (Gross et al., 2011), stress and chronic pain (Kabat-Zinn, 1990; Wong et al., 2011), improved immune functioning (Davidson et al., 2003),

and high blood pressure and cortisol levels (Carlson et al., 2007). MT is evidently a versatile intervention with applicability to a diverse range of conditions. An additional benefit proposed by Shonin et al. (2013) is that MT has been assessed as a relatively cost-effective intervention. This aspect has bearing with regards to the resource-constrained South African mental health context referred to earlier.

As the evidence base on the impact of MT on numerous conditions has expanded, Baer (2003) summarised the status of MT by concluding in a conceptual and empirical report that research studies have confirmed the effectiveness of MT practices in reducing psychiatric, psychological and medical symptoms. Subsequent reviews of empirical studies have corroborated the above findings. For example, Keng et al. (2011), concluded that MT is linked with beneficial psychological impacts like improved subjective well-being and diminished psychological symptoms such as emotional over-reactivity, and Khoury et al. (2013) resolve that MT improves behaviour regulation and is especially effective for treating states of stress, anxiety and depression.

On the other hand, in reaction to the rapidly expanding research base on MT, there have been criticisms raised in the literature concerning the methodological rigour of some of the research produced (Farias & Wikholm, 2016). These criticisms appear to have motivated improvements in research design and quality, as evidenced by the growing number of RCTs on MT that have been produced in the last few decades.

Correspondingly, the findings of recent systematic reviews and meta-analyses have been conducted on RCTs and further validate that MT is a potentially effective intervention for a variety of conditions. For example, Goldberg et al. (2018) report in their systematic review that MT is a promising intervention for the clinical symptoms of several psychiatric disorders. MT was found to be either equal to or superior to other evidence-based interventions, and MT showed the strongest positive impact on depression, pain, and addictions. This was an impressive meta-analysis in terms of pooling evidence as it compared 142 RCTs with a total of over 12000 participants.

While the above report specifically reviewed studies on clinical symptoms and populations, systematic reviews on non-clinical populations have similarly produced favourable results. Khoury et al. (2015) reported in their meta-analysis that MT was effective in reducing stress, anxiety, depression, and distress and in enhancing the quality of life of healthy individuals. While this metanalysis reviewed a more modest number of 29 studies with 2 668 participants, these findings substantiate the positive results concerning MT impact that were reported in an earlier meta-analysis by Grossman et al. (2004).

Finally, a meta-analysis that combined both clinical and non-clinical populations in a systematic review of 101 RCTs, with a collective sample of 8 135, concluded that MT improves mental health outcome measures and has a statistically significant impact on improving physical health, personal development, social functioning and quality of life, for an extensive diversity of population groups in a various settings (de Vibe et al., 2017).

The Evidence Base for MT with Health Care Workers

With regards to the population of interest for the context of the present study, more recent studies on the impact of MT focusing on health care workers (HCW) in general (including nurses, doctors, emergency, psychologists and paramedics) have emerged. These studies have assessed several aspects of psychological health using various stress-related outcome measures. For example, Lomas et al. (2018) conducted a systematic review on the impact of MT on HCW from 81 studies comprising 3 805 participants. The outcome measures included depression, anxiety, burnout, and stress. They concluded that MT generally produced benefits for the well-being of HCW.

Other systematic trials have also revealed evidence of the positive impact of MT on stress-related outcomes in HCW. For instance, McConville et al. (2017) conducted a systematic review of 19 MT studies conducted on 1 815 health professionals. Their meta-analyses validate the findings of Lomas et al. (2018) as they concluded that MT decreases depression, stress and anxiety levels, and improves trait mindfulness, mood, self-efficacy, and empathy in student HCW. Further, the authors

assert that MT can be relatively effortlessly integrated into the professional training of health practitioners because MT has a range of possible training formats and options.

On the other hand, Gilmartin et al. (2017) claimed that time limitations might be an obstacle in implementing MT for HCW as work demands and time constraints often challenge these professionals. Gilmarti et al. (2017), therefore elected to investigate the value of relatively brief forms of MT comprising four hours duration or less. Their systematic review on a total sample of 833 HCW found that even brief MT decreases stress, anxiety and BO symptoms and increases relaxation, resilience, and quality of life. Notably, the authors found that the extent of the impact of brief MT on resilience, BO and trait mindfulness tended to vary, with longer training duration producing increased benefits. These results seem to validate the contention that mindfulness moves from state to trait with repeated practice as the length of practice time does indeed appear to influence outcome variables. This point will be elaborated in the segment on neuroplasticity later in this chapter.

Other systematic reviews and meta-analyses have corroborated the findings that MT impacts positively on stress-related outcome measures and improves the well-being of HCW (Burton et al., 2016; Escuriex & Labbé, 2011; Lamothe et al., 2016). Thus, the potentially positive impact of MT has been established repeatedly in an expanding body of research directly relevant to psychology and psychiatry. While the population of interest in the present study has had some attention, there is a somewhat limited body of literature on investigating MT impact on STI in trauma counsellors. The existing research on this specific topic will be reviewed later in this section.

The evidence base for MT and trauma related responses and conditions

In the discussion of STI, it was evident that in many respects secondary trauma responses parallel aspects of primary trauma responses suggesting that research into the amelioration of direct trauma employing mindfulness interventions may have a bearing on the likelihood that mindfulness may have benefit for dealing with STI. “There is a growing research base on the impact of MT, specifically on trauma-related conditions. The research on MT impact validates MT as an effective

treatment for trauma on populations as varied as women who have experienced intimate partner violence or interpersonal trauma (Dutton et al., 2013; Smith 2009), patients managing cancer diagnosis related trauma (Bränström et al., 2010), adult survivors of childhood sexual abuse and cumulative trauma (Bolduc et al., 2018; Kimbrough et al., 2009), firefighters (Smith et al., 2011) and war veterans (Müller-Engelmann et al., 2017; Schure et al., 2018; Stephenson et al., 2017). Some of these research findings are elaborated further.

Kearney et al. (2013) found a sustained positive impact of MBSR four months after intervention in a randomised control study conducted on 47 veterans. Although limited in generalizability by small sample sizes, findings from these studies conducted on a diverse range of traumatised populations support the proposition that MT can effectively reduce primary trauma symptoms. A more recent randomised control trial (RCT) study based upon research with a larger sample of 116 veterans diagnosed with PTSD compared MT with present-centred group therapy (Polusny et al., 2015). Results provide further support for the positive impact of MT for PTSD and depression-related symptoms, both on immediate assessment after completion of an MBSR program and at two months follow-up. There is thus evidence suggesting that the effects of MT in ameliorating trauma symptoms are sustainable.

Furthermore, the results of three recent meta-analytic reviews provide convincing support for the growing evidence-base that MT is effective in ameliorating trauma symptoms. Banks et al. (2015), in a systematic review of 12 studies, reported positive outcomes on the impact of MT on PTSD post-intervention and found that these improvements were sustained from between four to 30 months post-intervention. The authors conclude that there is pre-preliminary evidence for the use of MT to treat trauma but called for the execution of more studies with improved methodological rigour. Hopwood and Schutte's (2017) meta-analytic investigation refined their criteria for inclusion, reviewing only impact studies that met RCT design criteria. Their review of studies conducted on the impact of MT on PTSD covered the recent period of 2008 to 2016. In the total sample of 1219 participants across the 18 studies reviewed, MT was generally found to have had a significant impact

on reducing symptoms of PTSD (Hopwood and Schutte, 2017). Similarly, Boyd et al. (2018) contribute evidence from their scoping literature review, observing that MT in general impacts positively on PTSD symptoms with medium to large effect sizes. Additionally, they report neuro-biological evidence showing that MT may effectively restore large-scale brain network connectivity in people with PTSD thus lending further credibility to the theorisation of the neuro-plastic changes associated with MT" (Pillay & Eagle, 2019, p. 8), as discussed later in this chapter.

The impact of MT on direct trauma is a comparatively new addition to the general body of MT research and would benefit from ongoing reinforcement and consolidation. Creswell (2017) argues that encouraging findings are emerging from more precise RCT research and the meta-analytic reviews provide useful critical appraisals of the emerging trauma research. Optimistic results are emerging on how MT may ameliorate an array of trauma symptoms with sustainable benefits, and the standards of research appear to be improving.

Studies on MT and STIs

Although there is a growing research base showing encouraging results for the use of MT as an intervention for direct experience of trauma, there are just a handful of studies on mindfulness and STI. Research on trauma counsellors is generally limited, and research relating to STI and mindfulness interventions is even more limited. However, there is some research investigating the impact of MT on counsellors for more general stress-related outcomes and a few studies focusing on aspects of secondary traumatisation. These are reviewed below

In relation to the impact of MT on BO, there have been mixed results. Using an RCT design Shapiro et al. (2005) evaluated the impact of MT on various HCW, including physicians, nurses and psychologists and found that while there was a trend toward decreasing BO related to MT, the result was not statistically significant. These results may have been compromised by a modest sample size of ten in the experimental group and a significant drop-out rate. Conversely, Goodman and Schorling (2012) in a pre-post observational study, assessed the impact of MT with a similar group of HCW and concluded that a continuing education MT course was associated with substantial improvements in

BO scores. Furthermore, Luken and Sammon (2016) concluded in their systematic review that there is robust evidence for the use of MT to reduce BO among HCW. Notably, the latter review was based on a modest sample of eight studies. However, the emerging evidence that MT may counteract BO appears hopeful.

Shapiro (2013), in a cross-sectional, correlational design study, surveyed 116 doctoral-level clinical and counselling psychology students and licensed psychologists and concluded that trait mindfulness may be a protective factor for BO and VT in psychologists and that mindfulness increases psychological well-being and health. Another correlation design study on professionals and volunteers serving the traumatically bereaved found a positive relationship between MT and CS and a negative relationship between MT and CF (Thieleman & Cacciatore, 2014).

Concerning the impact of MT on STS, Harker et al. (2016) investigated the predictive relationship between mindfulness, resilience, and psychological distress in a survey of 133 human service professionals and reported that higher levels of mindfulness were a significant predictor of lower levels of BO, STS, and psychological distress. In a similar vein, with regards to VT, Jacob and Holczer (2016) conducted a correlational study with 71 mental health clinicians who work mainly with trauma survivors and found that higher scores on mindfulness scales were associated with significantly lower levels of VT. While the above studies generally contribute to the notion that MT may be a protective factor against negative STI and may enhance CS, they provide evidence of correlation rather than causation.

However, the following experimental studies validate the findings of the above correlation studies. Shapiro et al. (2007), using a prospective, cohort-controlled design, investigated the impact of MT on 54 counselling students. Participants reported a significant decrease in stress levels, anxiety, negative emotions and rumination and significant improvements in self-compassion and positive emotions. Similarly, another RCT study with a smaller sample of 46 non-specified health care professionals compared an MT intervention group with a non- intervention control group and reported that MT had a significant impact on improving trait mindfulness, resilience, psychological

well-being and CS, and on significantly reducing BO (Hanna and Pidgeon, 2018). Other studies have also produced similar positive results regarding the impact of MT on the mental health of HCW (Aggs, & Bambling, 2010; Dobie et al., 2016).

One of a few studies in the South African context investigated health professionals who were training to teach MT in their clinical practice and found that MT increased levels of mindfulness and self-compassion while decreasing the participants' perception of stress (Whitesman & Marsh, 2015). While these results are promising, they are limited in generalisability by the small sample size of 23 and the absence of a control group.

In summary, there have been positive results produced by studies assessing the impact of MT on various stress-related outcome measures on a variety of HCW. The handful of studies available in the literature on MT and counsellors, which were reviewed above, also show favourable results. However, these studies did not specifically investigate the experiences of trauma counsellors, nor have previous studies assessed the impact of MT on a wide range of STI associated conditions or variables.

The available research is limited both in quantity and quality. The studies cited did not generally include follow-up assessments to establish the sustainability of the MT impact, there has been minimal employment of control groups, and there is also a paucity of mixed-method research studies that might better elaborate on possible mechanisms of change if a change is indeed observed. The current research study aimed to contribute to the existing body of research and to take account of some of these limitations in previous research in the design and execution of the study.

Mechanisms of mindfulness impact. As it became evident that MT interventions were effective in treating a variety of conditions, the next challenge presented to researchers was to establish how and why these interventions were working. There is now a sizeable body of literature on the possible cognitive and neural mechanisms of mindfulness, and while there are other areas of psychological theory related to mindfulness, these two frameworks appear to be dominant in underpinning research.

The investigation into what appears to render mindfulness effective developed from the initial phase of theorising on the mechanisms of mindfulness, to empirically investigating these proposed components through psychological assessment tasks, and more recently, to investigating, primarily through neuro-imagery techniques, changes in neural structure and function associated with mindfulness meditation

Research has produced evidence of a wide array of mechanisms that may be implicated in mindfulness as the following summary indicates. A collection of research studies has found a range of broadly psychological changes associated with MT including that it: decreases stress arousal and enhances the monitoring of internal states (Lutz et al., 2008); improves attention regulation (Brown & Ryan, 2003; Leyland et al., 2019; Treadway & Lazur, 2009); diminishes habituation (Jha et al., 2009); improves emotional and behavioural regulation (Heim et al., 2010; Linehan 1993; Langer & Moldoveanu, 2000); decreases anxiety (Hofmann et al., 2010); reduces depression (Teasedale et al., 2000); reduces rumination on disturbing thoughts and images (Jain et al, 2007; Lutz et al., 2008); increases acceptance (Lindsay, & Creswell, 2017; Treadway & Lazur, 2009); decreases experiential avoidance (Kocovski et al., 2009); and improves meta-cognitive awareness (Teasdale et al., 2002).

Following the identification of various sub- mechanisms that appear to render MT effective, as summarised above, systemic reviews have attempted to consolidate and distil the evidence from different studies into themes that capture the common threads in the literature reflecting collective mechanisms or pathways of impact. For example, Treadway and Lazur (2009), citing numerous empirical studies, produced a literature review concluding that MT is associated with decreased stress reactivity and increased positive affect and cognitive vitality and that it reduces the tendency to ruminate. Likewise, Davis and Hayes (2011) established from their review that MT facilitates positive affect, minimizes negative emotion and rumination, decreases reactivity to negative thoughts and emotions, promotes emotion regulation and facilitates response flexibility. More recently, Eberth et al. (2019) identified reduced emotional reactivity, or equanimity, and alteration of cognitions, or insight, as being the key mechanisms of mindfulness meditation.

While there is limited research exploring mechanisms of mindfulness impact in South Africa, one of the few academic studies conducted in this context was notable in employing multiple methods to investigate the commonly proposed cognitive mechanisms and their neural substrates using functional magnetic resonance imaging (fMRI) (Ives-Deliperi, 2008). The author identified self-regulation, awareness, cognitive flexibility, acceptance, exposure, dis-identification, reattribution, attention, meta-cognition and relaxation, as key sub-mechanisms of mindfulness and highlighted dis-identification as a significant meta-process implicated in MT. Based on the collective findings of her four studies involving four different methods (clinical intervention, literature review, functional brain imaging and brain lesion investigation) Ives-Deliperi (2008) concluded that MT is an effective intervention to reduce vulnerability to stress as well as increase affective and cognitive well-being.

Hölzel et al., (2011) proposed an integrative model of the mechanisms of MT which incorporates both the cognitive and neural substrates of mindfulness. It appears to be a comprehensive meta-analytic model as it assimilates existing theoretical models with a broad review of empirical studies derived from both cognitive and neuroscience research. The authors conclude that mindfulness mechanisms comprise four central components: body awareness, attention regulation, emotion regulation (including reappraisal and exposure, extinction and reconsolidation) and changes in perspective on the self (Hölzel et al.,2011), which links to meta-awareness as will be discussed further below

In addition to the sub-mechanisms discussed above, there appears to be identification in the literature of higher-order cognitive-behavioural mechanisms associated with mindfulness. Several terms which seem to relate to the theme of meta-awareness as a mechanism most centrally implicated in MT have been proposed. These include “re-perceiving” referring to a change in perspective and dis-identification from conditioned judgements toward experience (Shapiro et al., 2006), “decentering” or dis-engaging from mental events (Crane, 2019; Safran & Segal, 1996), and “meta-cognitive awareness”, in which negative thoughts are experienced as mental events rather than aspects of the self (Teasdale et al., 2002). These somewhat different but related terms appear

to refer to a meta-observational stance that entails stepping back from experience, developing awareness of the transience of experience, and holding awareness of both the contents and process of being aware, while maintaining a non-judgmental attitude.

Following on from the theorizing of meta-observational processes, Bernstein et al. (2019) conducted a review of studies in order to empirically investigate the construct of "de-centering" as an MT mechanism, as well as to elucidate its relationship with other similar concepts. The authors proposed a meta-cognitive processes model comprising the related components of meta-awareness, disidentification from subjective experience, and reduced reactivity to experience. Based on their evidence Bernstein et al. (2019) concluded that meta-awareness promotes disidentification from subjective experience and correspondingly, dis-identification from internal experience tends to elicit reduced reactivity to thought content. As Shapiro et al. (2006) elucidate, this meta-processing allows for the individual to produce a reflective space in which creative modes of perception and responding become options, thus freeing the individual from automatically enacting habitual dysfunctional patterns of experience and behaviour. The evidence reflects the notion that a meta-observational position is critical to promoting the benefits of the MT process, thus supporting Creswell's (2017) claim, based on a review of RCTs, that de-centering meta-processes are central to understanding and explaining how MT interventions may generate impact.

From the mechanisms and processes identified in the literature, there appear to be areas of overlap and the likelihood that researchers may be referring to similar phenomenon using different terminology. Additionally, the different variables assessed, and mechanisms identified do appear to depend on the methodologies employed and the research resources available for the specific study. Many MT mechanisms that have emerged as salient in the research seem to be connected to the executive functions of the PFC.

Neuro-biological mechanisms of MT

Complementing the findings relating to cognitive and behavioural components of mindfulness impact, there is emerging evidence concerning the neural mechanisms that may underly mindfulness. Ongoing advancements in neuroimaging technology, for example functional magnetic resonance imaging (fMRI), have improved knowledge of the neurophysiological processes associated with MT, thus advancing the field by providing emerging evidence of the biological substrates that may validate the mostly self-reported MT related improvements (Zeidan et al., 2019). The research appears to be in its early stage of development, but promising results are emerging.

Studies have identified the activation of a vast network of top-down regulatory brain structures implicated in MT, including the insula, putamen, somatosensory cortex, anterior cingulate cortex, temporo-parietal junction, fronto-limbic network and prefrontal cortex (Creswell, 2017; Grecucci et al., 2015; Holzel et al., 2011). The reported locations of the neural activation associated with MT are diverse and cover multiple regions in the brain, and this may be explained by the variance in methodologies, measurements and the different types of mindfulness practices investigated in these studies (Tang et al., 2015). At the same time, it could be speculated that the findings reflect the theory that MT may have a diffuse and extensive impact on the brain supporting Siegal's (2009) proposals on the integrative impact of MT on brain functioning. A more focused discussion on the neurobiological mechanisms of mindfulness and the implications specifically concerning mechanisms of traumatization will be explored in Section three of this Chapter.

Mindfulness and neuroplasticity

In addition to identifying specific brain regions and associated functions that are activated by MT, another significant area of neuroscience research has focused on investigating neuro-plastic changes associated with mindfulness. Researchers argue that the state of mindfulness may be refined and established through MT, and with repeated re-enforcement, through practice,

mindfulness moves from a state to a trait due to experiential neuroplasticity (Shapiro et al., 2007). Neuroplasticity, in this instance, refers to the way the brain changes both in structure and function and the rewiring of neural networks in response to experience (Davis, & Hayes, 2011). Siegal, (2009) contends that MT facilitates a state of integrative brain activation which, with regular practice can become an enduring trait that is reflected in long-term changes in brain function and structure with a related beneficial impact on body, and behaviour.

The theory that MT results in both structural and functional neuro-plastic changes in the brain has empirical validation in developing research. An example of the functional brain and body changes associated with MT was found in ground-breaking research by Davidson et al. (2003) who investigated the impact of the eight-week MBSR training on brain and immune functions. It was established that meditators showed significant increases in neural patterns, such as left-sided anterior activation, which were related to positive affect, when compared with non-meditators. In addition, after the eight- week MBSR intervention, the influenza vaccine was administered to participants in both the experimental and wait-list control group. It was found that the meditators evidenced significant increases in antibody titers to influenza vaccine as compared with the control group and that the extent of intensification in left-sided activation predicted the level of increase of antibody titer in response to the vaccine (Davidson et al., 2003)

Further validation of structural brain changes associated with MT was demonstrated by Holzel et al. (2011) when they conducted a controlled longitudinal study to explore pre-post changes in brain gray matter concentration related to an eight-week MBSR intervention. Anatomical MRI images from sixteen participants were obtained pre- and post- participation in the intervention. The results showed that participation in MT is associated with neuroplastic changes in gray matter concentration in brain areas such as the posterior cingulate cortex, the temporo-parietal junction, and the cerebellum, in the MBSR group compared with the controls. The authors interpreted these structural changes as being associated with improvements in emotion regulation, perspective-taking,

learning and memory processes and self-referential processing. These mechanisms resonate with what cognitive-behavioural researchers have associated with MT, as discussed earlier.

Other prominent studies that have added to the evidence base reflecting neuroplastic changes associated with MT include those of Lazar et al. (2005) who reported structural changes, including thickening of the brain areas linked with attention, sensory processing and sensitivity to internal stimuli, and of Vestergaard-Poulsen et al. (2009) who found higher density of gray matter in the brain stems of experienced meditators compared with nonmeditators of the same age and interpreted these finding as being associated with improved cognition, and emotional and immunoreactive benefits. In summarizing existing evidence on neuroplastic changes in their review of neuroscientific evidence in the field Holzel, et al. (2011) maintain that MT is associated with structural or neuroplastic changes in the areas of the brain that work synergistically to establish enhanced self-regulation.

In reviewing the evidence presented, it is acknowledged that the neuroscience of MT is an emerging field, and some of the conclusions and interpretations appear to be speculative and possibly controversial. It is imperative to validate and corroborate emerging findings with ongoing research, and, as Tang, et al. (2015) recommend, to improve the methodological rigour of neuroscience research in order to further the understanding of the neuro-plastic changes associated with MT. However, there is literature to support the idea that MT can produce neuroplastic changes which suggests that beneficial states associated with MT may be transformed into beneficial traits with ongoing practice.

Criticisms of The Mindfulness Movement in The West.

Despite increased visibility in the West and burgeoning application and scientific research, there is a shadow aspect to the widespread popularity of MT that warrants examination. Several criticisms have been levelled at certain aspects and elements of the mindfulness movement.

Firstly, while there has been extensive growth in the body of MT research, some critics have questioned its validity based on concerns about methodologies employed and related issues. Davidson and Kaszniak (2015), who are prolific researchers in the field, have produced a useful collation of the major methodological and conceptual concerns in MT research to date. The problems identified include the absence of consensus on the definition of mindfulness and resultant challenges with operational definitions and measuring instruments, concerns about self-report measurements and the first-person perspective, problems with measuring participant compliance, difficulties related to control and comparison groups, and the challenges of conducting intervention studies without the option of double-blind procedures. Other researchers have reiterated these critiques and raised additional concerns, such as lack of standardization in the expertise levels of MT facilitators, the paucity of long-term evaluation studies, the frequent use of small samples, and difficulties in establishing fidelity of implementation in MT programme designs (Baer, 2003; Shonin et al., 2013).

While these appear to be valid concerns, many of the criticisms raised may arguably be generalised to the state of treatment and intervention research broadly in psychology, rather than being specific to MT research. Further, it may be proposed that the methodological quality of studies in MT has improved considerably, as evidenced by the growth in the number of meta-analyses and systematic reviews based on RCTs over the last four decades. Davidson and Kaszniak (2015) offer practical suggestions on addressing some of these concerns noting that the field of MT research is relatively new, and they assert that they have observed considerable research improvement over the last decade.

The second area of criticism is related to the extraction of MT from its Buddhist roots and the possible adverse impacts this may have had. Critics have questioned whether decontextualizing MT from Buddhism may have led to the loss of its ethical and moral dimensions (Krägeloh, 2016), especially regarding the growing commercialisation and commoditisation of MT practices in Western contexts, in the form of what is being termed the “McMindfulness” movement (Purser & Loy, 2013).

Related criticisms focus on the promotion of MT as a panacea for all problems based on unsubstantiated claims about efficacy (Farias, & Wikholm, 2016), leading to exaggerated claims about the potential benefits of MT and the related failure of the popular media to report objectively on MT (Van Dam et al., 2018).

Additionally, some writers have raised concerns about the misuse of MT practices in support of exploitative political and social agendas. For example, Purser (2018) argues that there has been an evangelical elevation of mindfulness and MT has been co-opted as a form of "capitalist spirituality" that transfers the risk and responsibility for well-being solely onto the individual thereby ignoring socio-economic exploitation and related contextual considerations. Purser's criticism provides a beneficial reminder that any seemingly well-intentioned psychological practice for health and well-being may potentially be co-opted and exploited for purposes for which it was not intended. Therefore, due caution and ethical codes need to be observed for the principled practice of all psychological interventions.

Another valid concern raised in the literature refers to the possible negative impacts of MT. There appear to be mixed views in this regard with some writers arguing that that the adverse effects of MT are under-studied (Farias, & Wikholm, 2016) and possibly under-reported (Lustyk et al., 2009). Conversely, researchers such as Shonin et al. (2014) and Nagy and Baer (2017) contend that adverse effects relating to mindfulness meditation are rare and that MT is generally a safe, non-invasive and cost-effective intervention, free of negative side-effects, as validated by the empirical research findings. However, the criticism is worthwhile noting. This specific caution regarding the possibility of adverse effects is valid for all psychotherapeutic interventions. Therefore, due attentiveness and consideration of counter-indications in using psychological interventions, in general, is of great importance.

It is apparent that an objective approach to investigating MT, informed by an instructive recognition of its possible pitfalls, has merit, considering the above criticisms. While noting the

validity of a range of concerns, it seems to be evident that MT has mostly stood up to empirical and academic scrutiny and has been found to be effective in addressing a range of physical and psychological conditions and is therefore worth continuing application and investigation.

Section Three: Mindfulness and Trauma

This Section draws upon some of the material covered in Sections One and Two with the specific aim of examining the integration of research findings and theoretical perspectives on trauma and mindfulness. Section Three presents the main conceptual and empirical foundation for this study by reviewing literature related to the hypothesis that MT may be an effective intervention for trauma, and by extension STI in trauma counsellors, given that similar mechanisms seem to be operating to a large degree in indirect traumatisation as in direct traumatisation.

Impact of Mt on Trauma and STI: Theoretical Foundation

The hypothesis that MT may be beneficial in addressing STI in counsellors arises from the broad premise (outlined previously to a large extent) that STI in counsellors manifests in the form of PTSD-like trauma symptoms and responses and that there are parallels in primary and secondary trauma effects. Researchers such as Follette et al. (2006) contend that individuals who have faced traumatic events and are displaying posttraumatic stress would theoretically benefit from MT. It may be inferred by extrapolation, that MT may be beneficial for addressing STI. Neuro-psychological and cognitive-behavioural theories of trauma are an appropriate point of departure in understanding how MT is theorised to impact on ameliorating trauma symptoms.

Neurobiological Theory of Stress and Trauma Linked with MT Impact

"There is consensus in the neuropsychology literature that traumatic stress symptoms reflect a disruption in self-regulation concomitant with dysfunction in the "normal" stress survival response, whereby the brain engages and then becomes held in the mode of threat, anticipating the need for continuing self-protective responses. In certain conditions, brain threat detection systems may become dysfunctional. Chronic dysregulation of these systems may lead to functional

impairment and neurobiological abnormalities that are reflected in the presentation of PTSD (Sherin & Nemeroff, 2011). Brain imaging studies investigating trauma-related responses reveal neural circuit disruptions in brain areas responsible for mediating stress and fear responses, such as in the amygdala, hippocampus, anterior cingulate, insula, and orbitofrontal regions (Rothschild, 2000).

Impairment of neural circuitry results in the limbic system "hijacking" the functions of the pre-frontal cortex (PFC). The over-reaction of the amygdala, known to be critical in fear conditioning and threat detection (Roberts-Wolfe et al., 2012 and impairment of the self-regulatory functions of the pre-frontal cortex, may be linked to the functional impairments observed in trauma responses and symptoms, such as those of avoidance, hyperarousal, intrusion, and impaired emotion modulation" (Pillay & Eagle, 2019, p. 4).

Sherin & Nemeroff (2011) report that there are multiple biological disruptions observed in PTSD reflecting enduring dysregulation of multiple stress-mediating systems that occur as a result of a psychological "shock". Khusid and Vythilingam, (2016) contend that decreased PFC activation and insufficient inhibition of the amygdala, leading to overactivity of the amygdala, manifests as PTSD symptomology, including avoidance, anxiety, hyperarousal, poor impulse control, and intrusive negative thought and emotion. Generally, this claim is consistent with neurobiological models of trauma in the literature which propose that there are neural network dysfunctions associated with the trauma-related loss of top-down inhibition and associated with impaired neural integration between the PFC and the limbic system (Siegal, 2007; Siegal & Gottman, 2015, Boyd et al., 2018).

"Shin, Rauch and Pitman (2006) confirmed that increases in amygdala reaction are linked to more severe PTSD symptoms while increases in prefrontal cortex response are associated with less severe PTSD presentations. The PFC, more specifically the middle pre-frontal cortex, is the brain area responsible for several important executive functions such as body regulation, attuned communication, emotional modulation, response flexibility, and fear modulation (Siegal, 2010). Thus, the PFC is responsible for modification and modulation of the survival responses generated by

the amygdala. In successful recovery from trauma exposure, the automatic reflexive fear reaction is interrupted by messages from the PFC that generate strategic responses to the situation (Dowd & Proulx, 2012)" (Pillay & Eagle, 2019, pp. 4-5).

Empirical studies have provided some validation of the theories of impaired connectivity linked with trauma. For example, Bluhm et al. (2009) using fMRI scanning, found, in their investigation of 17 PTSD trauma patients as compared with a healthy control group of 15, that the default network connecting the limbic system to the PFC showed diminished connectivity with the hippocampus and the amygdala. Several meta-analyses of neuroimaging studies have confirmed that PTSD is consistently associated with evidence of hypoactivation of the PFC and hyperactivation of the amygdala (Boyd et al., 2018).

MT is proposed to enhance neural integration in the brain (Siegal, 2007). For example, Brewer et al. (2011) demonstrated that MT increases the neural and functional connectivity of the default network when comparing meditators with a control group of non-mediators, thus validating Ivanovski and Malhi's (2007) earlier findings of increased limbic and cortical connectivity associated with MT. The neuroscience literature provides evidence of the impact MT in both effectively restoring the "normal" stress response to homeostasis as well as positively impacting on the neural connectivity dysfunctions associated with trauma.

Regarding the impact of MT on the stress response, Creswell et al. (2019) proposed a "mechanistic stress-buffering framework" theorizing that MT amplifies and hones the brain's stress resilience capacity thus mitigating the role that stress plays in intensifying a broad range of stress-related diseases. The authors empirically tested this model in a series of studies. They concluded that MT trains stress resilience neural pathways by both increasing functional connectivity of regulatory pathways in the prefrontal cortex (the regulatory pathway) and decreasing activity connectivity in regions linked to the brain's reactivity pathway or stress alarm system (Creswell et al., 2019). These findings echo Lebois et al.'s (2015) conclusions, based on their intensive fMRI

investigation of neural mechanisms, that MT overrides the neuro-cognitive mechanisms that produce stress by disengaging the individual's sense of self from imagined stressful events and activating the brain areas related to perspective-shifting and optimal regulation.

The conclusions above were further validated by neuro-biological evidence concerning the immune-modulating impact of MT on the stress response as reflected in a recent meta-analysis and systematic review (Pascoe et al., 2017). The researchers reported on 45 RCTs which investigated the impact of MT on various physiological markers of SNS activation (such as cortisol levels, blood pressure, heart-rate, lipids and peripheral cytokine expression) which are implicated in the "fight or flight stress response" associated with traumatic states. The authors concluded that MT regulates stress reactivity and inflammation by decreasing the activation of the SNS. The protective impact of MT is a significant finding as prolonged stress and hyperactivity of the HPA axis is associated with various clinical conditions such as anxiety and depression (Pascoe et al., 2017), as well as PTSD. Ostafin et al. (2015) add that several studies have established that mindfulness is associated with an increase in dorsolateral prefrontal cortex activation which is associated with emotion regulation and sustained attention and reduced activity in the amygdala, thus facilitating more reflective and less reactive brain functioning. Further support of this theory comes from another review by Boyd et al. (2018) who concluded that numerous studies had demonstrated the role of MT in enhancing neural connectivity and increasing PFC functioning.

"From the linkages in research across the fields of trauma research and MT impact, it appears that MT may be a particularly apt intervention for both primary and secondary traumatic stress-related conditions. Broadly speaking, MT facilitates the executive functions of the PFC, the activation of the anterior cingulate cortex and insular cortex and the deactivation of amygdala activity (Wheeler et al., 2017), thus promoting self-regulation and optimal integration of mental and behavioural functioning, consequently ameliorating the kinds of symptoms generated by exposure to traumatic events (Dowd & Proulx, 2012; Siegal, 2009). A range of studies shows that MT has

benefits in enhancing PFC functioning and by implication, may alleviate symptoms associated with trauma (Roberts-Wolfe et al.,)." (Pillay & Eagle, 2019, p. 5).

Empathic Distress in STI: MT and Emphasis on Compassion

Recent studies on the neural correlates of compassion and empathy provide a critical area of neuroscience research relevant to theorising further on how MT may buffer against negative STI. As discussed previously, empathy is a core therapeutic skill, but of concern is the finding that holding of empathy is also implicated in the development of STI. Theorists explain this process as follows: within the therapy context, when emotional-regulation is not optimal and the self-other distinction becomes blurred, the counsellor becomes vulnerable to empathic distress and secondary trauma impacts (Decety et al., 2014; Duarte & Pinto-Gouveia, 2017). While empathy promotes connection with the client, it also may pre-dispose the counsellor to vulnerability for empathic distress. As previously noted, MT has been linked with improving adaptive emotional regulation (such as a reduction in distress and negative self-referential processing and improved emotional recovery), and in enhanced self-other awareness (Roemer et al., 2015), thereby facilitating more effective therapeutic boundaries between the therapist and the client. The capacity to self-regulate and to self-differentiate from the client may serve to reduce the risk of empathic distress in counsellors.

While empathy involves resonating with the emotional experience of the client or feeling *with* them, compassion includes feeling *for* someone coupled with a motivation to relieve the other's pain (Klimecki et al., 2013). Compassion training is central to MT. The attitudinal element which forms part of the definition of mindfulness is evidenced in the promotion of compassion and kindness for self and other as epitomised in the "Loving-Kindness" practice (an essential training component of MT). The theory that the development of compassion may promote resilience to empathic distress is linked to emerging neuroscience and clinical research exploring the distinctions between empathy and compassion that advocates that while these two concepts are related, they manifest differently in terms of physical and emotional responses and differ in terms of their

underlying neural pathways (Goetz et al., 2010). Researchers argue that these fundamental differences between empathy and compassion that have become evident in recent research may be crucial to understanding how to promote resilience in those who engage with the suffering of others (Peters & Clavo, 2015).

In an empirical review and evolutionary analysis on compassion, Goetz et al. (2010) conclude that compassion is associated with distinctive phenomenological and physiological patterns (such as lowered heart rate), and associated caregiving patterns of behaviour represented by vocalisation and facial expressions orientated toward alleviating the pain of others. The findings in the above study resonate with the findings of a series of fMRI brain scanning studies which investigated neural mechanisms of compassion versus empathy training (Klimecki et al., 2012; Klimecki et al., 2013). The findings showed that there are distinctly different neural circuits implicated in empathy and compassion. Empathy training for distress in another was found to be connected with activation in the anterior insula and anterior medial cingulate cortex, the same neural networks that are activated by the first-hand experience of pain, and was linked to brain regions associated with negative affect and distress. In contrast, compassion training was associated with distinctly different neural circuits, including the medial orbitofrontal cortex, putamen, pallidum, and ventral tegmental area, which are areas linked to positive affect, pro-social other-oriented feelings and behaviour, as well as to increased activations in brain reward system networks. Researchers concluded that compassion was linked with positive and nurturing feelings, concern for the well-being of another and a pro-social motivation toward alleviating distress in another, while empathic distress is associated with heightened sympathetic autonomic arousal, and a tendency to withdraw inward in order to relieve personal pain that results from the empathic response of mirroring the distress of another (Klimecki et al.,2013; Klimecki et al., 2012; Peters & Clavo, 2015). When extrapolating from these observations, it seems feasible that the compassion training component of MT may reduce vulnerability to empathic distress, a primary mechanism associated with STI.

Cognitive behavioural theories on mechanisms of trauma impact and mindfulness interventions

Brewin and Holmes (2003) summarised the shared features of several CB theories of trauma mechanisms and concluded that trauma is associated with disruptions in a wide range of psychological functioning processes including cognitive and affective reactions, memory and attention processes, coping strategies, belief systems and difficulties with accessing of social support. Historically, the understanding of psychological trauma has developed and deepened and there has been a recognition that consequences of trauma may be intensive, widespread, and longstanding. For example, the experience of sexual abuse in childhood has been related to a vast range of associated problems and trauma sequela such as depression, anxiety, addiction problems, suicide, and related inter- and intrapersonal problems in adult survivors (Polusny & Follette, 1995). While cognitive-behavioural (CB) theorists have provided the most reputable theoretically and empirically substantiated evidence-based interventions for trauma treatment (Follette et al., 2006) to date, recently, there has been an increasing focus on further developing and empirically validating additional interventions, such as MT, to treat traumatic stress-related conditions and their sequela (Follette et al., 2015; Lang et al., 2012).

As previously mentioned, from a clinical perspective, the four symptom patterns required for a diagnosis of PTSD, according to the DSM 5, are avoidance, intrusion, arousal and negative mood and cognitions. In addition to these diagnostic symptoms, theorists have identified a range of associated, typical, disruptive trauma responses, such as emotional numbing, dissociation, over-reactivity, memory disturbances, self-blaming and interpersonal difficulties (Dutton, 2015). It may be argued that the core features of traumatic stress conditions can all be effectively ameliorated by various aspects of mindfulness training and practice.

Avoidance is arguably a root cause of suffering in trauma (Orsillo, & Batten, 2005) and may entail avoiding environmental cues, such as people or places associated with trauma, or experiential avoidance, referring to attempts to ignore internal experiences such as trauma-related memories and emotions (Hayes et al., 2012). Briere and Scott (2014) explain that the traumatised individual tends to adopt avoidance to maintain psychological homeostasis when emotional distress exceeds

the ability to regulate affect or tolerate distress. However, avoidance tends to have the paradoxical effect of sustaining or exacerbating distress and evidence supports the view that elevated experiential avoidance plays a major role in the inception and maintenance of PTSD (Thompson et al., 2011). While the trauma survivor engages in avoidance behaviour to cope with the distressing trauma recollections, " avoidance appears to trap the individual in an iterative loop that sustains trauma symptoms and maintains pathological outcomes" (Pillay & Eagle, 2019 p. 9). Avoidance is viewed as a "pain paradox" whereby the individual experiences distress while attempting to avoid painful internal states (Briere & Scott, 2014) and avoidance is often linked with related disruptions in various areas of the traumatised individual's life (Follete & Vijay, 2009).

There are several MT mechanisms identified in the literature that may counter-act avoidance. From a holistic perspective, MT encourages the individual to maintain a present-moment focus, and to approach, accept and be receptive to experience without judgement or the desire to change the experience. Follette et al. (2006) argue that the mindful state is antithetical to avoidance and that mindfulness facilitates healing by promoting acceptance of experiences. The process of acceptance invites a willingness to approach and experience distressing internal states without judgment, thus facilitating exposure and habituation, which may extinguish the avoidance response over time. (Hayes et al., 2012).

Siegal (2007) suggests that MT promotes an "approach" state, linked from a neurobiological perspective, with a "left-brain" shift that counteracts the traumatised individual's propensity to avoid emotions, memories, cognitions, and body sensations associated with the trauma experience. Kimbrough et al. (2010) empirically demonstrated the impact of MT on avoidance in a study conducted with 27 adult survivors of childhood sexual abuse. Following the intervention, they found sustained reductions in trauma-related symptoms, especially avoidance and numbing, for up to six months after participation in MT. These findings were replicated in a study by King et al. (2013), who reported that a sample of combat veterans whom they assessed showed a significant decline in PTSD avoidance and

numbing symptoms after MT. Both studies had small samples but evidenced promising results on the impact of MT on avoidance and numbing related symptomatology.

A symptom often related to avoidance in traumatised patients is dissociation. In a recent conceptual paper, Zerubavel, and Messman-Moore (2015) make a convincing argument that three of the core elements of mindfulness, including present moment awareness, metacognitions of acceptance and nonjudgment, and reperceiving, may theoretically address and remedy dissociative features of trauma. While there is no empirical evidence to support this theory, it does make conceptual sense that the process of dissociation may be countered by the converse process of mindful presence.

In relation to countering the arousal or hypervigilance related symptoms of trauma, studies cited in Section One show that MT is effective in reducing stress-related arousal. As discussed earlier in relation to the neurobiological theories of trauma, the rationale of MBSR is based on the ameliorating impact of MT on the traumatic stress response. MT impacts on arousal and reactivity symptoms specifically by activating the parasympathetic response (Magyari, 2015), consequently resulting in a calming effect.

Most research has focused on how MT impacts on the stress response in general rather than specifically in traumatised populations. There are a few studies investigating the impact of MT on arousal symptoms in relation to PTSD. One study found that MT was effective in decreasing PTSD symptoms of hyper-arousal and stress reactivity in war veterans, teaching them to identify the triggers of traumatic and stressful emotional states and to foster the psychological flexibility required to engage positively in trauma treatment (Vujanovic et al, 2011). These findings were replicated in more recent research where it was found that improved mindfulness scores were associated with a significant reduction in PTSD symptoms in general, and most significantly related to a decline in symptoms of hyperarousal and emotional numbing (Stephenson et al., 2017). The Stephenson et al. study comprised a substantial sample of 113 military veterans adding credibility to their findings.

"A further common feature of traumatic stress is intrusion-related symptoms such as re-experiencing and intrusive memory disturbances flashbacks and nightmares. Intrusions have been linked to memory distortions, another common feature of traumatic stress. Memory disturbances are a central feature of the dual representation theory (Brewin et al., 1996) in which it is contended that aspects of the traumatic experience are stored in two different memory systems, one containing consciously-processed, temporally-located memories that are encoded in the hippocampus, while the other stores the less consciously processed, sensory memories that have not been encoded in the hippocampus. Memories that are not consciously processed are more likely to result in intrusion symptoms (Brewin et al., 1996). Trauma processing through the integration of memory systems is seen to be dependent on reducing distressing arousal and affect by means of exposure-oriented treatments. MT may be a useful adjunct to exposure therapy for PTSD in that it allows for the modulation of arousal and emotion while maintaining contact with disturbing images and thoughts (Follette & Ajay, 2009; Rothschild, 2000)" (Pillay & Eagle, 2019, p. 6).

Theorists have argued that the process of intentionally training and sustaining attention to focus on the present moment may facilitate the ability to reduce attentional bias toward trauma-related intrusions (Boyd et al., 2018). This theory is supported by Engle and Follette (2015) who argue that the central tenets of MT, especially attention control and present moment awareness, may be invaluable to traumatised individuals who tend to be easily distracted by trauma-related thoughts and intense emotions. They contend further that MT may assist in reducing rumination on these experiences and hypervigilant pre-occupation with traumatic memories. Some evidence supporting the conceptually strong contentions regarding rumination was provided by Im and Follette (2016) in a study with a fairly large sample of 164 students. The authors reported that mindfulness was negatively associated with rumination while rumination predicted greater psychological distress connected with trauma symptoms. Further empirical research is necessary to validate causal relationships between mindfulness and rumination

In considering the trauma symptoms of negative cognitions and emotions, studies have identified that MT promotes positive affect and reduces negative cognitions. For instance, Magyari (2015) describes that MBSR intervenes with these specific symptoms in traumatised clients by "disrupting the downward spiral of depressive rumination" (p. 341), decreasing reactivity to thoughts, and teaching the individual not to over-identify with thoughts and to rather respond to self-critical thoughts with self-compassion, thus facilitating a more positive relationship with themselves. Additionally, Bockers et al. (2016) contend that traumatic stress is often linked with self-blame, shame, and trauma-related guilt and which can lead to a sense of helplessness. Ehlers & Clark (2000) link this sense of powerlessness to what they term "mental defeat", a typical aspect of traumatic stress related to the erosion of healthy functional schemas about the self.

Several writers describe the attitudinal component of MT as being a non-judgmental stance towards self and other, typified by curiosity, openness, acceptance and compassion (Bishop et al., 2004; Shapiro et al., 2006; Siegal, 2007). This promoted attitude towards the self is theoretically likely to counter-act dysfunctional negative schemas about self. Some empirical validation for this proposal was provided by King et al. (2013) who conducted a research study on 20 combat veterans with long term PTSD related to military placement trauma and who reported that MT was linked with a reduction in PTSD related cognitions of self-blame. Goldsmith et a. (2014) also reported that an MBSR intervention substantially reduced shame-based trauma appraisals in a small study with nine adults suffering from PTSD and depression. While there appears to be limited documented research that has explicitly studied the links between negative trauma-related cognitions or schemas and the impact of mindfulness practices, there appears to be a conceptual link between the two and it seems that focused research on this dimension of traumatization would be beneficial.

MT has also been linked to a decline in PTSD symptoms evidenced by improved concentration and attention, decreased rumination on trauma memories, increased ability to stay focused on the present, improved self-compassion, decreased self-judgement, and a decline in physiological arousal, emotional numbing, and anhedonia. (Frewen et al., 2015). From a review of the existing theoretical

and empirical literature, Vujanovic et al. (2011) identified the crucial mechanisms of MT that appear to impact on trauma associated distress and dysfunction. These include present moment awareness, decreased arousal and stress reactivity, non-judgmental acceptance of stressful internal states and trauma-associated triggers, attention control involving selectively and adaptively switching or sustaining attention to stimuli, and increased awareness of and reflection upon thoughts and feelings. Several of these findings discussed may be associated neuropsychologically with the self-regulatory executive functions of the PFC.

While the discussion has focused on research related to direct or primary sufferers of PTSD and related conditions, it is evident from the discussion that there is a good "match" between what counsellors experiencing STI require to transcend the negative impact of work-related exposure and the functions that MT may facilitate. Existing research suggests that MT interventions may impact on a range of distinct aspects of trauma response in direct victims and, by implication, also in those similarly affected by secondary exposure. As discussed in Section Two of the literature review, there is some evidence to suggest that MT may benefit health professionals and counsellors who deal with psychologically taxing cases. However, it was noted that further research focused specifically on those engaged in counselling traumatised population in the course of their work would be beneficial. Further impetus to suggest that MT may be particularly useful in addressing STI arises from extrapolating from the finding of benefits to direct trauma victims across a range of dimensions. The existing theory and research indicate that there is strong justification for investigating to what extent MT may ameliorate negative STI and may enhance positive STI. In addition, it is evident that there is a need for ongoing expansion and refinement of research investigating the potential benefits of MT for those suffering from trauma-related states and conditions, including those indirectly or vicariously exposed to trauma-case work related risks.

Following this selected review of relevant literature, the next chapter elaborates on the methods employed to conduct the research study.

Chapter Three: Research Method

Purpose

This study explored the impact of MT on trauma counsellors and was led by the main research question: Do trauma counsellors report a significant decrease in Burnout (BO), Secondary Traumatic Stress (STS), Vicarious Trauma (VT) and Post-traumatic Stress symptoms (PTSS) and an increase in Compassion Satisfaction (CS) and mindfulness capacities following a mindfulness training (MT) intervention, as compared with a control group?

Research Design and Related Considerations

Research studies are identified as existing on a hierarchy based on the methodological rigour of their design, validity, and applicability to patient care, with the strongest being on level one (evidence from systematic reviews or meta-analysis of randomised controlled trials (RCTs)), the next being level two (evidence obtained from RCTs) and then level three (evidence obtained from well-designed controlled trials without randomisation (i.e. quasi-experimental) descending in strength down to level seven (Ackley et al., 2008). The research design for the present study is on level three and was chosen to respond to some of the criticisms on methodology in mindfulness research.

An embedded quasi-experimental mixed methods design was adopted as the most appropriate model to serve the goals of this study (Creswell, & Clark, 2017). Qualitative data collection and analysis were embedded within the study but were included in order to supplement the primary quantitative dimensions of the study (Creswell, & Clark, 2017). The study entailed utilising a quasi-experimental control-based design assessing differences in scores on a range of measures employing statistical analyses, complemented by thematic analysis of participant feedback on the intervention assessed (as elaborated further below). Embedded mixed methods designs are introduced to address the concern that the understanding of why interventions are effective may be as important as whether or not they appear to be effective (Wiart et al., 2016). While RCTs are regarded as the gold standard to establish cause and effect in intervention trials, they do not

necessarily provide important contextual data (Wiart et al., 2016). Creswell and Clark (2017) note that embedding qualitative data within a primarily quantitative intervention-based study offers the opportunity to enrich interpretation by illuminating both outcome and process mechanisms.

The quantitative element of this design entailed comparisons between the intervention group and active control condition and assessment of before and after change scores for each participant and for each group of participants. The quantitative design that was selected was a quasi-experimental treatment and control group, pre-test and post-test, research model. This quasi-experimental method was adopted as there were practical constraints that made the choice of a fully randomised controlled trial method unfeasible. Neither random selection nor random assignments were possible given logistical constraints in undertaking the research project, such as participant variability over certain time periods. Quasi-experimental designs are considered appropriate to test causal hypotheses and evaluate objectives of intervention when it is not feasible to randomise individuals or groups to treatment and control groups (White & Sabarwal, 2014). Shadish et al., (2002) also contend that quasi-experimental design in quantitative research effectively supports the testing of causal hypotheses as well as the evaluation of the effectiveness of an intervention in achieving its objectives through the measurement of outcomes. While this design was adopted as the most logistically feasible design, it has some limitations as will be elaborated in the concluding chapter.

Quasi-experimental designs are similar to randomised control trials (RCT) which are generally considered to be the gold standard for applied quantitative research into intervention impacts. While RCTs are characterised by three key components: Pre-post-test design, a treatment group and a control group, and a random assignment of study participants, the quasi-experimental design of this study met the first two requirements but not the third of randomised assignment. It is not possible to claim that each member of the population of trauma counsellors in South Africa had

an equal chance of being selected into the study sample given that there was a purposive criterion sample selection process employed as is described below.

Data from the quantitative assessment of change was supplemented with qualitative data obtained from post-intervention thematic analysis of participants' weekly feedback reports and final feedback reports collected at the end of the course. This element offered an opportunity to address the research aims with greater rigour and depth, providing the complementary qualitative data on subjective accounts of how and why the intervention may have impacted on trauma counsellors. However, this component, in keeping with the embedded mixed-methods model, was treated as secondary and supplementary to the data derived from the primary quantitative quasi-experimental method. The numerous advantages of complementing quantitative with qualitative data collection methods and analyses are outlined in a reference guide on multiple methods RCT produced for the American Psychological Association (Grissmer et al., 2009). In this instance, the qualitative material enabled understanding of how participants received and implemented the intervention in the life and work contexts within which they operated.

Sampling Method, Recruitment, and Inclusion Criteria

A non-probability, purposive, criteria-based sampling method was utilised since this appeared to be the most suitable and logistically feasible method to select participants from the population of trauma counsellors in the Gauteng area in order to meet the study objectives. The most obvious disadvantage of this method of sampling is that the research sample was non-random and hence not necessarily representative of the larger population of trauma counsellors in the region, which restricts the generalisability of the research findings. This point is discussed further in the section on limitations in the Discussion chapter of the thesis.

Participants were recruited through an advertisement campaign conducted through email and other social media via relevant organisational and individual channels. Trauma counselling organisations, circuit coordinators of community service psychologists and trauma counselling

centres were asked to circulate the call for participation, inviting a response from interested parties who considered that they fitted the inclusion criteria. The invitation was extended to psychologists, social workers and trained volunteer counsellors who engaged in work with traumatised clients, who wished to participate in a self-care intervention programme comprising two components: practical and theoretical.

Participants who responded to an invitation to take part were included in the study provided they self-identified as being engaged in offering counselling services to psychologically traumatised patients, they were over 18 years old, they had experience and training as trauma counsellors, they were available to attend the training on the specific dates, and they were willing to sign consent forms to participate in the research study based on the information provided. Of the 80 people who initially expressed interest in the study, 68 agreed to participate once they had more information and were found to fit the inclusion criteria.

Participants

The sample comprised trauma counsellors drawn from the population of trained trauma counsellors in the Gauteng area of South Africa. A total of 68 participants initially enrolled for the intervention programme. During the intervention, 10 participants did drop out for assorted reasons, leaving the final total sample size available for data analysis, after attrition, at 58. The reasons cited for leaving the programme ranged from time constraints to family and work pressures. Given the design of the study, there did not appear to be any noteworthy difference in drop-out rates between the MT intervention and control groups since most of those who did not complete the intervention programmes and assessments tended to leave fairly early in the process.

Of the 58 participants who qualified for participation in the study and subsequently completed consent forms, enrolled, and completed the course, and were consequently included in the final data analysis, the majority (89.7%) were females (*N* = 52) with a small number (*N* = six or 10.3%) being male. Participants' ages ranged from 22 to 69 years (*M* = 40.47, *SD* = 11.65), with the

number of years in practice ranging from one to 26 years (*M* = 9.55, *SD* = 10) and participants reporting that they consult with an average number of trauma clients per week ranging from two to 35 (*M* = 7.8, *SD* = 7.2). In terms of profession, there were 24 (41.3%) psychologists, 18 (31%) social workers, 13 (22.4%) registered counsellors, two (3.4%) volunteer counsellors, and one (1.7%) identified as a pastoral, church counsellor. Twenty-two participants (37.9%) reported previous experience with some form of self-care training, while 46 (62.1%) reported none. The majority of participants, thirty-seven (65%), reported no previous experience of MT, while 21 (35%) reported previous exposure to MT.

Procedure

In order to facilitate the logistics of the intensive course with one trainer, and to facilitate the study design, the sample of 68 was divided into four smaller groups, referred to for the purposes of the research as Groups A, B, C and D. Group A comprised 18 participants, Group B 17 participants, Group C 16, and Group D had 17 participants. The division into roughly equal groups ensured that each participant received adequate individual attention during the training and assisted with statistical comparisons.

The selection process was non-random because participants self-selected into one of the four groups required for the study design. They were given two possible dates to begin the intervention and invited to choose dates on which they were available to participate. They were requested to attend both components of the self-care program one after the other at two different starting points in the year. The four groups were assigned on a “first come – first served” basis after the participants were asked to select first and second options for dates on which they were available to attend the courses. In order to minimise expectations about programme efficacy, participants were not told which component of the self-care intervention was the “experimental condition” and which was the control condition. They were informed that there were two components to the self-

care intervention, these being the theoretical or psycho-educational dimension and the practical or MT training component.

During phase one of the intervention, Group A initially participated in the mindfulness training intervention (MT) while Group B participated in the psycho-education intervention (PE) active control condition. Thereafter, each group received the other component of the programme such that both groups received both intervention components but in different order of delivery. The rotating of components was designed to mitigate against recency or order of delivery effects in the assessment of training impact. The identical process was repeated during phase two when Group C received the MT, and Group D received the PE as the first component of their intervention. For the purposes of data analysis, group data were combined as follows: Group 1 (a combination of groups A and C) received the MT intervention first, followed by the PE control condition. Group 2 (a combination of groups B and D) received the PE control condition first and then the MT intervention. For phase one of the intervention process, Group 1 acted as the treatment group, and Group 2 was the active control group. For Phase 2, this order was reversed. Assessments were conducted at Time 1 (t1) to yield baseline data for both groups, at Time 2 (t2) for post-intervention data for Group 1 and at Time 3 (t3) for post-intervention data for Group 2. Group 2 had a further assessment at Time 4 (t4) after a three-month period to assess if the impact of MT was sustainable over time.

At the first meeting for all groups, baseline assessments on all measuring instruments (elaborated in a subsequent section) were obtained. Additionally, a brief demographic questionnaire and a measure of personal trauma history, the Life Events Checklist for DSM-5 (LEC-5) were administered at t1 to assess for possible group differences in personal trauma history and in order to obtain demographic information relevant to describing the sample. Post-intervention assessments on the instruments measuring the variables of interest (except LEC-5) were conducted again on the intervention groups and the active control groups at t2 and t3. Additionally, a three-month follow-up

post-intervention quantitative assessment was conducted on Group 2 (the group that had most recently received the MT intervention) to determine the sustainability of the impact of MT.

Design implementation and notation

As described above, the study employed a Pre-test- Post-test, non-equivalent groups, quasi-experiment model over two phases. The design offered the opportunity to capture between groups comparison data (intervention vs control groups) and within groups, comparison data (pre- and post-intervention scores for individuals and groups). The initial quasi-experimental process (Phase one) was repeated (Phase two) in order to increase the sample size and in order to improve the internal validity, control for placebo effects and improve the construct validity of the study. The groups not receiving the MT initially (Groups B and D) received the PE active control condition at the same phase in the research process. A summary of the research design is found in Table 1.

Table 1

Summary of research design: Two groups, Non-random Selection, Pre-test, Post-test

Group	Pre-Test (t1)	Treatment	Post-test (t2)	Treatment	Post-test (t3)	Post-test (t4)
Group 1 (A + C)	O	MT	O	PE	O	
Group 2 (B + D)	O	PE	O	MT	O	O

Note O = Observation, MT = Intervention, PE = active control condition,

t1 = 1st assessment, t2 = 2nd assessment, t3 = 3rd assessment, t4 = 4th assessment

Phase one, part one. Group A (*N* = 18) received the MT intervention while Group B (*N* = 17) received PE, the active control condition).

Phase one, part two. Group B received the MT while Group A received PE.

Phase two, part one. Group C (*N* = 16) received the MT while Group D (*N* = 17) received PE.

Phase two, part two. Group D received the MT, while Group C received PE.

For the statistical analysis, data obtained from Groups A and C were combined to form Group 1, while Groups B and D were combined to form Group 2. The combined sample size initially for Group 1 was 35 and for Group 2 was 33. After attrition, the Group size for Group 1 was 29 and for Group 2 was 29, yielding a total sample size of 58 available for data analysis.

The MT Intervention programme and PE control programme content

The construction of the MT programme for this research project was guided by Kabat-Zinn, the developer of the MBSR MT intervention, who highlights that there are many ways to structure and facilitate an MT intervention as efficacy is dependent on tailor making the programme to suit the specific context and the characteristics of participants, thus allowing for flexibility in delivery (Kabat-Zinn, 1996). The intervention was an MT programme constructed by the researcher based closely on the guidelines of content, process, and intervention integrity (Crane, 2019; Kabat-Zinn, 1996). The researcher has received previous training in MT and has worked as a mindfulness practitioner for over 20 years, including in therapeutic practice. (The possible advantages and disadvantages on the research design of the researcher facilitating the course will be discussed in the section on limitations of this study.)

The MT programme incorporated the critical components of the MBSR with some adaptations to suit the context and was planned with close adherence to MBSR guidelines (Santorelli, 2014) (see Appendix B for the MT programme outline). The MT was conducted with the experimental groups over an eight-week period. The training programme comprised practical, experiential components of MBSR and educative components such as the neurophysiology of the stress response stress and stress management. It incorporated the three core components of MBSR, formal practice, such as the body scan, breathe awareness and mindful movement, informal practice entailing performing daily tasks such as eating and washing dishes with mindfulness, and mindful enquiry into subjective experience as well as group sharing. The eight-week MT programme was conducted once weekly for approximately 3 hours (including time for assessment) per week, and there was one all day extended “retreat” training session conducted mostly in silence. CDs of formal

MT practices compiled by the researcher were provided to participants for self-regulated home-work exercises between formal training classes. Home-work exercises comprised diary keeping, and regular practice of informal and formal mindfulness exercise was encouraged between formal classes. Participants provided weekly feedback on their experiences in the form of evaluation reports as well as group feedback and discussion. Participants also provided a final feedback report at the end of the intervention. These reports were utilised for qualitative assessment.

The active control condition was a psycho-educative (PE) intervention offered within a group format (See Appendix C for the PE course outline). This control condition intervention was facilitated by the researcher who compiled material for a series of discussion groups based on existing theory in the literature related to the positive and negative STI of undertaking work with traumatised clients on the professional quality of life of counsellors. The content of the PE programme was primarily guided by Mescia and Gentrys' (2004) recommendations on the relevant information required for understanding STI and provided information on the various STI, risk factors and prevention factors and general guidelines to implement self-care plans to prevent negative STI. Participants met on a fortnightly basis and were invited to read prescribed material and engage in facilitated group discussions of the reading material. The control group sessions comprised four fortnightly meetings of approximately three hours duration.

Instruments/Measures

This section describes the measures used in this study and presents indicators of reliability and validity for instruments both in relation to psychometric validation in previous research studies published in peer-reviewed journals and in relation to scores derived from the sample assessed in the present study, where applicable. Cronbach's alpha coefficient (providing a measure of internal consistency and scale reliability) for the subscales of all the questionnaires were calculated and are presented. As is reported below, the Cronbach's alpha co-efficient demonstrated acceptable internal consistency and reliability for all scales of all the questionnaires.

The study investigated six primary variables each assessed by means of a specific scale or measurement tool: Compassion Satisfaction (CS), Burnout, (BO), and Secondary Traumatic Stress (STS) (using the ProQOL), Vicarious Trauma (VT) (using the TSI-BLS), Post-traumatic Stress symptoms (PTSS) (using the PCL-5), Mindfulness (M) (using the FFMQ) and additional variables which were derived from the sub-scales of some of the instruments. The instruments were chosen to measure each construct, and the rationale for these choices are discussed below.

Demographic questionnaire

The demographic questionnaire captured demographic details which were designed to be utilised for descriptive purposes. Participants were asked to supply details of their age, gender, number of years in practice, the average number of clients per week, profession, previous self-care training experience, and previous mindfulness training experience (see Appendix D).

Life Events Checklist for DSM-5 (LEC-5) (Weathers et al., 2013)

In order to control for the possible confounding variable of exposure to recent or severe personal trauma, the LEC-5 was used as a baseline assessment of personal trauma history (see Appendix E). This is a self-report measure that assesses exposure to 16 events that may result in psychological distress or PTSD.

The LEC has demonstrated adequate psychometric properties as a stand-alone assessment of traumatic exposure (Weathers et al., 2013). There are minimal changes between the LEC developed for the DSM IV, and LEC-5 developed for DSM 5. While the psychometric properties are not available as yet for the LEC-5, it may be presumed to be as psychometrically sound as the LEC as there are only minor changes from the original version. (Weathers et al., 2013). For each item, the respondent may check one of five options: “happened to me, witnessed it, learned about it, part of my job, not sure, doesn't apply”. The scores are added to yield a total that represents the number of diverse types of traumatic events that the respondent may have experienced.

Mindfulness: The Five Facet Mindfulness Questionnaire- FFMQ (Baer et al., 2006).

The FFMQ self-report, 39 item, mindfulness questionnaire, rated on a 5-point Likert-type scale (1 = never or very rarely true, 5 = very often or always true), was selected as the most comprehensive measure of mindfulness for the purposes of this study (See Appendix F). The instrument is based on the consolidation of items from five pre-existing, independently developed, mindfulness questionnaires. Factor analysis of combined items from these five instruments, The Freiburg Mindfulness Inventory (Walach et al., 2006), The Kentucky Inventory of Mindfulness Skills (Baer et al., 2004), Cognitive and Affective Mindfulness Scale-Revised (Feldman et al. 2007, The Mindful Attention Awareness Scale (Brown and Ryan 2003),) and the Southampton Mindfulness Questionnaire (Chadwick et al. 2008), was conducted by Baer et al. 2006). The outcome of the above factor analysis resulted in the following five factors that constitute the sub-scales included in the FFMQ (Baer et al., 2006):

1. Observing (perceiving internal and environmental stimuli, such as emotions, cognitions, body sensations, sights, sounds, and smells). One example of an item measuring this factor is: “I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing”

2. Describing (classifying these mental stimuli with words). For example, an item measuring this factor is: “I’m good at finding words to describe my feelings”.

3. Acting with awareness (attending to the experiences of the present moment, attending to one’s current actions, rather than behaving automatically or absentmindedly). An example of an item which is scored in reverse to measure this factor: “I find myself doing things without paying attention.”

4. Non-judging (refraining from evaluating sensations, emotions, and thoughts). An example of an item which is scored in reverse to measure this factor: “I disapprove of myself when I have irrational ideas”.

5. Non-reacting (acknowledging the movement of observed thoughts and feelings without cogitating on them). An example of an item measuring this factor is: “I perceive my feelings and emotions without having to react to them”.

These five factors are operationalised in the FFMQ. The psychometric properties of the FFMQ indicate adequate to good internal consistency (alpha coefficients range from .72 to .92) and good construct validity, with meditation experience being significantly positively correlated with four of the five mindfulness factors (Brown et al., 2013). The FFMQ’s construct validity is further evidenced by the fact that the scores of the five questionnaires from which it was composed correlate significantly with each other and the FFMQ (Baer, 2011).

One obvious limitation of the FFMQ is that it is a self-report instrument, as are the other instruments used in this study. As such, it is subject to respondents’ possible conscious or unconscious bias. This limitation is recognised in the literature as a drawback in self-report questionnaires in general (Paulhus, & Vazire, 2007). However, self-report questionnaires are commonly used in experimental studies in psychology. The use of this self-report questionnaire in this study is supported by a literature review of mindfulness measures. Baer (2011) concludes that mindfulness questionnaires are valuable tools for studying the nature of mindfulness in that they provide data that show patterns consistent with theoretical expectations. Offering further support for the reliability of the FFMQ, in studies conducted with samples of nursing students from South African, Chile and China, Arthur et al. (2018) found that internal consistency was acceptable, and correlations were significant among all facets and the total score suggesting reasonable cross-cultural validity. Authur et al. (2018) contended further that their research provided support for the use of FFMQ as an instrument to measure changes in mindfulness over time.

The FFMQ and the five questionnaires from which it was derived have been extensively used in empirical research on mindfulness. In a review of mindfulness assessment measures, Brown et al. (2013) conclude that the FFMQ is presently one of the leading instruments for assessing

mindfulness. Additionally, du Plessis et al. (2014) in a South African study with 794 students, attempted to determine if the factor structure of the FFMQ can be replicated in an African context. They concluded that their results supported the factor structure of the FFMQ as well as the applicability of this instrument in the African context. A further advantage of the FFMQ is that it provides a comprehensive, multi-faceted evaluation of mindfulness, which was appropriate for the objectives of the present study as it potentially helps establish particular areas and mechanisms of change.

Pallant (2016) reports that the reliability of scales is subject to variation depending on the specific sample that it is employed on. The following alphas were computed for the FFMQ subscales on this sample: Observe (α =.82), Describe (α = .72), Act with awareness (α = .84), Nonjudgment (α = .83) and Non-reactivity (α = .78). Thus, for the current study, it was established that three of the five subscales of the FFMQ showed good internal consistency while two scales showed acceptable internal consistency.

Compassion Fatigue and Compassion Satisfaction: The Professional Quality of Life Scale (ProQOL) (Stamm, 2010)

The Professional Quality of Life Scale (ProQOL), developed by Stamm (2010), was chosen as an appropriate assessment tool for the present study as it assesses both the positive and negative trauma impacts of providing trauma counselling (see Appendix G). The ProQOL comprises three discrete subscales measuring burnout (BO), secondary traumatic stress (STS) and compassion satisfaction (CS). Each of the subscales captures different facets of trauma counselling impacts. The BO scale primarily assesses the depletion and exhaustion elements of compassion fatigue while STS assesses the post-traumatic stress like symptoms. The CS scale provides an assessment of the positive impact that may arise from counselling traumatised patients.

The ProQOL was developed from the Compassion Satisfaction and Fatigue Test (CSFT) (Figley & Stamm, 1996), which was designed to measure only negative trauma impacts on healthcare

workers. In an attempt to enhance the psychometric properties of the CFST and to expand the instrument to include both the negative and positive impact of counselling, Stamm (2002) added the compassion satisfaction subscale and thus developed the ProQOL.

The most recent version (ProQOL version 5, 2009) was utilised in this study. In the current edition of the ProQOL manual Stamm (2010) reports good construct validity in terms of both discriminant and convergent validity and good internal consistency. There appears to be widespread use of this instrument in studies assessing both the negative and positive aspects of the professional quality of life of counsellors and Stamm (2010) reports that this scale has been cited in over 200 research articles that have been subjected to peer-reviews. The extensive use of ProQOL is further evidenced by the fact that it has been translated from English into 17 other languages for use in different countries.

The ProQOL questionnaire is a 30-item self-report measure comprising subscales of 10 items each that assess the risk of Secondary Traumatic Stress (STS), the potential for Compassion Satisfaction (CS) and the risk of Burnout (BO). Compassion Fatigue (CF) is viewed as being a product of both Burnout (BO), and Secondary Traumatic Stress (STS). Participants are requested to consider their experiences over the last 30 days and rate whether each item was experienced within a range of a 6-item Likert scale (0 = never, 1 = rarely, 2 = a few times, 3 = somewhat often, 4 = often, and 5 = very often). Scoring guidelines indicate that for the CS scale, scores below 22 indicate low CS, scores between 23 and 41 reflect moderate CS levels, and scores of 42 or more indicate high levels of CS. Scores of 22 and below indicate low levels of BO, scores between 23 and 41 indicate moderate BO, while scores over 42 reflect high BO and with STS, scores 22 and below reflect low STS, between 23 and 41 indicate moderate STS, while scores of 42 or higher reflect high STS (Stamm, 2010). For this study, the ProQOL provided an assessment of how MT impacted on both the positive and negative aspects of the professional quality of life of trauma counsellors. The ProQOL showed good reliability for the sample of participants of the present study with all three subscales attaining Cronbach alpha

scores above 0.8. The following alphas were computed for this sample: CS (α = .89), BO (α = .86) and STS (α = .94).

Vicarious trauma: The Traumatic Stress Institute Belief Scale (TSI-BLS) Pearlman (1996)

The Traumatic Stress Institute Belief Scale (TSI-BLS) is derived from the Constructivist Self Development Theory (CSDT) and is designed to measure disruptions in cognitive schemas that may result from vicarious trauma (Pearlman 1996) (See Appendix H). While there are conceptual similarities between the ProQOL and the TSI-BLS, each scale emphasises various aspects of negative trauma impacts. The ProQOL assesses burnout and the PTSD-like symptoms of trauma impacts, while the TSI-BLS is designed to measure vicarious trauma (VT) or disruptions in cognitive schemas.

The inclusion of the TSI-BLS in addition to ProQOL in this study is supported by the findings of Jenkins and Baird (2002) who investigated possible associations between measures of Secondary Traumatic Stress symptoms (STS) and Vicarious Trauma (VT) in a sample of 99 domestic violence counsellors. They found significant evidence that the scales of STS and VT measured distinct dimensions and consequently recommended that using these scales together would help provide a more comprehensive assessment of trauma impacts on counsellors (Jenkins and Baird, 2002).

The TSI-BLS measures disruptions in cognitive schemas that may result from direct exposure to psychological trauma or vicarious trauma exposure. These schema disruptions relating to self and others may arise in five areas: safety, trust, esteem, intimacy, and control (Pearlman, 1996). The TSI-BLS scoring system produces a sub-score for each of the 10 subscales (self-safety, other-safety, self-trust, other-trust, self-esteem, other-esteem, self-intimacy, other-intimacy, self-control, and other-control), as well as a TSI-BLS Total score which combines the scores of the five sub-scales. There are 80-items linked to a 6-point Likert scoring scale which ranges from 1 (disagree strongly) to 6 (agree strongly). Higher scores would indicate more significant disruptions or negativity in cognitive schemata (Pearlman, 1996).

In terms of psychometric properties of the TSI-BLS, after a review of research studies that had employed the scale, Pearlman (1996) found an average internal consistency of .98, with sub-scale reliabilities ranging from .68 to .84. In addition, two South African studies confirmed high reliability and good internal consistency for the TSI-BLS. In an investigation on post-traumatic stress and cognitive schema disruptions in a sample of first year South African students. Friedlander (1999) found high overall reliability (.93) and subscales reliability ranging from .70 to .80, while Davidson (2001) reported from a study of emergency care practitioners that the overall internal consistency of the TSI-BLS was .95 and found subscale reliabilities ranging from .71 to .85.

For the sample in the present study, all 10 subscales showed internal consistency ranging from α = .75 to .89 indicating acceptable to good reliability. The following alphas were computed for this sample: Self-safety (α = .87), Other-Safety (α = .86), Self-Trust (α = .81), Other-Trust (α = .76), Self-esteem (α = .89), Other-Esteem (α = .86), Self-Intimacy (α = .75), Other-Intimacy (α = .83), Self-Control (α = .84) and Other-Control (α = .89).

Post-traumatic stress symptoms relating to DSM5: The Posttraumatic Stress Disorder Checklist (PCL-5) (Weathers et al., 1993)

The Posttraumatic Stress Disorder Checklist (PCL-5), the most current version of this instrument, is a self-report rating scale comprising 20 items used to assess the DSM-5 symptoms of PTSD (See Appendix I). It is recommended clinically as a method for monitoring symptom changes during and after treatment. In the context of the proposed study, the PCL-5 was used as an additional symptom pattern measure of negative trauma impacts. It was included in the assessment battery to elicit more comprehensive information on the impact of MT on counsellors by assessing posttraumatic stress symptoms (PTSS) prior to the MT intervention as well as post-intervention symptom shifts across the four categories of trauma symptoms.

The previous version of the PCL, which corresponded with the symptom criteria for PTSD reflected in the DSM IV-R had items yielding scores for three symptom clusters. The updated PCL-5

corresponds to the DSM-5 four symptom clusters and symptom criteria for PTSD. The wording of PCL-5 items has been changed to reflect both changes to existing symptoms and the addition of new symptoms in DSM-5. The PCL-5 has 20 items, three more than the earlier version. The first five items yield a score for Criterion B: Intrusion symptoms. Items six to ten produce a score for Criterion C: Avoidance. Items 11-15 yield a score for Criterion D: Negative alterations in cognitions and mood. The last five items produce a score for Criterion E: Alterations in arousal and reactivity. The self-report rating scale has been changed from 1-5 in the DSM-IV version to 0-4 for each symptom. Rating scale descriptors remain the same: "Not at all," "A little bit," Moderately," "Quite a bit," and "Extremely."

The PCL-5 produces a total symptom severity score (maximum of 80) by the addition of scores for each of the subscales. Subscale scores for each of the four DSM-5 symptom clusters can be obtained by summing the scores for each cluster. This makes the PCL-5 a useful tool to enable an assessment of the impact of MT intervention on each of the symptom clusters separately.

At the time of this research study, the psychometric properties for the latest version of this instrument were yet to be established. The instrument was chosen on the basis that the previous version of the PCL developed for DSM-IV-R has sound psychometric properties including good internal consistency, convergent validity, test-retest reliability and discriminant validity (Ruggiero et al., 2003). In addition, the PCL was found to correlate strongly with other measures of PTSD, such as the Mississippi Scale, the PK scale of the MMPI-2, and the Impact of Events Scale (Weathers et al., 1993). In a recent psychometric evaluation of the PCL-5 with trauma-exposed college students, the scale was investigated for internal consistency, test-retest reliability, and convergent and discriminant validity and pronounced to be a thorough psychometric measure of PTSD symptoms with the confirmatory factor analyses indicated that PCL-5 was an adequate fit with the DSM-5 four-factor model of PTSD (Bovin et al., 2016).

For the sample in the present study, two of the PCL-5 sub-scales showed good internal consistency while two scales showed acceptable internal consistency. The following alphas were computed for this sample: Intrusion (α = .85), Avoidance (α = .77), Negative alterations in cognitions and mood (α = .85), Alterations in arousal and reactivity (α = .71).

Data Analysis

The embedded mixed methods research design entailed primarily quantitative analysis supplemented by thematic qualitative analysis as discussed below.

Quantitative Analysis

At a broad level of analysis, the assessment instruments were used with reference to the study objectives to determine if decreased levels of BO, STS, PTSS, and VT and increased levels of CS were observed in response to receipt of MT. Statistical analyses were employed to assess the significance of changes in pre- and post-test scores across the whole sample and also in terms of significant differences in outcome scores as compared between Intervention and Control groups after the initial intervention. The next level of analysis involved a comparison of the apparent strength of the impact of MT on the various outcome variables. A further assessment was conducted on one of the groups three-months after the beginning of the MT intervention (one month after the end of the intervention) to assess if the impact of MT was sustainable over time.

Both descriptive statistics and the inferential analyses were employed. The analyses of all data were performed with SPSS, version 22.0.0. Descriptive statistics including means, standard deviations and frequencies were computed to describe features of the sample and to compare the demographics of the two groups. For the inferential analyses, independent *t*-tests, Chi-Square tests and repeated measures between-within groups Analysis of Variance (ANOVA) were employed. In order to compare means between the intervention and control groups, ANOVA was chosen above the *T*-test as it is considered more robust against type one errors (Pallant, 2016).

Initial analysis (Meeting of Assumptions). Prior to commencing with analyses, the data were examined for the required assumptions for a repeated-measures ANOVA. These assumptions include independent and identically distributed variables, normal distribution, homogeneity of variance and sphericity (Pallant, 2016). The data met the assumptions of independent observations. Preliminary analyses assessing normality, homogeneity of variances, and sphericity were conducted. The Shapiro-Wilk test was used to test for normal distribution, Levene's test for homogeneity of variances and Mauchly's test for sphericity. The majority of the 25 scales and sub-scales were found to be normally distributed except for two of the TSI-BLS subscales and two of the FFMQ subscales. For these scales that were not normally distributed, the skewness (*S*) and kurtosis (*SE*) were examined. The value of skewness and kurtosis were found to be within the range of between -2 and +2 and, with reference to George and Mallery (2001), may be considered acceptable to prove normal univariate distribution Additionally, Blanca et al. (2017) provide empirical evidence for the robustness of ANOVA under conditions involving certain non-normal distributions.

The following procedures were followed as advised by Pallant (2016). In cases where the data did not meet the other assumptions of the ANOVA, the non-parametric equivalents, Friedman's test for within-group comparisons and Mann-Whitney U tests for between-group comparisons, were utilised. For data sets when assumptions of sphericity were violated (Mauchly's test was found to be non-significant at $p > 0.05$) Greenhouse Geisser corrected values were reported. In instances where the homogeneity of variances assumption was violated (Levene's test was found to be significant at $p = 0.0$), results of the non-parametric Friedman tests and Mann-Whitney U tests were presented and compared with ANOVA results.

Main analysis

The study entailed a repeated measures research design with a between-subjects' factor (MT intervention) and a within-subjects' factor (time). A mixed Between-Within Subjects Analysis of Variance (ANOVA) (Pallant, 2016) was conducted to analyse the effect of MT, as the independent

variable, on the outcome variables over time by comparing the questionnaire scores of the intervention and control groups. Multiple univariate ANOVA analyses were selected with reference to the Huberty and Morris (1992) examination of multivariate versus multiple univariate methods in which they argued that that different ANOVA methods address different research questions and that a series of univariate research questions (as in the case of the present study) are better served by a series of univariate tests, rather than multivariate methods such as MANOVA.

The mixed ANOVA tested for mean differences between the independent groups, while simultaneously subjecting participants to repeated measures, and assessed whether the mean changes in the outcome scores on the dependent variables from pre-test to post-test differed significantly for individuals over time within the two groups. The time x group interaction ANOVA result was used to determine if there were significant post-intervention differences in the mean changes in the dependent variable scores outcome scores of the two groups.

The scores from four questionnaires were used: ProQOL (assessing CS, STS & BO), PCL-5 (assessing PTSS), TSI-BLS (assessing VT) and FFMQ (assessing Mindfulness). Statistically significant was interpreted by the *p* value, when $p = < .05$, indicating that the result is unlikely to have occurred due to chance alone and that the null hypotheses may be rejected. Partial eta-squared value ($\eta^2_{partial}$) was used as an index of effect size and was interpreted using Cohen's (2013) guidelines where .01 = small, .06 = Medium and .14 = Large. However, it was noted that effect size statistics might be influenced by factors such as sample size and that non-randomised samples may impact on the estimates of effect size (Ferguson, 2009). Therefore, effect sizes were presented to offer comparison across the different outcome variables specifically for this study but were interpreted with caution with respect to the controversies identified in the literature in relation to the validity of effect sizes (Fern, & Monroe, 1996).

Qualitative Analysis

The quantitative data was complemented with qualitative data from participants' weekly feedback reports and end of course feedback reports (Appendix K). This data played a supplementary role to enrich the interpretation of the quantitative findings.

Qualitative data was analysed using a thematic analysis method developed by Braun and Clarke (2006) which entails describing, analysing and interpreting patterns in data while searching for two levels of themes: semantic or descriptive and latent or interpretive The systematic six-step process of data analysis entails familiarisation with the data content, generating preliminary codes, extracting themes, reviewing the themes, defining and reviewing the themes toward generating a hierarchical thematic map, and finally producing a report. Thus, the data analysis began with initial coding toward descriptive themes and then evolved toward more interpretive or explanatory themes. While this process of data reduction, organisation and analysis was based on the iterative system developed by Braun and Clarke (2006), it was also, as recommended by the authors, flexible and evolving. The data collected from participants' feedback reports and notes taken by the researcher during group discussions were read and re-read several times over. The codes generated were then grouped and organised into themes. Themes generated were then revisited and revised and organised into superordinate and sub-themes before being consolidated into a hierarchy or thematic map with reference to specific aspects of participants' feedback that validated the themes. The translation from descriptive to higher-order categories was undertaken in consultation with the supervisor of the project to ensure some degree of validation of themes.

Ethical considerations

The researcher occupies a dual role as a research doctoral student registered at the University of Witwatersrand (Wits) and a Clinical Psychologist registered with the Health Professions Council of South Africa (HPCSA). The research study was conducted in accordance with both the Wits University Code of Ethics for Research on Human Subjects and the ethical guidelines for

professionals registered with the HPCSA (specifically the code for professional conduct of the Professional Board of Psychology). The proposal on which the research study was based was submitted and accepted unconditionally for ethical clearance by Wits University Human Research Ethics Committee (HREC–non-medical) of the University of the Witwatersrand prior to commencement of the study. The protocol number of the clearance certificate granted is H15/05/33.

This was a non-invasive study with a low-risk adult population of professionals trained as trauma counsellors. General conventions of best research practice with human subjects and ethical considerations were subscribed to. HREC general guidelines require that that research with human subjects is safe, ethical, soundly based, respects the right of individuals, and includes informed consent. All the recommended ethical procedures were adhered to. The key ethical principles of relevance to the proposed study are highlighted below.

Informed consent and voluntary participation

The principle of informed consent is common to both the HPCSA and the HREC codes of ethics. Guidelines call for the participants to be furnished with comprehensive information about the nature and purpose and possible risks and benefits of the proposed research and to be allowed freedom of choice to agree or disagree to participate. The participants were presented with an information sheet outlining the details of the proposed study (See Appendix L). While this could not be made compulsory, the participants were encouraged to commit to attendance at all sessions of the MT programme. The participants were also requested to sign a voluntary consent form once they had agreed to participate in the research study (See Appendix M).

Costs or risks and benefits for participants

The benefits or incentives indicated to the participants upon recruitment were that they would receive an MT intervention programme conducted by a registered psychologist who was

experienced in the field of mindfulness practice and training and trauma intervention. There were no costs for the participant aside from the time commitment and travel cost involved in attending the training programme sessions. As compensation for time and participation the incentive offered to the participants was that the course and course materials (including theoretical materials and a collection of mindfulness mediations recorded onto a CD) were provided free of charge. They were also provided with a certificate of attendance for the training course. It was not possible to seek Continuing Professional Development accreditation for the course as it was being conducted as part of a research study but based on the study outcomes and feedback from participants it seemed that participants found benefit in terms of their professional development.

There were no envisaged risks for participation in the MT programme, especially with this specific sample having been trained as trauma counsellors. While there have been isolated reports of negative responses to meditation (Lustyk et al., 2009), most studies report positive benefits with no side-effects (Creswell, 2017). Nevertheless, the guidelines proposed by Lustyk et al. (2009) on safety procedures in MT research were adhered to. The participants were also informed that in the possible (but unlikely) event that a participant were to become extremely emotionally disturbed during the MT sessions, the researcher, in her capacity as a practicing clinical psychologist of almost 20 years, was qualified to contain and manage the person and the situation and to then refer to a health care professional for treatment if necessary. While emotional responses to the training material expectedly and appropriately arose at times during sessions, there were no disturbances evident that warranted clinical intervention or referral during the intervention programme.

Confidentiality

Every attempt was made to protect the participants involved, in respect of the non-disclosure of their identities, honouring their dignity and privacy. For example, demographic information is provided in group rather than individual form. In addition, the participants were encouraged to respect each other's confidentiality and privacy as part of the group safety rules

established at the beginning of the intervention process. Agreement on this point was simple to accomplish as all the participants as trained counsellors were familiar with the ethics of confidentiality. In terms of the confidentiality of data, participants were informed that in accordance with the ethical requirements for psychologists, the raw data will be kept in private and confidential storage for a maximum of five years after the end of the study, after which the raw data will be destroyed.

Chapter Four: Results

The chapter is divided into two main sections, the first dealing with the primary quantitative results and the second reporting on the findings that arose from analysis of the supplementary qualitative data.

Quantitative results

In the first part of the quantitative results section, the demographics of the sample are presented, and a comparative analysis of Groups 1 and 2 is provided in order to establish that the groups were sufficiently alike to undertake the statistical analyses. Thereafter, quantitative results are presented with reference to each of the research questions and hypotheses that were investigated.

Demographic Characteristics of the Sample

Group assignment in this research study was not controlled meaning that the groups were not necessarily equivalent. The data was therefore investigated for possible substantive differences between Group 1 and Group 2 on socio-demographic variables, using *t*-tests for continuous variables and Chi-square tests for the nominal variables.

Results of the Independent Samples *t*-tests show no significant differences between the groups for the variable age; t (56) =1.42, p = .16. There was also no significant difference between the groups for the variable of the number of years in practice, t (56) = 1.63, p = .11. There was a significant difference between the groups for the variable of the average number of clients seen per week; t (55) = 3.62, p = .00, with Group 1 on average reporting a higher number of consultations with trauma clients per week than Group 2. For the nominal variables, the results of the Chi-Square test showed that there was no significant difference between Group 1 and Group 2 for gender; x^2 (1) = 0.75, p = .39; occupation, x^2 (4) = 2.61, p = .63; previous self-care, x^2 (1) = 2.64, p = .10; or previous experience of mindfulness training, x^2 (2) = 4.96, p = .08.

The measure of personal trauma history (Life Events Checklist, LEC-5) was administered only at pre-test to control for the possible confounding variable of recent personal trauma exposure. *T*-test results show that there was no significant difference between the groups for the total number of stressful events that were reported; t (63) =1.210, p =. 23. The Chi-Square test showed no significant differences between the groups for any of the 16 traumatic events assessed other than physical assault (x^2 (5) = 11.96, p = .04 with Group 1 reporting a higher number of physical assaults.

In summary, the demographic variables for Group 1 and Group 2 showed no significant differences for six of the seven variables that were compared. For the measure of personal trauma history, the groups showed no significant differences for 15 or the 16 variables assessed. Given that the groups showed no significant differences on 21 of the 23 variables compared overall, it appeared that the groups were sufficiently alike to undertake valid statistical analyses in respect of the research questions posed. The two areas of difference were noted but were not deemed to be sufficiently concerning to compromise statistical findings in relation to overall outcomes.

Descriptive Findings at Baseline

There were no significant differences in the baseline scores for the outcome variables (CS, BO, STS, VT, and PTSS) at t1 for Group 1 and Group 2 except for the PCL-5 scores measuring PTSS. The scores of both Group 1 and Group 2 reflected moderate levels of CS, moderate levels of BO and moderate levels of STS. Average base-line levels of VT were found in both groups. The only notable difference in baseline scores between the groups was for the PCL-5 Total score (as well as the PCL-5 Intrusion and PCL-5 Avoidance sub-scales of the PCL-5) with Group 1 showing higher baseline scores on these measures relative to Group 2. However, both groups reflected below average scores on all PCL-5 subscales. The mean scores for both groups were found to be sub-clinical and below the threshold for PTSD diagnosis.

Research Questions and Results

The quantitative statistical results for each research question are presented in the following order: the means and descriptive statistics for each group are presented graphically in order to represent the pattern and direction of post-intervention differences visually. ANOVA results of the time x group interaction that were employed to establish if the group differences were statistically significant are then presented. Data for the scales that met all the assumptions for ANOVA are presented with the Wilks Lambda test statistic. Where assumptions of sphericity were violated, results are presented using Greenhouse-Geisser estimates of sphericity with corrected degrees of freedom. For significant ANOVA results, Bonferroni adjusted Pairwise Comparisons Post hoc tests were employed to determine at what time periods the significant differences occurred and thus to establish if MT was associated with statistically significant post-intervention changes.

Research Question One. Does mindfulness training (MT) appear to impact on trauma counsellors in relation to Compassion Satisfaction (CS), Burnout (BO), Secondary traumatic stress (STS), Vicarious Trauma (VT), and Post-Traumatic Stress symptoms (PTSS)? The following five hypotheses were tested concerning this question:

Hypothesis One. MT will result in an *increase* in post-test as compared with pre-test Compassion Satisfaction (CS) scores in the intervention group as compared with the control group.

Hypothesis Two. MT will result in a *decrease* in post-test as compared with pre-test Burnout (BO) scores in the intervention group as compared with the control group.

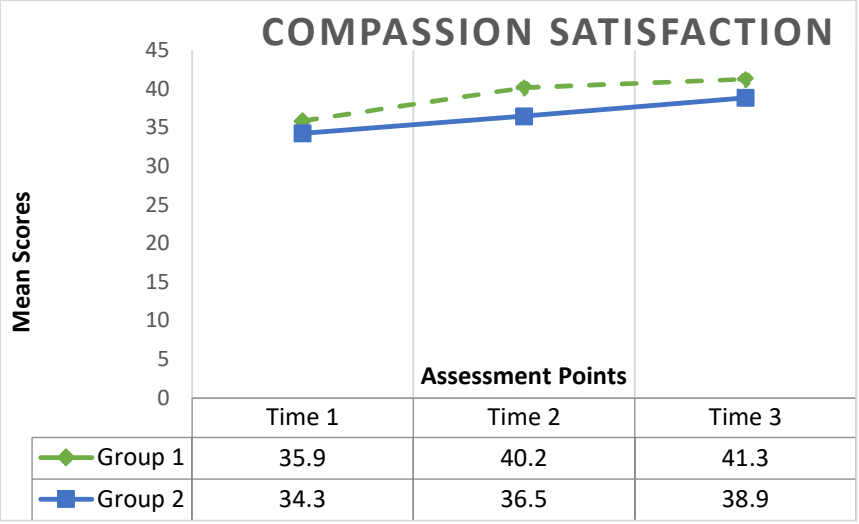
Hypothesis Three. MT will result in a *decrease* in post-test as compared with pre-test Secondary Traumatic Stress (STS) scores in the intervention group as compared with the control group.

Hypothesis Four. MT will result in a *decrease* in post-test as compared with pre-test Post-Traumatic Stress symptom (PTSS) scores in the intervention group as compared with the control group.

Hypothesis Five. MT will result in a *decrease* in post-test as compared with pre-test Vicarious Trauma (VT) scores in the intervention group as compared with the control group.

Professional Quality of Life Questionnaire (ProQOL) Results

Compassion Satisfaction (CS) subscale.



	Time 1	Time 2	Time 3
Group 1	35.9	40.2	41.3
Group 2	34.3	36.5	38.9

Note: From t1 to t2, Group 1 was the MT intervention group and from t2 to t3 Group 2 was the MT intervention group for above and all following figures.

Figure 1.

Compassion Satisfaction. Comparison of means over time

There was an increase in CS scores in both groups from baseline to t2 as well as from t2 to t3. While there was a greater increase in mean scores under the MT condition, this increase was not significant with reference to the ANOVA time x group interaction results, F (1.51, 84.63) = 3.32, p = .054. The findings do not support Hypothesis one.

Burnout (BO) subscale.

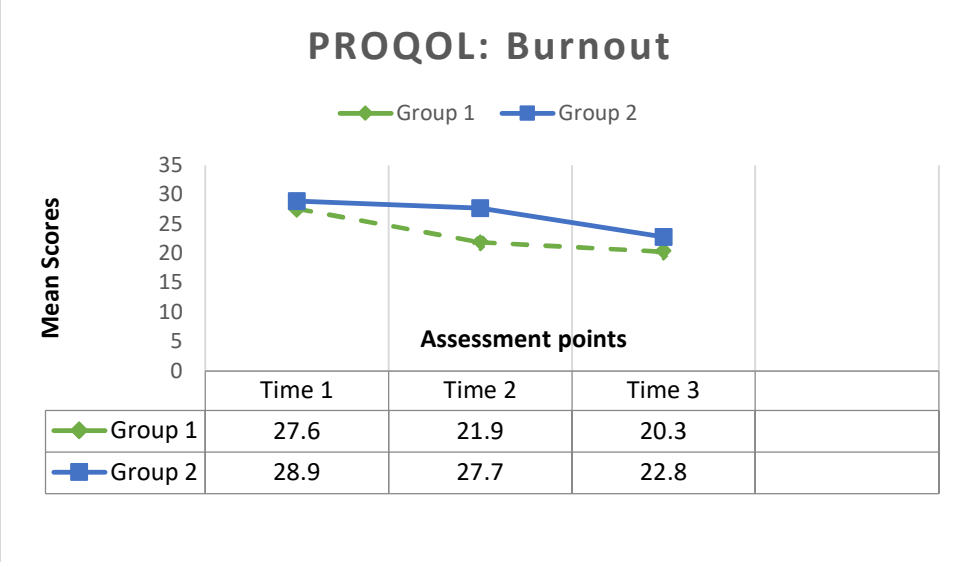
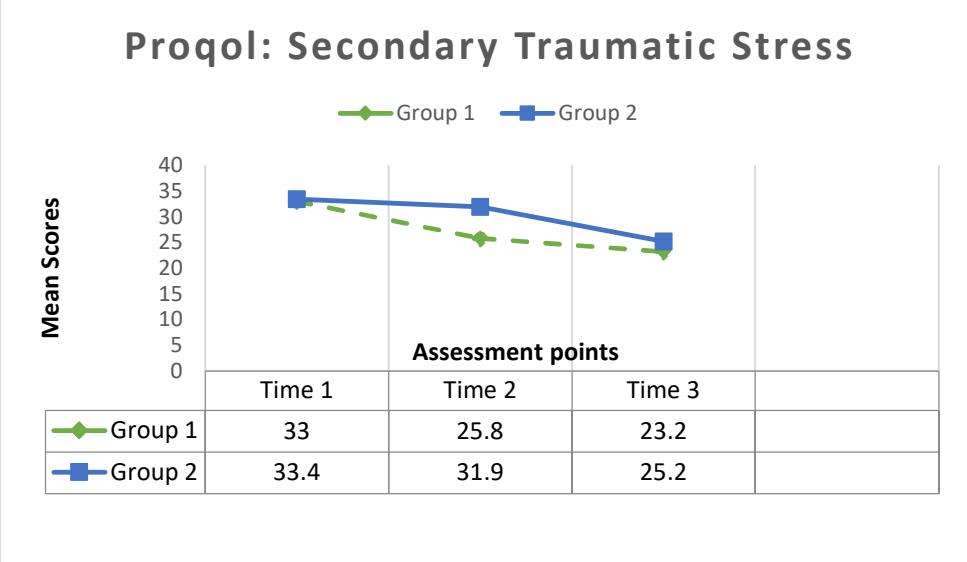


Figure 2.

Burnout. Comparison of means over time

There was an initial decrease in BO scores in both groups from baseline to t2. From t2 to t3, there was also a decrease in BO scores for both groups. However, there was a greater decrease in BO scores under the MT condition. The time x group interaction of the ANOVA results with a Greenhouse-Geisser correction applied to the degrees of freedom indicates that the group differences are significant, F (1.40,78.17) = 12.61, *p* = .00, (ηp2=. 18). Post hoc Pairwise comparisons using the Bonferroni correction showed that MT was associated with a statistically significant post-intervention decrease in BO in both MT conditions: Group 1(t1 to t2) and Group 2 (t2 to t3). The effect size was large. (As noted in the Method Chapter, the effect sizes for all variables are interpreted with caution). The evidence supports Hypothesis Two.

Secondary Traumatic Stress (STS) subscale.



	Time 1	Time 2	Time 3	
Group 1	33	25.8	23.2	
Group 2	33.4	31.9	25.2	

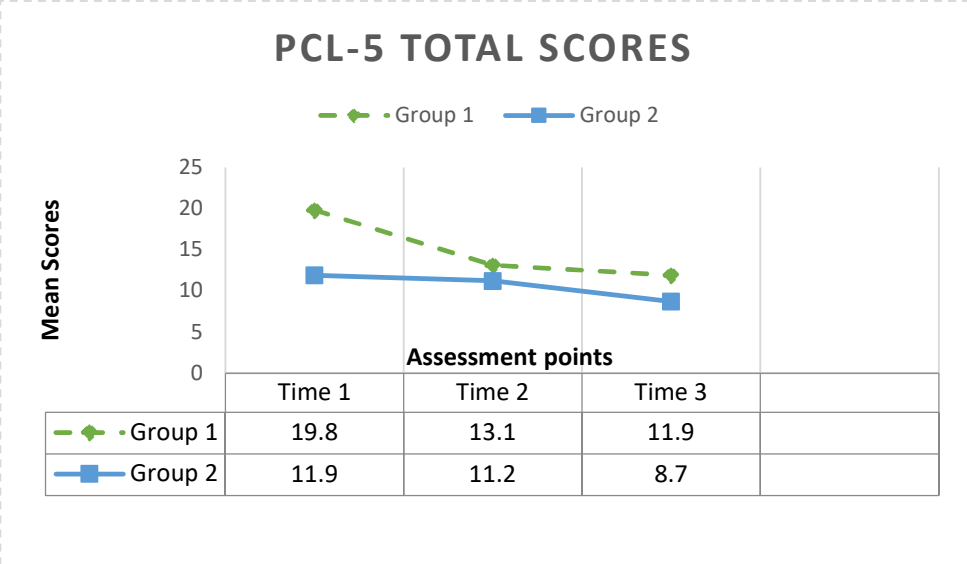
Figure 3.

Secondary Traumatic Stress. Comparison of means over time

There was an initial decrease in STS scores in both groups from baseline to t2. From t2 to t3, there was also a decrease in STS scores for both groups. However, there was a greater decrease in scores under the MT condition. The time x group interaction of the ANOVA with a Greenhouse-Geisser correction applied to the degrees of freedom indicates that the group differences are significant, F (1.81,101.43) = 14.41, p = .00, (ηp2=. 18). Post hoc pairwise comparisons using the Bonferroni correction showed that MT was associated with a statistically significant post-intervention decrease in STS scores in both MT conditions: Group 1(t1 to t2) and Group 2 (t2 to t3). The effect size was large. The evidence supports Hypothesis Three.

Post-Traumatic Stress Symptoms (PCL-5).

PCL- 5 Total.



	Time 1	Time 2	Time 3	
Group 1	19.8	13.1	11.9	
Group 2	11.9	11.2	8.7	

Figure 4.

PCL-Total. Comparison of means over time

There was a decrease in PCL-5 Total scores in Group 1 from baseline to t2 and a small decrease for Group 2 for the same period. From t2 to t3, there was also a decrease in PCL-5 Total scores for both groups with a greater decrease for Group 2 during this time period indicating a greater decrease in mean scores under the MT condition. The time x group interaction of the ANOVA with a Greenhouse-Geisser correction applied to the degrees of freedom indicates that the group differences are significant, F (1.68, 94.02) = 23.28, p = .00, (ηp2=. 29). Post hoc pairwise comparisons using the Bonferroni correction showed that MT was associated with a statistically significant post-intervention decrease in PCL-5 Total scores in both MT conditions: Group 1(t1 to t2) and Group 2 (t2 to t3). The effect size was large. The evidence supports Hypothesis Four.

Having presented results of comparisons across groups and across time for the PCL5- Total scale, each of the sub-scale comparisons is subsequently presented.

PCL-5 Intrusion.

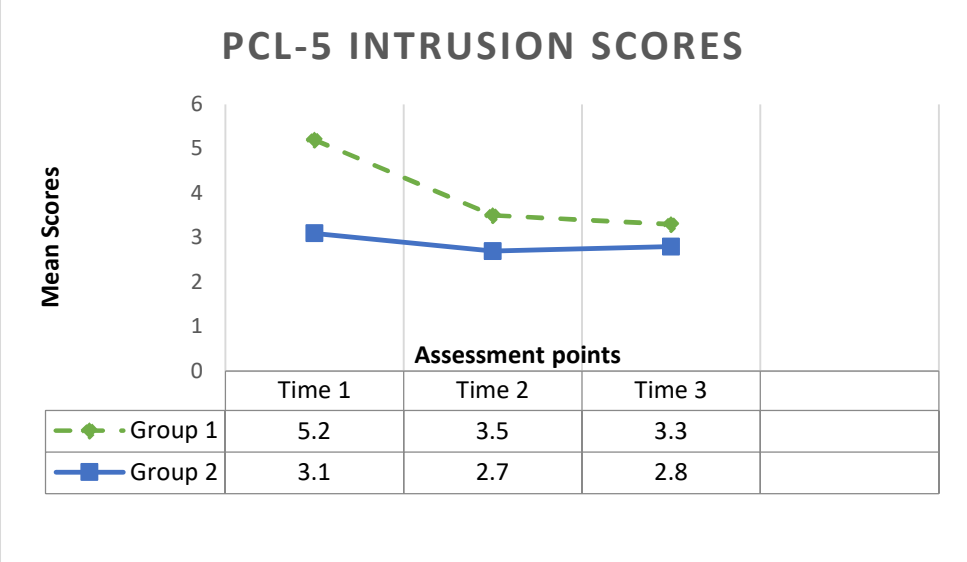


Figure 5.

PCL-5 Intrusion. Comparison of means over time

There was an initial decrease in PCL-5 Intrusion scores in both groups from baseline to t2. From t2 to t3, there was also a slight decrease in PCL-5 Intrusion score for Group 1 and a slight increase for Group 2. The time x group interaction of the ANOVA with a Greenhouse-Geisser correction applied to the degrees of freedom indicates that the group differences are significant, F (1.53, 85.44) = 9.22, p = .00, (ηp2=. 14). Post hoc pairwise comparisons using the Bonferroni correction showed that MT was associated with a statistically significant post-intervention decrease in PCL-5 Intrusion scores only in one of the MT groups, Group 1, from t1 to t2. There was a slight insignificant increase in the PCL-5 Intrusion scores for the MT group during Phase two (t2 to t3) (p = 1.00). The above results indicate only partial support for Hypothesis Four.

PCL-5 Avoidance.

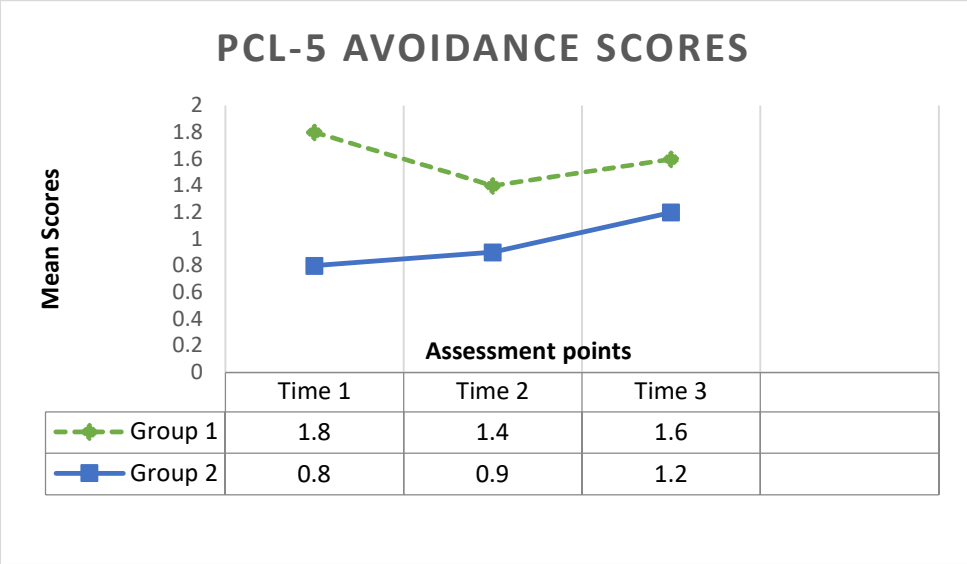


Figure 6.

PCL-5 Avoidance. Comparison of means over time

The pattern of change depicted in Figure 6 runs counter to anticipated findings related to PCL-5 Avoidance scores. From t1 to t2, there was a non-significant decrease in PCL-5 Avoidance scores in Group 1 and a slight increase for Group 2 with reference to the Pairwise Comparisons. There was an increase in scores for both groups from t2 to t3. The increase in post-intervention scores for Group 2 was not statistically significant. Results of the PCL-5 Avoidance scale do not support Hypothesis Four.

PCL-5 Negative Alterations in Cognitions and Mood.

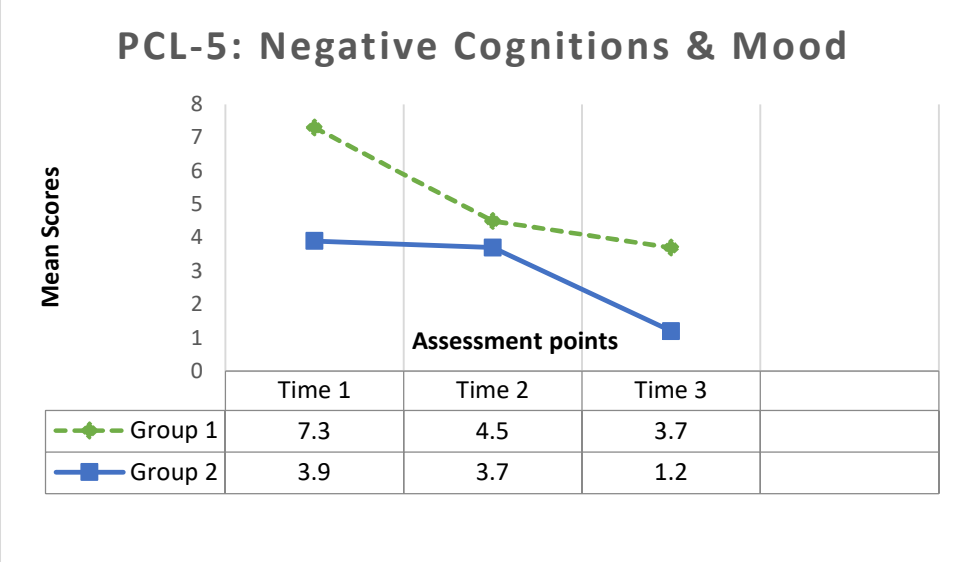


Figure 7.

PCL-5 Negative Alterations in Cognitions and Mood. Comparison of means over time

There was a greater initial decrease in Group 1 than Group 2's scores from baseline t1 to t2. From t2 to t3, there was a further decrease in scores for both groups. However, there was a greater decrease in mean scores under the MT condition. The time x group interaction of the ANOVA with a Greenhouse-Geisser correction applied to the degrees of freedom indicates that the group differences are significant, F (1.54,86.47) = 11.70, p = .00, (ηp2=. 17). Post hoc pairwise comparisons using the Bonferroni correction showed that MT was associated with a statistically significant post-intervention decrease in PCL-5 Negative Alterations in Cognitions and Mood scores in both MT conditions: Group 1(t1 to t2) and Group 2 (t2 to t3). The effect size was large. The evidence supports Hypothesis Four.

PCL-5 Alterations in Arousal and reactivity.

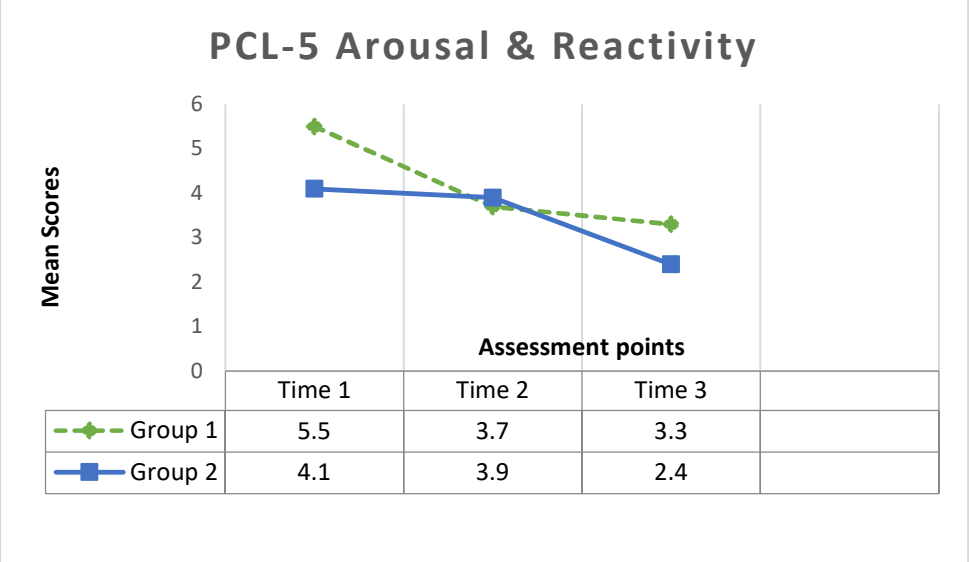


Figure 8.

PCL-5 Arousal and Reactivity. Comparison of means over time

There was an initial decrease in scores in both groups from baseline to t2. From t2 to t3, there was also a decrease in scores for both groups. However, there was a greater decrease in mean scores under the MT condition. The time x group interaction of the ANOVA with a Greenhouse-Geisser correction applied to the degrees of freedom indicates that the group differences are significant, F (1.62,91.19) = 9.83*, p* = 00, (ηp2= .15). Post hoc pairwise comparisons using the Bonferroni correction showed that MT was associated with a statistically significant post-intervention decrease in PCL-5 Arousal and reactivity scores in both MT conditions: Group 1(t1 to t2) and Group 2 (t2 to t3). The effect size was large. The evidence supports Hypothesis Four.

In summary, for PTSS, the ANOVA results provide evidence supporting Hypothesis Four for PCL-5 Total scores as well as scores on the two PCL-5 sub-scales: Negative Alterations in Cognition and Mood and Arousal and Reactivity. For the Intrusion subscale, the results are mixed, providing partial support for this component of Hypothesis Four. For the Avoidance subscale, the findings run

counter to the anticipated direction of Hypothesis Four. It could, therefore, be concluded that the significant difference in overall PCL-5 scores across the two groups was primarily a consequence of the reduction in arousal and reactivity as well as negative cognition and mood related symptoms, and to some extent the intrusion symptoms.

Vicarious Trauma – TSI-BLS.

TSI-BLS Total.

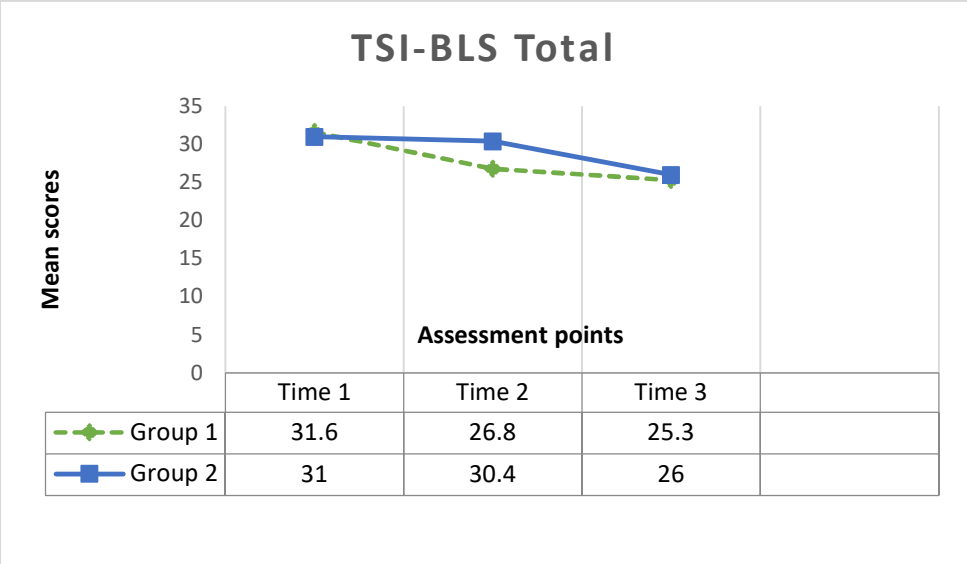


Figure 9.

TSI-BLS Total score Comparison of means over time

There was an initial decrease in TSI-BLS Total scores in both groups from baseline to t2 with a greater decrease for Group 1 the MT group. From t2 to t3, there was also a decrease in TSI-BLS Total scores for both groups with a greater decrease for Group 2, the MT group. The time x group interaction effect of the ANOVA with a Greenhouse-Geisser correction applied to the degrees of freedom indicates that the group differences are significant, F (1.36, 76.34) = 38.22, p = .00, ($\eta p2$= .41). Post hoc pairwise comparisons using the Bonferroni correction showed that MT was associated with a statistically significant post-intervention decrease in TSI-BLS Total scores in both MT conditions: Group 1(t1 to t2) and Group 2 (t2 to t3). The effect size was large. The evidence supports Hypothesis Five.

Summary of Results for TSI-BL Subscales. (See Appendix J)

Significant positive changes associated with MT exposure were observed in the TSI-BLS subscales of Self-safety, Self-esteem, Other-esteem, Self-trust, Other-trust, Other-intimacy, Self-control and Other-control. However, scores on the Other-safety and Self-intimacy scales did not change significantly in the direction anticipated with exposure to MT. In summary, the results of TSI-BLS Total score as well as eight of the ten TSI-BLS subscales (reported in Appendix J), support Hypothesis Five that MT would result in significant post-intervention decreases in VT scores for the MT condition as compared with the control condition.

Research Question Two. Is there an increase in scores of trait mindfulness (M) following exposure to the MT intervention?

Hypothesis six states that engagement in MT will result in an *increase* in post-test as compared with pre-test mindfulness (M) scores as measured by the FFMQ.

FFMQ Total.

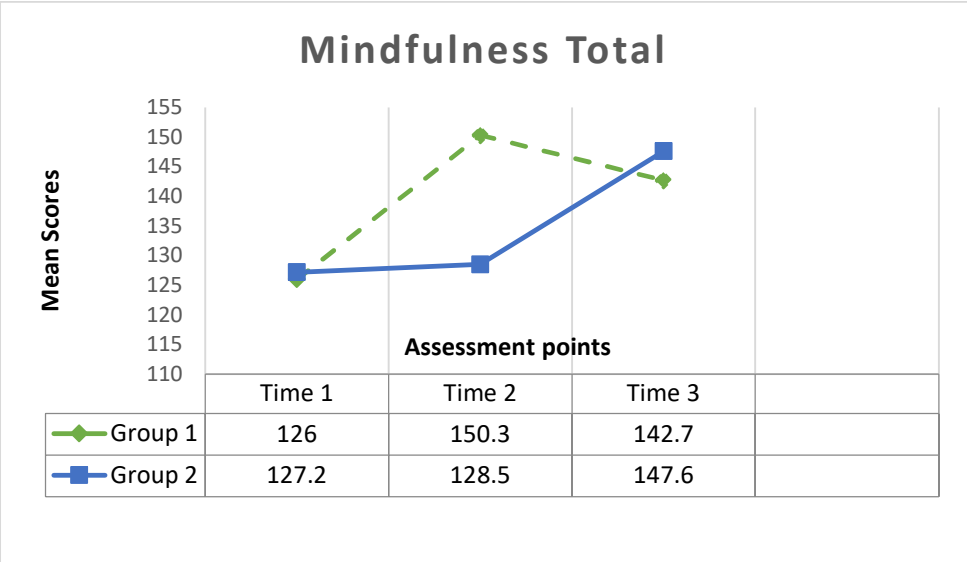
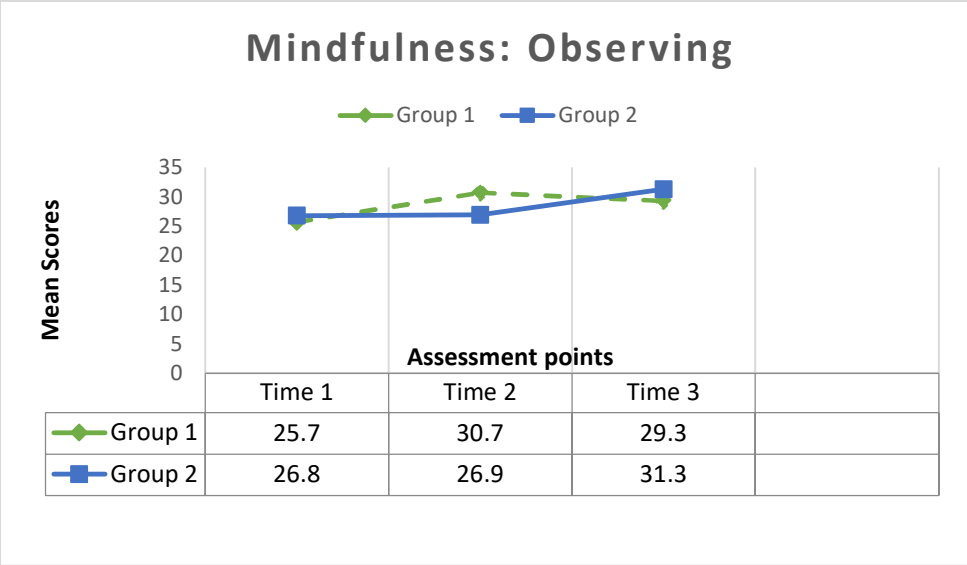


Figure 10.

FFMQ Total. Comparison of means over time

There was a substantial increase in FFMQ Total scores for Group 1 the intervention group from t1to t2 and a slight increase for Group 2. From t2 to t3, there was a substantial increase in scores for Group 2, the intervention group, while the scores of Group 1 declined slightly from t2 to t3. The time x group interaction of the ANOVA with a Greenhouse-Geisser correction applied to the degrees of freedom indicates that the differences between the intervention and control groups were significant, F (1.79, 96.24) = 74.07, *p* = .00, (ηp2=. 57). Post hoc pairwise comparisons using the Bonferroni correction showed that MT was associated with a statistically significant post-intervention increase in post-intervention FFMQ Total scores in both Group 1(t1 to t2) and Group 2 (t2 to t3). The effect size was large. The evidence supports Hypothesis Six.

FFMQ Observing.



	Time 1	Time 2	Time 3	
Group 1	25.7	30.7	29.3	
Group 2	26.8	26.9	31.3	

Figure 11.

FFMQ Observing. Comparison of means over time

There was an increase in FFMQ Observing scores in Group 1 compared to Group 2 from baseline to t2. From t2 to t3, there was also an increase in scores for Group 2, the intervention group, and a decrease in scores for Group 1. The time x group interaction of the ANOVA with a Greenhouse-Geisser correction applied to the degrees of freedom indicate that indicates that the

group differences are significant, F (1.79,100.49) = 30.76, *p* = .00, (ηp2=. 35) Post hoc Pairwise comparisons using the Bonferroni correction showed that MT was associated with a statistically significant post-intervention increases in both MT conditions: Group 1(t1 to t2) and Group 2 (t2 to t3). The effect size was large. The evidence supports Hypothesis Six.

FFMQ Observing. Non-Parametric Results. As the homogeneity of variances assumption was violated in this data set, the non-parametric test results are also presented. Friedman's test was used to determine within-group differences. For Group 1, there was a significant difference between FFMQ observing scores measured before MT and after MT: χ2 (2) = 23.37, *p* = .00. For Group 2, there was a significant difference between FFMQ Observing scores measured before MT and after MT: χ2 (2) = 44.36, *p* =.00. The Mann-Whitney U test was used to determine if there were significant between-group differences. Results indicates that there was a significant difference in the scores of the two groups for t2 (z = -3.32, *p* = .00), and t3 (z = -1.30, *p* = .00). Thus, results of both parametric and non-parametric tests for FFMQ Observing scores support Hypothesis Six.

FFMQ Describing.

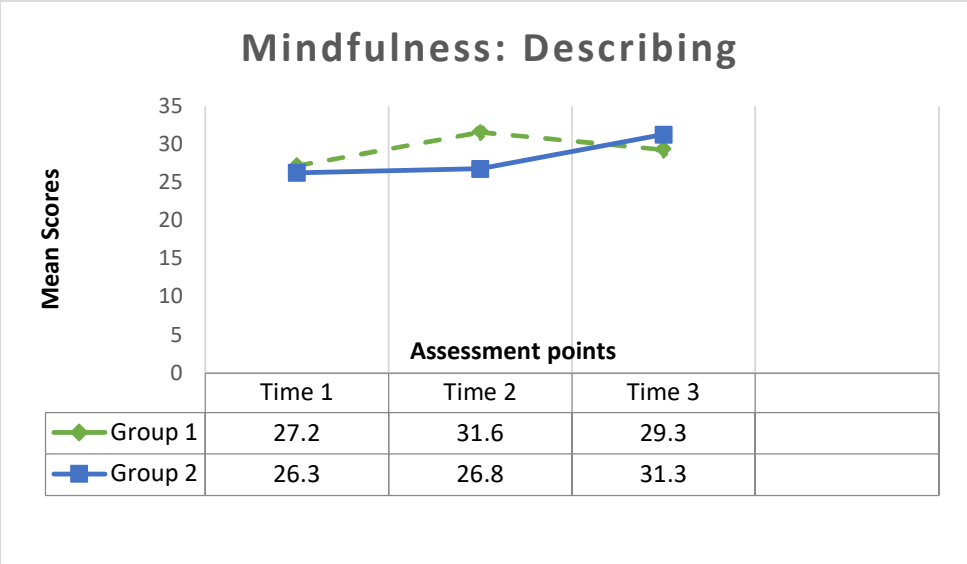


Figure 12.

FFMQ Describing. Comparison of means over time

There was a substantial increase in FFMQ Describing scores for Group 1, the intervention group from t1 to t2. From t2 to t3, there was also a substantial increase in scores for Group 2, the intervention group, for this time period. The scores for Group 1 decreased from t2 to t3. The time x group interaction of the ANOVA results with a Greenhouse-Geisser correction applied to the degrees of freedom indicates that the group differences are significant, F (1.76,98.57) = 23.40, *p* = .00, (ηp2=. 30). Post hoc pairwise comparisons using the Bonferroni correction showed that MT was associated with a statistically significant post-intervention increase in scores in both MT conditions: Group 1(t1 to t2) and Group 2 (t2 to t3). The effect size was large. The evidence supports Hypothesis Six.

FFMQ Awareness.

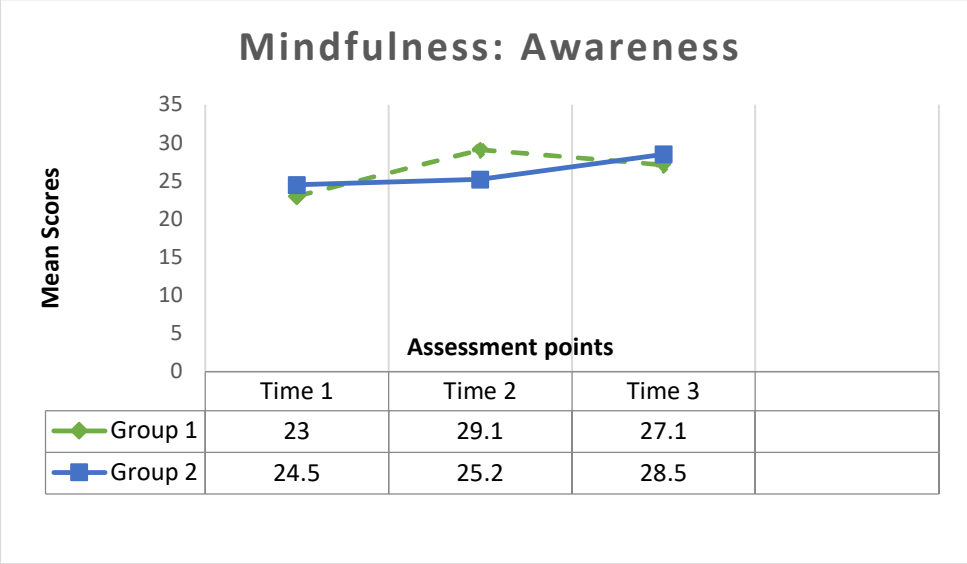


Figure 13.

FFMQ Awareness Comparison of means over time

There was an increase in FFMQ Awareness scores for Group 1, the intervention group, from baseline to t2. There was also an increase in scores for Group 2, the intervention group, for the time period t2 to t3. Scores for Group 1 decreased from t2 to t3. The time x group interaction of the ANOVA results indicates that the group differences are significant, Wilk's Lambda = 0.56, F (2,55) = 22.84, *p* = .00, (ηp2= .29). Post hoc pairwise comparisons using the Bonferroni correction showed

that MT was associated with a statistically significant post-intervention increase in scores in both MT conditions: Group 1(t1 to t2) and Group 2 (t2 to t3). The effect size was large. The evidence supports Hypothesis Six.

FFMQ Non-Judging.

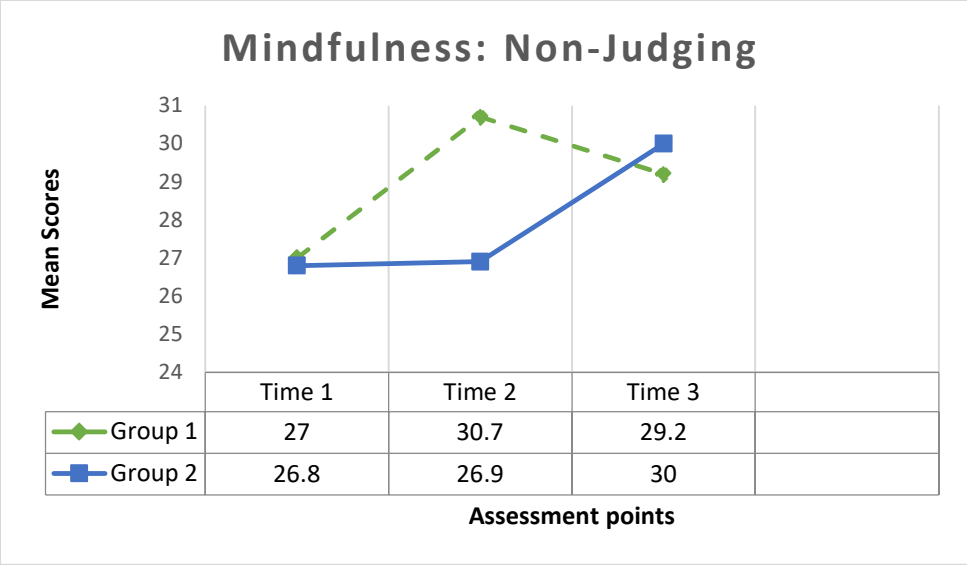


Figure 14.

FFMQ Non-Judging Comparison of means over time

There was an increase in FFMQ Non-Judging scores for Group 1, the intervention group, from baseline to t2. From t2 to t3, there was also an increase in scores for Group 2, the intervention group, for this time period. The scores for Group 1 decreased from t2 to t3. The time x group interaction of the ANOVA results indicates that the group differences are significant, Wilk's Lambda = 0.58, F (2,55) = 21.90, *p* = .00, (ηp2=. 28). Post hoc Pairwise comparisons using the Bonferroni correction showed that MT was associated with a statistically significant post-intervention increase in scores in both MT conditions: Group 1(t1 to t2) and Group 2 (t2 to t3). The effect was large. The evidence supports Hypothesis Six.

FFMQ Non-Reacting.

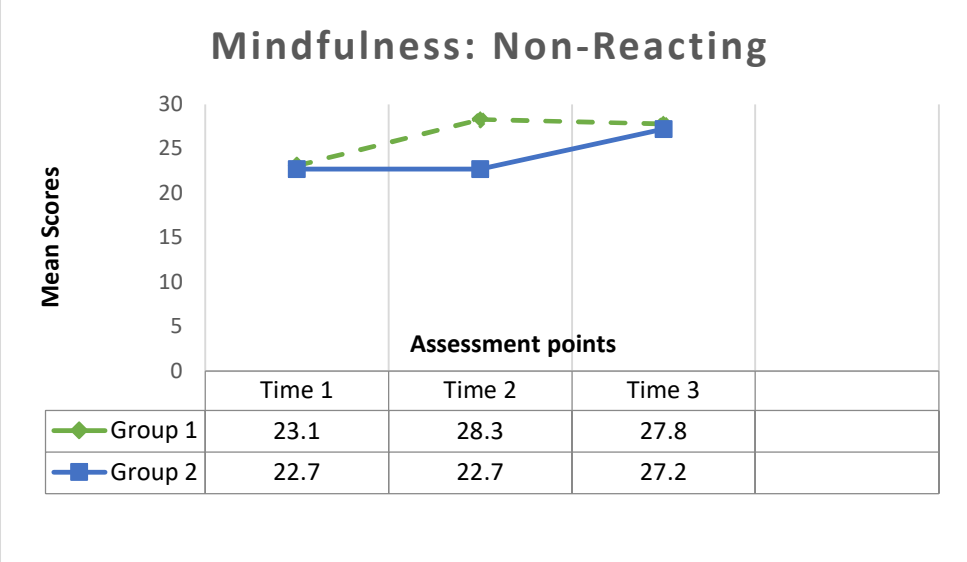


Figure 15.

FFMQ Non-Reacting**.** Comparison of means over time

There was an increase in FFMQ Non-Reacting scores for Group 1, the intervention group, from baseline to t2. From t2 to t3, there was also an increase in scores for Group 2, the MT group for this time period. Scores for Group 1 declined slightly during t2 to t3. The time x group interaction of the ANOVA results indicates that the group differences are significant, Wilk's Lambda = 0.40, F (2,55) = 31.94, p = .00, (ηp2=.36). Pairwise comparisons using the Bonferroni correction showed that MT was associated with a statistically significant post-intervention increase in scores in both MT conditions: Group 1(t1 to t2) and Group 2 (t2 to t3). The effect size was large. The evidence supports Hypothesis Six.

Summary of Results for FFMQ Subscales. The results presented show that there was a significant post-intervention difference in the increase in mindfulness scores post-MT intervention as compared with the control condition. This increase in post-intervention scores was significant when compared with the control condition for the FFMQ Total score as well as for all five subscales of the FFMQ. The results support Hypothesis Six.

Research Question Three. Does MT appear to have a sustainable impact on counsellor well-being four months after the initial training?

This question was assessed in relation to Hypothesis seven stating that the post-test decreases in scores on the BO, STS, VT and PTSS scores and increase in CS and mindfulness scores would be sustained when measured by a re-test of these variables three months post-intervention. Data analysis entailed-paired sample t-tests to compare the scores on all outcome measures for t3 with t4 (three months post-intervention) in order to ascertain if the effect of the MT intervention impact was sustained over time. It was found that of the 25 scale total and component scores assessed, the scores on 16 variables did not change significantly from t3 to t4. Scores on two variables increased, and the scores on seven variables decreased, as reflected in Table2 and Table 3.

Table 2 :

Summary of t-tests for variables with scores that increased significantly from t3 to t4

Variable	Time 3 (t3)	Time 4 (t4)
ProQOL: CS *t* (26) = -2.59, *p* = .02	*M* = 39.30, *SD* = 4.61	*M* = 40.44, *SD*=3.51
FFMQ - Acting with awareness *t* (26) = -2.56, *p* = .02	*M* = 28.70, *SD*=5,1	*M* = 29.44, *SD* = 4.3

Table 3

Summary of t-tests for variables with scores that decreased significantly from t3 to t4

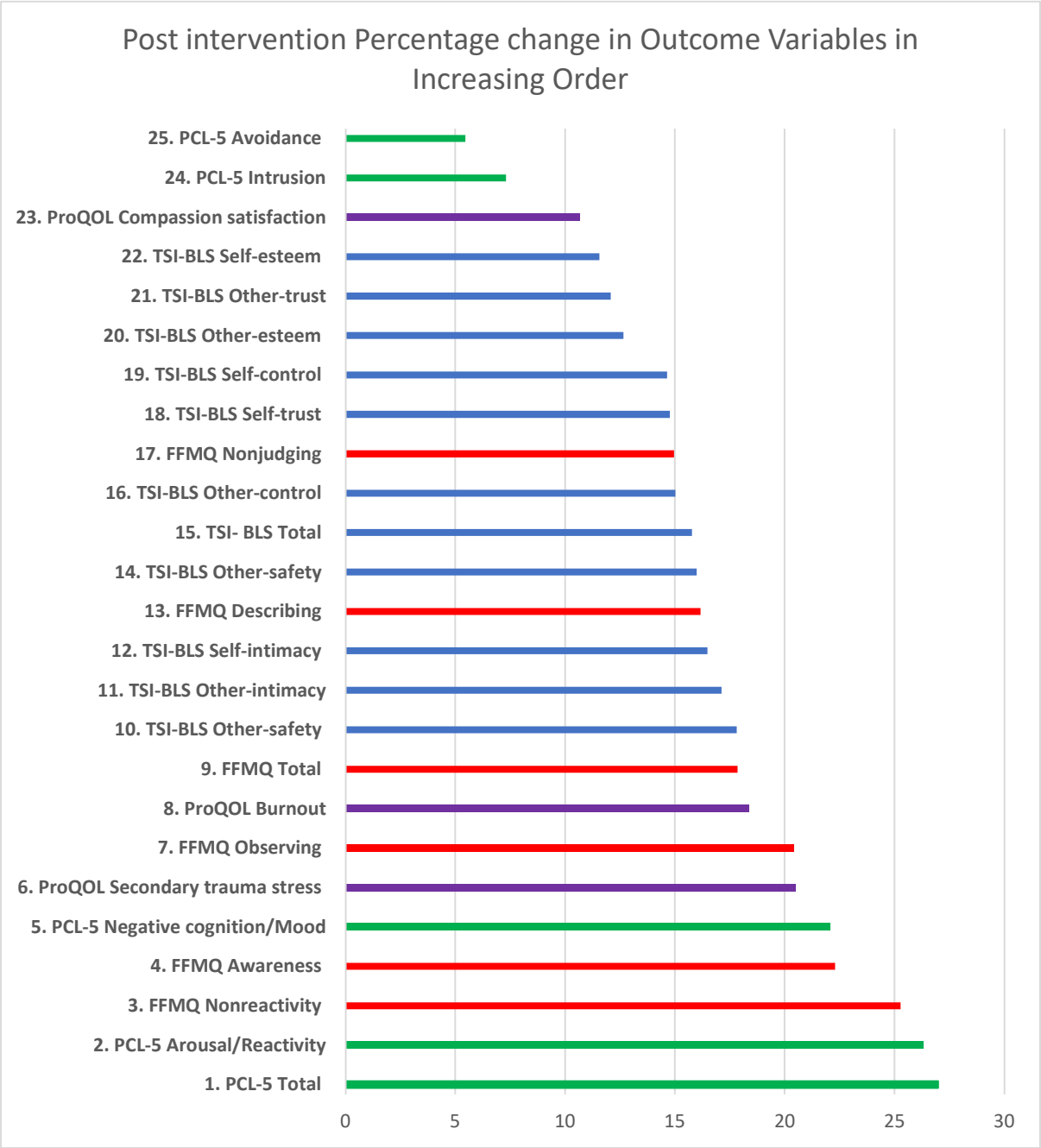
Variable	Time 3 (t3)	Time 4 (t4)
ProQOL: BO *t* (26) = 4.59, *p* = .00	*M* =22.74, *SD* = 5.39	*M* = 21.22, *SD*=5.17
ProQOL: STS *t* (26) = 3.88, *p* = .00	*M* = 25.33, *SD* = 7.24	*M* = 23.56, *SD* = 6.81)
PCL-5: Total *t* (26) = 4.77, *p* = 0.0	*M* = 7.44, *SD* = 5.10	*M* = 6.67, *SD* = 5.70)
PCL-5: Intrusion *t* (26) = 3.06, *p* = .00	*M* = 2.56, *SD* = 2.38	*M* = 2.19, *SD*= 2.22
PCL-5: Negative cognitions/Mood *t* (26) = 3.33, *p* = .00	*M* = 1.89, *SD* = 2.36	*M* = 1.48, *SD*= 2.05
TSI-BLS: Self intimacy *t* (26) = 2.74, *p* = 0.01	*M* = 2.59, *SD* = 0.69	*M* = 2.51, *SD* = 0.61
FFMQ- Observing *t* (26) = 3.32, *p* = 0.00	*M* = 31.37, SD = 3. 36	*M* = 30.56, SD = 3.16

The results depicted in Table 2 and Table 3 indicate that for 24 of the 25 variables tested, the statistical analyses support Hypothesis Seven stating that the post-test decrease in relevant total and sub-scale scores on the BO, STS, VT and PTSS and post-test increase in CS and Mindfulness scores

would be sustained when measured by a re-test of these variables 3 months after the intervention. The one result that ran counter to what was anticipated was the decrease in FFMQ Observing subscale scores. The results for 24 of the 25 variables assessed support Hypothesis Seven.

Research Question four. What appears to be the most important psychological mechanisms of the impact of MT on secondary trauma symptoms?

This question was investigated by calculating the averaged percentage of change in scores from baseline to post-intervention (t1 to t2 for Group 1 and t2 to t3 for Group 2) for each of the 25 variables and ranking them. All the mindfulness scores increased, all the TSI-BLS scores decreased, and all the PCL-5 scores decreased except PCL-5 Avoidance which showed an unexpected post-intervention increase contrary to the hypothesised direction of change. Figure 16 graphically presents the comparative mean percentage rate of change in increasing order for all variables.

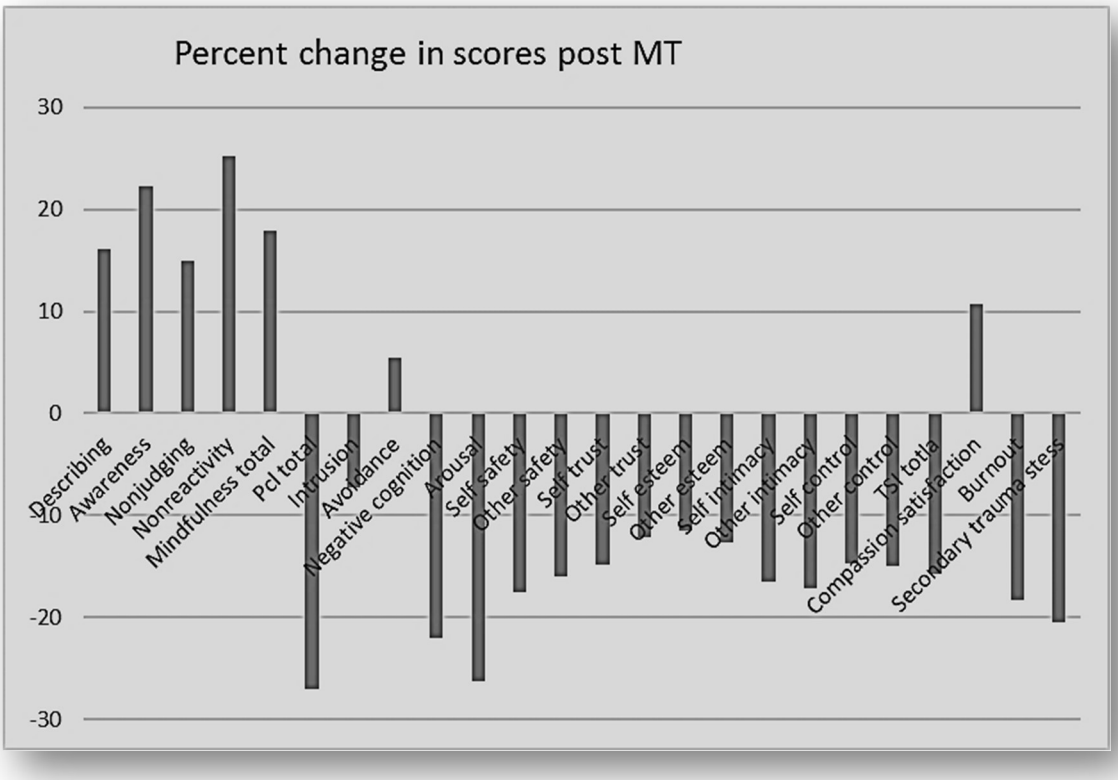


Note, Colour Code: = PTSS = FFMQ = ProQOL = TSI-BLS

Figure 16.

Post intervention percentage change in outcome variables

Figure 16 shows that MT had the greatest impact on reducing PTSS Total and Arousal scores. MT showed the least impact on PCL-5 Avoidance scores (which increased rather than decreased counter to the hypothesized direction of change). With regards to the ProQOL, there was a minimal impact of MT on CS and considerably greater impact in reducing BO and STS. MT has had varying levels of impact on each dimension of the FFMQ scales. Figure 17 depicts the comparative rates of change and direction of change of each variable, indicating whether the scores increased or decreased post-intervention.



Note, Direction of change: North = increase in scores, South = decrease in scores

Figure 17.

Direction of change of outcome variables

The direction of increase or decrease in scores depicted in Figure 17 supports Hypotheses One, Two and Three of Research Question One for all variables with one exception. The increase in PCL-5 Avoidance score does not support Hypothesis four.

Supplementary Qualitative Results

The qualitative analysis of data drawn from participants' feedback reports is presented below. It should be noted that while there were also interesting comments and observations pertaining to the PE programme, which was the active control condition, given that the focus of the research was on the MT as the core intervention, only the subject matter pertaining to MT were included in the qualitative thematic analysis. The thematic analysis of the MT related content yielded several codes which were then consolidated into 12 sub-themes and finally distilled into four major super-ordinate themes (each incorporating three of the sub-themes). It is acknowledged that there is a degree of overlap across themes, in part precisely because mindfulness encourages integrated thinking and practice. Nevertheless, the themes were deemed sufficiently distinct as to present as summarised in Table 4.

Table 4

Thematic analysis themes and sub-themes

Major Theme	Subthemes
1. Paradox (Balancing polarities)	1.1 Enablers versus Challenges
	1.2 Self-Care versus Self-Criticism
	1.3 Avoidance versus Approach
2. Therapeutic Presence	2.1 Therapy Skills
	2.2 Compassion for Self/Other
	2.3 Work Stress Resilience

3. Mindsight	3.1 Awareness
	3.2 Regulation
	3.3 Embodiment
4. Acquisition	4.1 Ease
	4.2 Equanimity
	4.3 Integration

Each of the themes is briefly described and elaborated as follows:

Theme One: Paradox (balancing contradictions)

The first broad interpretative theme reflects the participants' efforts to balance apparent contradictions in their experience of the MT. Participants reported attempting to navigate between two polarities of experience during their practice, sometimes struggling to find a balance between two extremities and also commented on how they attempted to resolve these contradictions. This dialectic is evident in the three sub-themes of *Enablers versus Challenges*, *Self-care versus Self-criticism and Avoidance versus Approach* that were identified.

Enablers versus Challenges. Participants referred to factors that contributed to facilitating the process of MT as well as factors that were challenging, and how they attempted to balance these polarities. Factors that enabled or facilitated MT included a personal commitment to the process, group discussions during the meetings, the support of the facilitator, the scheduled regular group meetings and the process of recording weekly experiences in feedback reports and practice logs. These factors appeared to facilitate MT practices both within the group meetings and during the self-regulated practices between sessions. Challenges included both internal factors, such as difficulties in staying awake, impatience, boredom, restlessness, and cynicism about the worth of the practice, and external factors, which were mostly logistical, such as finding time to meditate, finding

a quiet space and difficulty practising alone without facilitation by the trainer or the group presence. Below are examples of participants' reports reflecting their experience of attempting to balance some of these factors:

" *It was hard finding time and quiet space to do the exercises during the week especially when I'm tired and sleepy, again because it is easy to believe that I don't have time because if I tell myself that, then I don't have to make an effort to find time. But I knew I was committed to learn and share with the group and wanted to write my feedback, so I do practise at least something every day.*" (A9).

"It's quite an effort to not be distracted by thinking about other things that need your attention and getting restless during exercises, but I learn from discussion within the group that everyone goes through this and we must commit then it does get easier." (C8).

" I didn't really know what to expect and was not sure if this was worthwhile so was a bit nervous with the training but the presenter made me feel safe and made the environment accessible to relax, learn and experiment with learning all this new stuff.." (B12).

In each instance, one sees some reference to features that made it difficult to receive, practice and integrate the training together with indications of various factors that enabled ongoing engagement.

Self-care versus Self-criticism. Given the focus of the mindfulness course on self-awareness and self-acceptance, it was not surprising that participants focused on issues related to taking more or less critical attitudes towards themselves. Participants described fluctuations between self-judgment, increased awareness of their critical self-talk, and a resolve to grow more compassionate toward themselves.

"I know I'm too hard on myself and hate when I can't get something right. I'm an over-achiever but now mindfulness is teaching me to accept and love me as I am." (C4)

"*I am learning to appreciate who and what I am and not be too horrible… treating myself more like I treat clients with the awareness of being kind to the inner child."* (D1).

"I'm getting kinder, and I love that feeling because that is more me than the "judgy" person I can be with myself... So, in a way, I am reconnecting with me, the real me that gets lost in the hustle and bustle of our daily lives" (C12).

In addition, participants reflected on the paradox of feeling guilty if they took time out of their daily tasks to focus on meditation and self-care but equally feeling guilty if they did not practice their homework meditation tasks. In this respect, they seemed to pay more attention than usual to their 'mind-talk' and self-states.

"*I feel guilty if I take off time from other demands to do my practice, then I feel guilty if I don't practice and come to group without doing my homework, so that does get me going."* (A6).

This notion of attempting to develop self-compassion and over-ride self-judgment and self-criticism was reflected repeatedly in participants' comments. It seemed that while participants did appear to acknowledge the importance of self-compassion intellectually, evidently the notion of self-care and self-affirmation appeared to develop gradually over the course of MT as old self-defeating patterns needed to be eroded. This theme appeared to reflect the tension between professional and personal needs – the participants' need to care for others as counsellors and the need for self-care.

Avoidance versus Approach. Participants shared that there was sometimes resistance to approaching negative emotions, thoughts and body sensations that proved to be challenging to navigate. This tendency to want to avoid seemed to be counter-pointed by an awareness that it would be beneficial to face these uncomfortable states head-on, as well as a growing willingness toward approaching difficulties. Participant B8 had reported at the beginning of the course that she suffers chronic pain and was thus wary of MT practices, more specifically, the body scan. This

practice encourages being attuned to and present with the body and bringing intimate awareness to each part of the body. B8 reflected on the dialectic between avoidance and approach as follows:

"I used to want to distract myself when my leg hurts, especially when the pain-killers were doing nothing. So, when you say I must be with the body it is hard for me as I do not want to feel this pain all the time… But with the meditation, I want to and I'm trying to be more present with the body pains and be there for myself even though it's a struggle…I'm trying to get better at it."

B6 reflected on the avoid-approach dilemma within her work context as follows: "*I actually found that after a couple of weeks I perceived my sense of being overwhelmed by the feelings of my patients had increased… I think that the course was helping me to access those feelings in a more real way, and then I have found myself more able to accept those feelings rather than feel I have to exercise or eat them away.".*

As reflected above, participants reported the general tendency toward avoiding distressing feelings, thoughts and sensations in an attempt to pretend that they do not exist or to wish them away as they feared being overwhelmed by these distressing experiences. At the same time, participants seemed to be moving toward greater ability for distress tolerance, developing the capacity and mindfulness skills of approaching and staying with the negative experiences in an attempt to learn to tolerate and transcend them.

Theme two: Therapeutic Presence

The second super-ordinate theme identified clustered around the impact of MT on participant's 'therapeutic presence', encompassing comments relating to this concept described by Geller and Porges (2014). Therapeutic presence refers to the counsellor's ability to be fully engaged and attuned on multiple levels - physical, emotional, cognitive, and relational - in order to promote effective therapy. Participants reported an expanding sense of improvement and confidence in their work roles. They described that they were able to stay stable, focused and attentive in the therapy room and more fully immersed in their therapeutic practice and related these changes to their MT

practices. Additionally, there seemed to be recognition of the impact of their own reliability and well-being on the comfort and engagement of the client and thus a recognition of the importance of self-care for their professional efficacy. MT was reported to help them acknowledge the equal importance of self and other compassion for effective therapy. The three sub-themes of *Therapy Skills, Compassion for self and other* and *Work stress resilience* emerged.

Therapy skills. There appeared to be recognition of improvement in various core therapy skills such as attuned communication, improvement in therapeutic boundaries, greater empathy, increased compassion and improved capacity to tolerate and contain clients' trauma and distress. Participants reflected on the positive impact of using MT to prepare and ground themselves at the start of the working day, or directly before sessions. The also reflected that they often used mindfulness practices to "clear" their minds after difficult sessions. Some also reported incorporating elements of MT into aspects of their clinical work. The examples cited below are illustrative of this sub-theme:

"I am now using mindfulness to center myself before seeing clients. I am so much more present and less scattered" (A4).

"… it clears my mind and makes space for the next client." (C2).

"*It's getting easier to be a better therapist, to listen and care and still be okay after work."* (A7)

Participant B2 clearly illustrated his sense that the MT had improved his therapy skills in reporting on a challenging traumatic incident that had occurred at work while he was undergoing the training. He elaborated on how he had found MT to be both personally and professionally beneficial in responding to the situation:

"I got trapped in a lift at work with four patients …One patient had lost a leg in a mining accident and the situation causes him to experience flashbacks... He was panicky and it affected the

other patients in the confined space. I was in a professional capacity in a situation that affected me personally as well… I got very anxious in this situation and mindful of my own feelings and physiological symptoms I was able to take a pause and practice mindfulness which gave me the ability to attended to myself and the others in the lift too. I was quite proud of myself".

Many participants articulated the idea of improving therapy boundaries:

*"I am able to do what I have to do but I am not necessarily taking the clients everywhere I go with me in my head." (*B9)

"I can still feel more fully for the client but still keep my boundaries clear." (B5)

Thus, in a range of ways the participants were able to observe and report how the MT was of benefit to them as practitioners. Interestingly they captured something of the essence of a mindful presence in the sense that they seemed to feel both more available to and engaged with their clients and more able to retain a perspective on what was happening from an observer stance.

Compassion for self and other. MT was reported to bring more compassion to relationships with self as well as with others in both work and personal contexts, and a feeling of connection with greater humanity. The theme of feeling more compassion and connection in relationships was evident in participants' reports of experiencing an increasing sense of care and empathy toward self and other, greater tolerance, less judgment, and more attunement. Consequently, they felt they demonstrated the capacity for greater inter-personal connection and intimacy with self and others.

B4 reported as follows*: "Through loving-kindness meditations, I can understand how we are connected with everything, we are all vulnerable and even people I dislike are a reflection of ourselves and worthy of love".*

"I am attuned to people's vulnerability more and stand strong for them. That's my work but I also do more of that outside of work. Feel I have greater capacity now"(A12)

Participant D3 reported an increased ability to be more attentive to clients and significant others, and how this created a greater sense of intimacy:" *I can stay more present at work and sit with the pain of clients more and even at home and I'm feeling more connected and calmer through the ups and downs."*

"I am gentler to myself and more tolerant and less reactive with other people, I would rather heal than hurt myself and the patient" (D5)

"*As a therapist I am good at caring for others, I genuinely want to help and that is part of my life's purpose, and now I am so much aware of how I treat myself and having a better relationship with myself which makes me a better therapist"* (A7)

As reflected by in the quotes above, many participants reported that the training had helped them develop a greater sense of attunement to the vulnerability within themselves and others. The enhanced sense of and connection with themselves seemed to improve their inter-personal relationships and their perception of connection with a greater community. The beneficial impact of more compassionate relationships was reportedly experienced both in the professional and personal contexts.

Work stress resilience. Participants reported a decrease in work-related stress symptoms, greater resilience in the face of work environment pressures, improved energy levels, and an increase in positive emotions and work-related well-being.

"When things got overwhelming at work, I sometimes wished I had another job… mindfulness is like another work skill that helps me face it and smile through everything." (C5)

"Being aware of mindfulness really focusses me even more and I do not feel stressed or worried after seeing a client in the same way as before." (C2).

"I feel rejuvenated and hopeful about my own recovery and healing from the stress symptoms related to work" (B7)

Work boundaries seemed to become strengthened with the suggestion that there was less vicarious traumatisation.

"I find I am not taking the patient home inside my head as much as before when I dealt with trauma cases… easier to leave work at work now." (B11)

" In the past, hectic traumas have been difficult to drop and being mindful has allowed me to be very aware of my own stuff and the client's stuff so they don't get mixed up." (D2).

Participants' reported an increased capacity for dealing with caseloads as well as traumatic work demands.

"We have big caseloads and many trauma cases per week, and it is easier to cope if I do my self-care practices." (C10)

"The biggest impact has been on myself, and how my meditation practices help me to center after hectic cases since most of my workload is extreme trauma work". (A6)

This greater sense of resilience appeared to facilitate better coping skills in challenging situations: A9 shared her experience of improved coping skills with regards to both her personal and work contexts as follows: *"When I return from work these days, I do not get as overwhelmed as before with my five-year-old daughter, especially when she gets emotional about something. I can calm myself and be kind and also calm her down as well. I'm more mindful that sometimes her emotions have nothing to do with me but it's her way of communicating her own frustration in any given situation. The same thing at work where I can care better, not becoming so overwhelmed."*

As reflected above, MT appeared to have addressed the specific stressors related to the professional role of a counsellor as well as improved the participants' sense of their resilience in the workspace.

Theme three: Mindsight

The third super-ordinate theme is associated with the concept of mindsight (Siegal, 2010). Mindsight is defined as the focused attention that facilitates the ability to "see" the mind and to regulate its internal contents and processes. The three sub-themes that emerged from the data were termed *awareness*, *regulation,* and *embodiment*.

Awareness. Participants reported a keener ability to recognise and identify mental objects: thoughts, emotions and body sensations and increased ability to remain focused in the present. The awareness was multi-layered and related to differentiating between different types and varying intensities of emotions, thoughts, and sensations, as well as becoming more cognizant of the rising and falling of emotions and the transient and ever-fluctuating nature of internal and external phenomenological experiences. They reported a greater capacity to track changes that occurred in these dimensions and greater acceptance in relation to the variance of experiences. Participants reported experiencing a greater awareness of both positive and negative thoughts, such as self-critical thoughts and self-affirming thoughts, feelings of sadness or joy, and of sensations such as pain or relaxation.

"I am more in touch with my body inside and outside and can now recognise changes in my thoughts and differences in many sorts of feelings as they come and go." (A15).

" I'm learning how to keep track of the change in my breath and body and recognise my positive and negative thoughts and feelings and how the mind wanders to past and future." (D6).

"I can't always stop it, but at least I know when I'm time travelling all over the shore. Still working on it but now I am aware of this tendency more". (B7)

There were also comments relating to participants' sense of an improvement in their ability to distinguish between impulsive or robotic "auto-pilot" reactions and mindful responses, especially in challenging situations. C7 reflected as follows: *"I have found that I am responding better to*

stressful situations and conflict in my personal life…not being so automatic but now I'm choosing to stay present and mindfully communicate and also to choose the way in which I want to move forward, rather than reacting on instinct."

Participants reported increased awareness of both their internal and external environments and the ability to track their mind-wandering more effectively. There seemed to be a greater sense of consciously inhabiting the present moment, or at least becoming more easily aware when they have lost touch with the present moment.

Regulation. The theme *regulation* is focused on the participants' reports of improved executive control in relation to emotional, cognitive and behavioural regulation. With greater awareness of internal and external processes (as described above) they reported on changes in their ability to inhibit automatic impulsive reactions.

"*I can recognize when I go into flight or fight mode and get angry… then I can pause and choose to respond more intelligently."* (C4).

"…anger is part of me but not all so it will pass if I don't let myself act it out" (A3).

The modulation of the stress response and improved regulation during stressful encounters was described as follows:

"*I used to be stressed and not even know I am stressed… then sometimes I'm out of control and act unlike myself… I can recognize the signs when I'm tense and when my mind and when my thoughts race - all that adrenalin stuff… Once you know it you can do something about it and change how you feel and act.*" (C3)

"I can take a breath and pause and settle down. I can act in a way that doesn't hurt me or the other person, especially with work conflicts." (D7)

This was especially evident in reports of improving self-regulation and the ability to lower reactivity to stressors and increase tolerance to negative emotions, especially anger, without impulsive acting out. Increased regulation was associated with greater response flexibility.

Embodiment. This sub-theme captures content related to the participants' awareness of being present in the body and sensing a greater connection with bodily functions both internal and external.

"I feel like I'm coming home back to my body… before I just walked around mindlessly floating around." (A2).

Breath and breathing, which is viewed as an anchor for attention in MT, was often used to create an increase of embodiment or grounding within the body.

"It's nice to be present in my body. I'm, enjoying this… When my mind drifts off, I can come back to my breath and center myself" (C5)

"…easy to forget you have a body when you thinking all day so it's good to come back and check-in." (B3)

" I exercise more mindfully when I went to gym, and rather than wishing away the tough class, I am able to stay in my body and be aware of how my muscles were working – this felt like a big step for me as I always enjoy gym for the sensations afterwards of being happy and tired, but seldom the actual experience while doing it, just being inside my body." (C9)

The raison eating meditation practice also seemed to be effective in grounding participants within their bodies.

"Wonderful to actually feel and really experience the raison travel down into my body. Like I am visiting inner-space, but this is actually me visiting my own body, Quite a sensation to feel all my senses" (A6)

The idea of interoceptive awareness and its relationship to the regulation of anxiety was also evident, for example as stated by D1: *" I have learned so much on how to stay focused inside my body and feel what is happening for me inside and as a result gained control over thoughts wandering to the past and the future. As a result, my anxiety levels are more manageable*".

The idea of embodiment was not always reflected upon in positive terms and was experienced by some participants to be quite challenging. There were instances when embodiment was associated with judgment, criticism and negative thoughts and feelings and participants commented on the predicament of inhabiting their bodies within this context. However, even in these instances, there was some sense of beginning to appreciate aspects of their bodies:

"Sometimes I don't want to be focusing on my body because I feel fat and don't like my body, but I know it is the only one I have. We should try and be friends" (D6)

"I have found that I gradually became more and more aware of my body and my so-called 'unpleasant' feelings. Most profoundly, I have struggled to inhabit my imperfect body in all sorts of ways for many years and I suddenly realised that I was able to appreciate it so much and to come to understand the way that I am allowed to love my body as it is now." (C9)

While participants reported on a greater sense of being located within and aware of their bodies, this was not always experienced in a positive light as there were mixed views. Some found the experience of embodiment comforting and pleasant, while some reported discomfort as described above.

Theme Four: Acquisition

This theme relates to the manner in which participants reflected upon their sense of acquiring the skills of MT, the chronological changes in their reported experiences of MT, and the changing processes over the timeline of their training experience. The three sub-themes that were identified here relate to reports that the mediation practice was becoming easier, the development of the observing or witnessing self, and participants' comments on a growing sense of integration or

connectedness at various levels over time. The comments reflected in the theme *Acquisition* were mainly sourced from the end of course evaluation reports in which participants tended to reflect on their experience of the course over time.

Ease. Participants stated that MT became easier over time and noted an improvement in their ability to keep attention and focus. They were able to continue with formal practice for more extended periods of time with greater ease.

"Like you said, it's a type of gym for the mind. My body gets stronger when I train regularly, and I see the same with the MT as my ability to pay attention for longer periods gets better… I still get distracted though but as you said this is normal" (B2).

"At first, I found the longer meditations challenging, as I got distracted at times by all the sounds at the venue… I used to be so restless in the beginning… I sit for like 45minutes now and don't even feel the time when I do the formal exercise" (C7)

The motivation for practice seems to have increased as benefits became evident. During the early stages of the MT, many reported difficulties ranging from restlessness, distractions, falling asleep, and dealing with self-criticism and impatience. D7 had first reported: "*I really struggled this week… kept wanting to fall asleep or my mind was doing the "monkey mind' we talked about last week and wandering all over".* Toward the end of the course, D7 states: "*I battled in the beginning just to keep still…. Now I started feeling benefits… I still struggle with distractions, but it is so much easier to meditate and focus for longer".*

As the MT proceeded and participants became more familiar with the exercises, many reported looking forward to the training sessions and enjoying the homework exercises as well as positive changes over time.

"I love coming to the class… I used to rush around and that is how I kept going… these days I really love walking mindfully and doing the homework and trying doing activities in slow motion" (A12)

"When I start off getting into panic mode and then I remember my weeks of the mindfulness course… moving from the fright and flight phase to the present moment. I just breathed for a bit and just like that I felt less anxious, I did a body scan and relaxed. A little later… all the irritation was gone… so much better now than when I first joined. "(C11).

Equanimity. This theme relates to the reporting of a growing sense of less reactivity to experience and a growing sense of meta-awareness over time. The development of the observing or witnessing self as a different entity from the mental objects that are being experienced becomes more apparent as the MT timeline progresses. This idea of "re-perceiving" (a concept that was discussed in Chapter Two) with an even-mindedness becomes accompanied by a growing attitude of curiosity and acceptance of the various and transient nature of their experiences. There is a growing sense of stabilizing the lens through which experience is being perceived, which is associated with less reactivity, and more stillness.

" Now I know that I am not just my thoughts and feelings… I can be still and experience it fully, but they will pass as the weather changes like in the mountain meditation we did" (B5)

" It is good not to get swept up by run-away thoughts and feelings as I used to as that caused me anxiety… now I am able to observe and know this too will pass… it's like that idea of leaves flowing in a stream or clouds in the sky." (A9)

".. a mood is just a mood. It comes and it goes… even sadness can be a gift and that is what we teach the clients we work with. Moods pass but the center of me will be present always" (A3)

Participants express the notion of developing of equanimity in this theme as neither over-identifying nor detaching from the contents of the mind but instead bearing neutral witness to their

experiences. There is an expressed awareness of the dialectic of, at once, being connected to but separate from the experience is expressed by the participants.

Integration. Over the time-line of the MT course, participants reported experiencing greater connectedness or integration at various levels: in relation to their perceptions of the associations between mind and body; between their feelings, thoughts and body sensations; between self and others; as well as a sense of greater connection with a broader community reflecting a more trans-personal connection. The integration between thoughts and feelings and the physical body was reflected on by several participants as follows:

"I can feel how my feelings exist in my body experiences and how my negative thoughts cause me to feel negative feelings" (D4).

"It's like I abandoned my body, now I can feel my mind also exists in my body." (D5).

"I think my mind and body are becoming more aligned… I am becoming more present in the moment and with my body." (A6)

B11 reports greater feelings of connectedness in several areas: *"I see myself more integrated through my training practice… thoughts, feelings and my body all part of a whole where the whole is greater than its parts…when I first began MT it was not so easy to see myself as a holistic being."*

While MT is presented as a secular practice, many reported on a more spiritual and sometimes religious dimensions of connection such as feeling closer to God or feeling more connected with a higher purpose or greater sense of the meaning

"Feeling so warmed by the loving-kindness practice and… can see that all beings are as one. We are not alone (C2)

"Mindfulness is not religion, but it does open up on spiritual feelings even though I am not religious. Meaning is important to us all and I feel I am more spiritual now" (B11)

Participant D9 who had identified himself as a Christian pastoral counsellor reported that MT has helped him to feel more connected with his church congregation and with God: "*I am able to see how being connected with myself through meditation and knowing myself better helps me serve God and my community better..*"

Participants reported experiencing deeper feelings of integration on multiple levels including connections on an intra-personal, inter-personal and more trans-personal level. There seemed to be an awareness of integration within and without, to both their internal and external environments.

In Summary

In closing off the chapter, it is noted that the qualitative results section presented outlined and described the core themes and subthemes identified and extracted from the thematic analysis and illustrated the themes with relevant content. It was apparent that not only commentary relating to increased skill in mindfulness practice emerged but also content that related very clearly to a sense of benefit to professional identity and practice and to working with triggering content such as that present by traumatized clients. The themes will be elaborated upon, interrogated more intensively and integrated with the quantitative results in the Discussion Chapter that follows.

Chapter Five: Discussion

This chapter integrates the quantitative and qualitative findings and locates the findings in the context of existing literature. The discussion is structured in keeping with the order of the research questions outlined in the Method and Results Chapters of the thesis but aims to integrate relevant information across sections. Interpretations and implications of the findings are discussed, and towards the end of the chapter, the strengths and limitations of the study and recommendations for further research are presented.

This study aimed to investigate the impact of MT as a self-care strategy for trauma counsellors on a holistic level, and consequently, a broad range of assessment tools was utilised to gauge where the change took place for individuals who undertook the training. In addition to comparing the effectiveness of the intervention across different conditions (intervention (MT) and the active control (PE) over time, the study aimed to explore experiential features of the training through analysing self-report data from participants. The study addressed two related questions: Does MT work in alleviating negative trauma impacts and enhancing compassion satisfaction, and if so, how does it work? The discussion explores how the findings contribute to validating, extending, or contradicting existing theory and research and elaborates an understanding of the processes and mechanisms of MT as a self-care intervention.

Summary of Results

An overview of the results reveals that MT was effective in reducing negative trauma impacts and in increasing trait mindfulness and that these outcomes were largely sustained over three months post-intervention. MT was found to be associated with variable rates of change on each of the outcomes assessed, with the most significant positive impact being on PTSS Total scores, followed in descending order by, the Non-Reactivity and Awareness facets of mindfulness, STS scores, and BO scores. There was a relatively smaller impact on VT and a non-statistically significant impact on CS. The increase in scores on the Avoidance scale of the PTSS (although statistically non-significant) was unexpected and warranted some discussion. The results for the Intrusion scale of

PTSS were mixed, and the significant decline in the Observing facet of the mindfulness scale three months post-intervention was also unforeseen. A more detailed discussion of the research outcomes and their implications is presented below.

Discussion of Results

Research Question One

Research question one was centred around investigating whether MT impacted on trauma counsellors in relation to Compassion Satisfaction (CS) and negative trauma impacts, i.e., Burnout (BO), Secondary Traumatic Stress (STS), Post-Traumatic Stress symptoms (PTSS) and vicarious trauma (VT). Firstly, the hypothesis that MT would have a significant impact on increasing levels of CS was not supported by the findings. While CS did show a more considerable increase in the MT intervention group as compared with the control condition, the significance level of the change associated with MT was just slightly below the acceptable level of significance (p = .056). Thus, MT was associated with a trend in increased levels of CS, tending to support conclusions that mindfulness is positively correlated with compassion satisfaction (Decker et al., 2015; Martin-Cuellar, Atencio et al., 2018; Thieleman & Cacciatore, 2014). This result replicates findings by Clarkson et al., (2019) who found that MT was associated with a non-significant trend in increased levels of CS in a study of therapeutic radiography students, and is directionally in-line with evidence from Thomas and Otis (2010) who found that MT significantly increased CS in social workers.

Findings on the casual impact of MT on CS in this study are not conclusive. As noted in the review of the literature, in general, positive outcomes on counsellors of working with trauma have received minimal research attention relative to negative trauma impacts. There is a scarcity of studies examining the relationship between MT and CS (Martin-Cuellar et al., 2018), and those that do exist are mostly correlational rather than intervention studies. While the indication that MT has an impact on increasing CS was not definitive in this study, there were suggestions of the potential returns of MT for this aspect of work-related satisfaction. This benefit was evident in the qualitative analysis in which participants reported improved job fulfilment and a greater sense of

accomplishment and happiness in the workspace. These themes are consistent with the description by Wagaman et al. (2015) that CS is associated with feelings of achievement, motivation, and enjoyment from emotionally challenging work.

Generally, researchers propose that CS is multifaceted in that it may exist concurrently with negative trauma impacts, may buffer the impact of negative trauma impacts and may be influenced by several factors (Arnold et al., 2005; Stamm, 2010). When considering specific examples of items from the CS questionnaire such as item 16, “I am pleased with how I am able to keep up with counselling techniques and protocols”; item 22, “I believe I can make a difference through my work” and item 12, “I like my work as a counsellor”, it may be proposed that both MT intervention and the PE control condition had the potential to improve levels of CS and this may account for the improvements in CS scores, but non-significant findings across Groups 1 and 2.

The literature demonstrates that various self-care strategies such as social support, professional education, peer support, support by a supervisor, and factors such as exercise, nutrition, and improved work-life-balance, are promoted to increase CS (Figley, 2002). The PE control group participants attended regular facilitated group meetings and had access to educational material, which promoted factors that are effective buffers for STI and could potentially increase CS. Consequently, both the process and the content of the control condition such as the group support format, participants taking time out for self-care, the facilitator’s support, as well as the educational content on how to recognise and alleviate STI may explain why the control group was found to improve their levels of CS, although not to the same extent as the intervention group.

The results seem to confirm that many self-care factors may influence CS and that while MT does show potential benefit in increasing CS, it was not necessarily significantly better at improving CS than a group, psychoeducational programme. The findings indicate a positive correlation between MT and CS in keeping with previous findings (Decker et al., 2015, Thieleman & Cacciatore,

2014) but do not support a causal link between MT and CS. MT was shown to have a comparatively more significant effect on decreasing negative trauma impacts.

The results supported the hypotheses that MT would lead to a reduction in all the negative trauma impacts measured, as evidenced by statistically significant decreases in all the primary outcome measures. These findings were validated by participants' qualitative feedback reflecting on lowered stress levels as well as increased resilience and capacity to perform work duties. The results are in keeping with those of related studies that have demonstrated the effectiveness of MT interventions in decreasing negative trauma impacts in different samples of counsellors such as psychologists, social workers, nurses, and chaplains, (Duarte et al., 2016; Harker et al., 2016; Hotchkiss & Lesher, 2018; Shapiro et al., 2007). Further, the results support the findings of the Shapiro et al. (2005) RCT, which concluded that MBSR interventions enhanced quality of life and decreased stress in a variety of health professionals.

Generally, MT has a strong positive influence on negative trauma impacts, as evidenced by the medium to large effect sizes in all the outcome variables, noting that there continues to be a debate about the validity of effect size calculations under conditions of non-randomisation with smaller sample sizes. The findings support conclusions from a recent systematic review of 31 RCTs which reported that MT interventions have a consistent impact on many aspects of quality of life for a range of target groups, including improved mental health, empathy, coping, and mindfulness capacities, as well as improvements in physical health (Burton et al., 2017). In this instance, one can assume that reduced levels of trauma-related symptoms and more positive cognitive schemas concerning features of life, such as safety and meaning, are associated with improved quality of life for trauma counsellors.

In comparing the variable impact of MT on the negative trauma impacts, MT was found to have had the most significant impact on PTSS Total scores with a 27% post-intervention decline. The finding that MT is effective in decreasing overall levels of PTSS is consistent with research on diverse

traumatised populations. While research on the impact of MT on trauma-related symptoms on victims or patients is substantial and fast-expanding, this research has generally not been extended to secondary or vicarious traumatization in trauma counsellors internationally or in the South African context. The findings contribute to the evidence base showing that MT can reduce PTSS in trauma counsellor populations.

It is noted that this sample of trauma counsellors showed relatively low baseline sub-clinical PTSS scores when compared with data from related studies in which higher baseline PTSS scores were observed in similar samples. For example, the findings from a literature review of 110 articles indicated that the prevalence of PTSD among health care workers ranged from 4.4% to 28% (Sendler et al., 2016). A study on a sample of 121 mental health workers in a Botswana hospital found that 18.4% met the criteria for a PTSD diagnosis (Olashore et al., 2018). The fact that none of the participants scored between 31 and 33 (which are parameters that may reflect a diagnosis of PTSD) is not entirely surprising given that this sample reported relatively low exposure to direct traumatic events (as reflected in the LEC-5 checklist). Therefore, it should be noted that the improvement associated with MT in this study cannot be extrapolated to PTSD but reflects a reduction in PTSS instead.

It is worth highlighting that even with the non-elevated levels of trauma-related symptoms evidenced in the sample MT was able to produce significant decreases in this symptomatic dimension of secondary traumatization (as evidenced by the decline in the PCL-5 Total scores, as well as the significant declines in both the Arousal sub-scale and the Negative alterations in cognition and mood subscale. The significant impact of MT in reducing PTSS as a whole and, most notably hyperarousal symptoms, is consistent with related research (Stephenson et al., 2017). The impact of MT on the Negative alterations in cognition and mood scale is also consistent with studies that have found that MT improves positive affect and reduces negative affect (Schroevers &

Brandsma, 2010) and that MT is associated with a reduction in maladaptive cognitions (Eberth et al., 2019; Kiken & Shook, 2012).

From a neuro-science viewpoint, the decline in PTSS may be related to the neurobiological theories of trauma presented in Chapter two and specifically the hypothesised link between MT and the enhancement of PFC functioning. The findings lend support to theories that MT engages the executive functions of PFC in this instance by regulating the stress response, decreasing arousal symptoms, and modulating negative mood and related negative cognitions.

After PTSS Total scores, the next most significant set of results were those concerning the sub-scale measuring STS as a component of the ProQOL. MT was associated with decreases of 20.5% in STS scores. The results are consistent with related studies such as that conducted by Harker et al. (2016), who reported that mindfulness might be a preventative factor for psychological distress and secondary traumatic stress in health care professionals. Overall, the significant impact of MT in reducing levels of STS as well as the substantial and significant impact in reducing PCL-5-Total scores reinforces the hypothesis that MT may potentially reduce a range of symptoms associated with STI and the kind of discomfort in counsellors associated with symptoms that might parallel those of the clients with whom they worked.

After STS, BO scores also decreased significantly by 18% with a large effect size. The results are in keeping with correlation studies that report a strong negative association between mindfulness capabilities and BO in mental health professionals and that recommend MT programmes for the treatment and prevention of BO (Askey-Jones, 2018; Di Benedetto & Swadling, 2014). The results also concur with intervention studies such as that conducted by Goodman and Schorling (2012) who demonstrated that MT was associated with significant improvements in BO scores and mental well-being for a broad range of healthcare providers such as physicians, psychologists, social workers and nurses. The significant reduction in BO in this sample is especially notable in relation to South African's health care system. There are many problems related to

resource constraints and poor working conditions that may pre-dispose counsellors to BO, as was elaborated in Chapters one and two. This study demonstrates that MT may significantly alleviate BO symptoms in trauma counsellors and offers a potential solution relevant to the social context.

With regards to VT, MT resulted in a significant reduction of 16% in the total score with a large effect size. These findings are in keeping with related research on mental health care workers working with trauma survivors. For example, Jacob and Holczer (2016) concluded that higher mindfulness scores were associated with significantly lower VT scores. However, in comparing the impact of MT on the various negative STI, while the change in VT scores was significant, there was a smaller reduction in VT as compared to PTSS, STS, or BO outcomes. The VT results may be explained in the context of theories of how different STIs appear to develop and manifest differently, as discussed in Chapter Two. A comparison of specific items on the scales used for the outcome measures of VT, PTSS and STS makes this distinction clearer. To illustrate: Items relating to VT include item 2, “Mostly, I don’t feel I’m worth much” and item 34, “Bad things happen to me because I'm bad.” While items relating to PTSS include item 18, **“**Feeling jumpy or easily startled,” and STS is indicated by items such as item 11, “Because of my counselling, I have felt "on edge" about various things.” These examples reflect different content contrasting the internal cognitive schema associated with VT with the more physiological or physical symptoms linked with PTSS and STS. It may, therefore, be inferred that the lowest rate of change in VT relative to the other STI variables assessed is related to theories of the genesis of VT. VT is conceptualised as a gradual and cumulative process that develops over time as the counsellor’s healthy cognitive schema about self, the world and others are gradually replaced by negative belief systems as a consequence of repeated exposure to client trauma (Pearlman & Mckay, 2008).

The gradual development of VT contrasts with the relatively quick onset proposed for PTSS or STS. It may then follow that shifting the negative belief systems associated with VT would require more time with on-going mindfulness practice as compared with changing those negative trauma impacts that are associated with more externally observable symptoms such as those associated

with PTSS and STS. Nonetheless, even after an eight-week MT intervention, it is noteworthy that MT showed the potential to reduce negative cognitive schema that are associated with VT significantly. Despite the variable rates of change for the different negative STI that were assessed, MT generally resulted in significant reductions in all negative trauma impacts assessed.

It may then be concluded that for Question One, while Hypothesis One was not supported in this study (as MT did not result in a significant increase in CS), there is evidence that participation in MT translated into significant reductions in the negative trauma STI features of PTSS, BO, STS and VT in trauma counsellors supporting Hypotheses relating to these variable. There is compelling evidence in this study for the impact of MT in reducing a range of STI in trauma counsellors. There is inconclusive evidence that MT improves CS in trauma counsellors.

Research Question Two

The second research question focused explicitly on mindfulness as an outcome measure and investigated if there was an increase in scores of trait mindfulness across participants following exposure to the MT intervention. To summarise, there was a significant post-intervention increase in Total trait mindfulness (18%), and there were significantly improved post-intervention scores on all five facets of mindfulness as measured by the FFMQ. However, FFMQ factors showed varying levels of increase: Non-reactivity (25%), Awareness (22%), Observing (20%), Describing (16%), and Non-judging (15%). These findings concur with other related studies which have shown that MT results in significant improvements in all FFMQ scores for both brief and longer-term intervention periods and can produce moderate to large effect sizes with eight-week training interventions (Cresswell, 2017; Kiken et al., 2015; McGarrigle & Walsh, 2011; Robins et al., 2012). Present results showed significant post-intervention improvements in all factors of the FFMQ scale consistent with other studies that have compared control and intervention groups following MT interventions (Chang et al., 2004; de Vibe et al., 2013; Goldberg et al., 2016; Pawar et al., 2016). In this study, the Non-Reactivity, Awareness and Observing facets showed the most substantial levels of positive change.

It could be argued that the increase in the Non-reactivity facet of mindfulness, which showed the most significant degree of improvement, is due to similar change mechanisms to those that produced the significant decrease in the arousal scale of the PTSS as will be elaborated later in discussion on Research Question Four. The change in reactivity supports Eberth et al.'s (2019) identification of reduced emotional reactivity or equanimity as a vital mechanism of mindfulness meditation and resonates with the references to equanimity that were made by participants in their self-reports.

The substantial increases in both the Non-reactivity and Awareness mindfulness facets parallel the findings of a recent study that investigated mindfulness and affect in older adults and demonstrated that these two mindfulness facets contributed significantly to improvements in positive affect (Pierson et al., 2019). It could be argued that in this study, increased levels of Non-reactivity and Awareness on the FFMQ were found in conjunction with the decrease in the Negative alterations in cognitions and mood scale of the PTSS, suggesting that improvements in these aspects of mindfulness may reduce negativity. However, it must be acknowledged that a direct relationship between these variables was not examined, and within this study, it can only be observed that these changes were co-occurring. It is noteworthy that in their self-reports, participants reported increased levels of enjoyment and satisfaction in both work and personal spheres, although these changes may have stemmed from factors beyond improvements in these aspects of mindfulness.

In speculating on why the Describing and Non-judging facets had changed less than the other facets, it may be ventured that the capabilities associated with Describing and Non-judging may already have been reasonably well developed as components of the professional skill set of the sample. The capacity to describe feelings and cognitive states in order to reflect these to clients, and the capacity to adopt an accepting and non-judgmental approach to clients, are both often cultivated as core or micro-skills in counsellor training. While these capacities did shift significantly subsequent to exposure to MT, they may have been somewhat less amenable to change than the

more novel capacities associated with other mindfulness attributes. It is worth noting, however, that Non-judging also applies to the self, and self-judging attitudes may be harder to shift than developing the capacity to be alert to and observant of self-states.

The findings to date in the literature more broadly indicate that there is no commonality across studies in the kinds of change scores associated with different facets of the FFMQ. Patterns of response to the different facets seem to be dependent on contextual factors such as sample characteristics, length of meditation practice, properties of the instrument, and the specific features of the MT training protocol used. Further research may assist in establishing links between aspects of change and some of these variables. Nonetheless, the results of this study support the hypothesis that there would be a post-MT intervention increase in trait mindfulness in the intervention group relative to the active control group

Research Question Three

The third research question extended questions two and three by assessing if the changes evident in counsellors' well-being were sustained over time. Consistent with the expected direction of change, the CS scores and the Awareness facet of mindfulness scores were not only maintained but showed a significant increase after three months, and the PCL-5 Total and PCL-5 Intrusion subscale, STS and BO scores had declined significantly indicating sustained and ongoing benefits. The improvements post-training in the Total Mindfulness score as well as in the Non-judging, Non-reacting, and Describing facets were sustained three months later. The decline in the Mindfulness Observing scale at t4 was the only result that ran counter to the hypothesis.

The present findings provide evidence for the sustainable impact of MT benefits supporting other studies that have also demonstrated the enduring impact of MT over time with different samples and outcome measures (Amutio et al., 2015; Geary, & Rosenthal, 2011; Pbert et al., 2012). This study adds to the evidence by providing findings for a three-month sustainable impact of MT. The findings substantiate an earlier intensive qualitative study which reported that the positive

effects of MT tend to endure in both the personal and professional lives of counsellors long after formal MT invention has concluded and that most counsellors continue to self-regulate their MT practice many years into their careers. (Christopher et al., 2011). Although it was not possible to establish in this case, there is some evidence of the enduring benefits of MT. One of a few longer-term quantitative studies demonstrated sustained positive effects of an MT intervention on outcome measures of mindfulness, avoidance coping, problem-focused coping and mental distress in a sample of students, four years post-intervention (Solhaug et al., 2019). Given that it had already proven somewhat challenging to retain participants in the current study for the third phase assessment at four weeks after the termination of the intervention, it was not possible to do a comparably long-term follow up in this instance. However, it was encouraging to see generally sustained improvements continuing beyond the active weekly inputs associated with the facilitated formal training intervention phase. While it is unlikely that trait mindfulness can develop fully over the kind of eight-week period that the training involved, it is gratifying to see that improvements can begin to be consolidated over this kind of two-month intervention period.

Additionally, the theory and emerging empirical neuro-science data presented in the literature review relating to the proposal that mindfulness moves from a state to a trait as reflected by neuroplastic changes in both the functions and structure of the brain is to some extent verified by these results. For example, the finding of sustained and improved benefits may be viewed as consistent with the idea of neuroplasticity and the association of mindfulness with both functional (reduced amygdala activity) and structural changes (decreased grey matter in the amygdala), understood to reduce stress reactivity (Taren & Creswell, 2013). From a neurophysiological perspective, the primary changes in outcome measures such as the high increase in FFMQ Non-reactivity facet and the significantly decreased PTSS arousal scores, and the sustained changes in these features over time adds credibility to theories of decreased activity in the amygdala and increased PFC functioning linked to emotional and stress regulation associated with MT. However,

these kinds of changes can only be inferred without access to collateral evidence, such as fMRI scan data, which it was not possible to obtain within the parameters of this study.

Contrary to the findings for the rest of the FFMQ scale, scores for the Observing facet declined between t3 to t4. This significant decrease was unexpected, running counter to the hypothesised trend, and is therefore worth deliberating. While this unforeseen finding was initially perplexing as Observing is seen as a crucial skill in theories of mindfulness, further examination of the literature reflected a similar trend in several other studies with researchers reporting unexpected results for the Observing facet (Quaglia et al., 2016; Shipherd, & Salters-Pedneault, 2017; Stanley et al., 2019). These unforeseen results appear to be linked to two possible factors: the construct validity of the FFMQ scale and the fact that scores on the Observing scale are variable depending on patterns of differences in meditation practice, as discussed below.

Baer et al. (2008) assessed the construct validity of the FFMQ for meditating and non-meditating samples. While the authors found good construct validity for the FFMQ and advocate for the continued study of its separate facets of mindfulness, they noted that the Observing factor appeared to have different properties from the other four mindfulness factors and proposed that the Observing factor may be more sensitive to changes in meditation practice. Further studies evaluating the psychometric properties of the FFMQ support the inference that the unexpected results of the Observation FFMQ scale may be related to instrument construction. For example, Lilja et al. (2013), using hierarchical confirmatory factor analyses, found that four of the FFMQ factors, all those excepting Observing, were components of the overall mindfulness construct, a finding that was recently replicated by Pang and Ruch, (2019). Other recent studies also found that the Observing sub-scale exhibited different psychometric properties or produced discrepant findings relative to the other four factors (de Bruin et al., 2012; Falkenström, 2010; Michalak et al., 2016; Quaglia et al., 2016; Shipherd, & Salters-Pedneault, 2017). Bowman (2014) concludes an evaluation of the psychometric properties of the FFMQ by calling for a revision of the Observing sub-scale.

Other evidence relevant to interpreting the unexpected result is the finding that the Observing Scale behaves differently in different meditation conditions and that experienced meditators tend to score differently on this specific FFMQ facet when compared with novice meditators (Lilja et al., 2013). For the present study, it may be inferred that the pattern of meditation practice changed once participants had concluded the guided MT intervention process and were required to self-regulate their meditation practice without the support of regular group facilitation. In this regard, participants had reported extensively on how the group meetings and the researcher's facilitation had enabled and supported their meditation practice. For instance:

"*I'm quite concerned about keeping this up after the course ends. The group's support and the regular sessions help me to commit to the practice".* (D4)

"really look forward to our meetings and prefer your voice doing the live meditations and I really enjoy our discussions…takes extra disciple to do it alone during the week" (C8)

The reports above are consistent with other studies that have demonstrated that support from the group and the facilitator are vital enablers in the development and practice of MT skills (Tollstedt, 2017). For the most part, it appears that the FFMQ Total mindfulness score, as well as the other four facets of mindfulness, were more robust to these changes in support for meditation practice than was the Observing component. It was evident that Observing facet scores improved by 20% initially, suggesting that this component of mindfulness practice was positively cultivated in participants in response to the training. However, this aspect of mindfulness appeared more difficult to sustain than other aspects, possibly for some of the reasons put forward in the discussion of this finding. This anomaly is worth bearing in mind for future training and may require some re-examination of the teaching materials related to this component of MT. The fact that the five mindfulness factors behaved differently in response to the MT reinforces the idea that there are factors or sub-components to assess in evaluating people's proficiency with mindfulness practice (Baer et al., 2008).

The sustained and improved changes in most of the STI of interest over the three-month post-intervention period lend support to the idea that MT may be utilised both therapeutically and prophylactically as a beneficial intervention for secondary traumatic stress in trauma counsellors. The sustained improvements in well-being, which may be associated with MT related neuro-plastic changes, suggest that as an intervention MT may assist both in reducing immediate trauma symptoms as well as in building long term resilience. MT may potentially be an effective approach to the management, treatment, and prevention of negative trauma impacts as well as the promotion of sustainable wellbeing for trauma counsellors.

Research Question Four

Question four expanded the enquiry from "does MT have an impact" to "how and why does MT appear to have an impact" as it aimed to elaborate which key psychological dimensions of vicarious or secondary trauma impact appeared to be most effectively addressed by MT. For example, it seemed useful to understand whether more symptomatic or more meaning related elements appeared to be better ameliorated by MT, hence the use of multiple research instruments and sub-scales, each tapping into different dimensions of counsellor secondary trauma impact.

Regarding the quantitative assessments based on comparative rank ordering of outcome variables by percentage of change in scores, the following primary areas were identified as dominant: MT appeared to have impacted significantly by decreasing Arousal and reactivity (26%) (both of which conceptually link to the 20.52% decrease in STS), increasing Non-reactivity (25%) increasing Awareness (22%) and decreasing Negative cognitions and mood (22%). Moreover, MT was found to have improved Describing (16%) and Non-judging (15%) and reduced Intrusion symptoms by 7%.

An inference that can be drawn about the mechanisms of impact of MT from the quantitative evidence is that MT impacts considerably on reducing the symptomatic dimensions of negative STI. The decreases in the PCL-5 Total score, PCL-5 Arousal and reactivity scale and STS levels

show the most firmly evident changes in response to MT. It is noteworthy that MT seems to reduce the parallel states of arousal that counsellors may experience in reaction to their traumatised clients. There seemed to be a substantial reduction in tension, anxiety and the hyper-vigilance of threat that is often associated with hyperarousal states. This shift is especially significant in South Africa with counsellors living in a country where their own sense of personal safety may be compromised by the elevated levels of crime and the high potential of becoming victims themselves. While it may be argued that some level of hyper-vigilance or keen environmental awareness may be adaptive in potentially threatening contexts, MT impacts on improving both awareness of these states of arousal and the ability to modulate and reduce levels of hyperarousal. These skills would clearly benefit the counsellor in both their professional and personal lives. The evidence is in line with other studies that have demonstrated the strongly significant impact of MT on hyperarousal states associated with trauma (Grupe et al., 2019; Stephenson et al., 2017; Vujanovi et al., 2011).

In addition, the conclusion that may be drawn from the assimilation of the qualitative data themes is that MT, while challenging and effortful (as reflected by the theme of *Paradox or balancing of polarities*), results in both a reduction of negative trauma impacts well as improvements in key areas of the counsellors' lives both personally and professionally (as reflected in the themes of *Therapeutic skills and Mindsight*) and that MT skills and knowledge improve gradually and progressively over time (as reflected in the theme of *Acquisition*).

Generally, inferences that can be drawn about the mechanisms of impact of MT from this study are consistent with findings from related empirical studies that have established that MT is associated with decreased hyper-arousal and stress reactivity, improved modulation, regulation and awareness on various levels (cognitive, emotional, somatic and physiological), acceptance and self-other compassion, transcendent perspectives on the self, and dis-identification with objects of awareness, as discussed in Chapter two.

Feedback shared by Participant B2 during the MT intervention is a particularly illuminating illustration concerning the change mechanisms highlighted above. B2 shared that he had unfortunately become trapped inside a lift with four of his trauma patients and that while he experienced this as a very traumatic situation, he had also felt that as a counsellor, he needed to contain his patients and himself within this situation. He had panicked initially, an understandable response to the situation. He then remembered his MT training and practised a brief meditation. The meditation enabled him to calm himself down as well as contain the four patients in the lift who had become extremely anxious.

This vignette resonates with a study that examined the physical and physiological responses of individuals who had undergone an 8-week MT intervention that were evoked within immersive virtual environments that simulated emergency situations (Crescentini et al., 2016). It was found that the meditators exhibited different responses in the simulated emergency, such as decreased stress responses, lower anxiety levels, decreased heart rate, and increased mindfulness when compared with a control group. Generally, the sample of this study showed evidence that MT appeared to have assisted them in managing both physiological and psychological dimensions of stress, as reflected in both quantitative data outcomes and qualitative feedback.

The evidence of this study also supports theoretical proposals on the mechanisms of impact of MT specifically on trauma symptoms (Follette & Vijay, 2009). Furthermore, the mechanisms highlighted can be plausibly connected to the integrative and executive functions of the PFC, specifically emotional, cognitive and physiological regulation, attuned communication, enhanced flexibility in response choices, improved compassion and empathy, anxiety and fear extinction and mental and physical integration (Siegal, 2007). These links to existing findings are further elaborated.

The understanding of how and why MT was effective may also be linked to the gradual development of compassion, coupled with a meta-observational stance of equanimity and a quality of “heartfulness”, as may be interpreted from an integration of the quantitative findings and

qualitative data as discussed here. In theorising on the change mechanisms of MT in this area, it may be useful to re-engage some of the material on STI, empathy, and compassion as discussed in the Literature Review. A central theme that recurs in the theories on the development of STI is that of empathic distress. In the context of the current results, the distinctions between empathy and compassion, both as psychological concepts and in terms of their underlying neurological correlates, may offer an insightful perspective on interpreting the findings.

In simplified terms, writers on STI emphasis the role of empathy in both healing the client and hurting the counsellor, while writers in the mindfulness literature write extensively on the role played by compassion for healing and helping both self and other. It may be postulated that empathy, if not modulated and mediated by the PFC, and when the distinction between the therapist and the client becomes blurred, may result in empathic distress, a central feature of STI. On the other hand, compassion, as engendered by MT, involves empathy but is modulated by the PFC with an attitude of equanimity or "intimate distance" (Shapiro et al., 2006), which then helps clarify the distinction between the self and other, coupled with the desire to ease the suffering of the other. Examples of participants reports, which may be interpreted as reflecting on the difference between empathic distress and compassion emerged as follows:

"*It's a challenge to care for clients all the time without getting drained. Mindfulness helps me care deeply without getting drained from it, almost like from a safe distance, but still caring".* (A14).

"*It's easier for me to work better and more deeply and not get lost inside their pain and problems… I can still be there and help them without getting lost in their stuff. It's like I have a new super-power."* (D8)

"Sometimes I used to feel overwhelmed like I've lost the capacity to care anymore. I think I respond better to their pain now. I feel more sense of purpose in my helping people in need and the meditations help me feel protected from the clients' trauma." (B7)

As evident in the findings, the quantitative evidence of decreased levels of negative trauma impacts was accompanied by participants' reports of an increased capacity to hold the emotional suffering of their clients without becoming overwhelmed, to maintain better boundaries, and to notice increased work fulfilment. It seems, then, that the development of compassion and clarity of boundaries and the activation of the integrative functions of the PFC as facilitated by MT, appears to result in a resourceful and self-sustaining approach to both self-care and to managing and containing the distress of traumatised clients. The literature review had highlighted the different neural circuits implicated in empathy and compassion training where compassion was linked to neural pathways associated with positive affect and increased activation in brain reward system networks. The latter point highlights a potential relationship of reciprocity between compassion and reward, implying that compassion may be self-sustaining through the associated reward experience of positive affect. For example, A5 reports:

"I meditate for a few minutes between the sessions...it's quite refreshing. I'm enjoying my working more, gives me more meaning without losing boundaries with the trauma clients." (A5)

Furthermore, the compassion training component, which extends from self to other and to the greater community, is a core feature in MT. The "Loving-kindness Meditation" (LKM) exercise, which represents the compassion training component in MT, was reported by many in the sample as being a chosen favourite MT exercise and appeared to inspire expansive and nurturing emotions of care and affection toward self and others as reflected as follows:

"*This is my easiest to do practice, to do, my best. Reminds me to be in love with myself as much as I love my family and my work… a reminder that love has no limits."* (B11)

"I love the love and kindness exercise. I feel closer to myself, notice my pain as well as everyone else. It's challenging with enemies or those who have hurt me, but I think I will get there with practising regularly." (C14)

"It is like a feedback loop; I just have to remind myself that you give positive energy into the world and you can feel it return." (B5)

This data echoes Fredrickson et al. s' (2008) finding that compassion training connected with MT is associated with an increase of self-sustaining positive feelings like joy, love, and gratitude, as well as a resultant increase in personal resources and increased positive feelings toward others. Another relevant link to existing evidence relates to findings by Lutz, Brefczynski-Lewis et al. (2008), who reported that the LKM compassion training of MT reduces amygdala activity associated with the perception of distress and increasing responsiveness to the suffering in others. The counsellor may be vulnerable to internal and external physiological changes related to distress, like increased heart rate and negative affect patterns in the brain. In contrast, a compassionate response may be associated with positive affect patterns in the brain, which may reduce distress. It seems evident then that compassion is likely to enhance counsellor well-being and skills, while empathic distress is likely to compromise these (Hofmeyer et al., 2019).

Further evidence that compassion training may serve to counteract empathic distress was demonstrated by an fMRI longitudinal study (Klimecki et al., 2012). The researchers found that while empathy training could lead to empathic distress and associated negative affect, subsequent compassion training sessions with the same sample was found to be effective in reversing empathic distress impact back to base-line levels and increasing positive affect. While the design of the study discussed in this thesis does not allow for investigation of neurological correlates of the change, the scale scores and self-reports tend to support the notion that participants may have been better able to couple empathy with compassion after the training. Thus, the findings of this study present the possibility of the reparative impact of compassion on empathy distress which is arguably linked to a reduction in negative STI and an increase in CS as was evident.

"I must say the more you practice the more resilience you feel. Meditation re-charges me, emotionally and mentally. Like mental medication and without side-effects of medication!" (A8)

Another key mechanism that appears to be broadly relevant to the question of how and why MT impacts is the development of equanimity. The post-intervention changes posited above may be interpreted in relation to equanimity, a core concept that recurs in the literature and occupies a central role in the discourse on meditation studies and is seen as being an emergent or meta-process in the development of mindfulness skills. As previously noted in the literature review, equanimity is a fundamental skill in MT. Together with the quantitative findings of substantial improvement in the mindfulness facet of Non-reactivity as well as the pronounced decrease in Hyperarousal responses (evidenced in the PCL-5), participants reported on a growing sense of even-mindedness associated with a meta-observational perspective:

"I can enter a still place of deep wisdom, especially when we did the mountain meditation. I can bear witness to the changing weather of my thoughts and feelings, knowing that they will change and not get caught up in it. I am my thoughts and feelings, but I am not at the same time. Quite weird, but nice" (D13).

The findings appear to resonate with those of Desbordes et al. (2015) who describe equanimity as being an even-minded and balanced, but non-detached and caring attitude to inner and outer experiences, whether they are pleasant, unpleasant or neutral in affective valence. Additionally, with those of Grabovac et al. (2011) who describe equanimity as a balanced state of awareness involving neither attachment nor aversion to the external or internal objects of attention. The development of an attentive and composed presence of mind during MT, described by the participants, seems consistent with descriptions of equanimity.

Similarly, the qualitative data suggest that the cultivation of compassion in MT is related to another significant element of Buddhist mindfulness practice that may have been under-emphasised or lost in translation as mindfulness moved from East to West - the concept of "heartfulness" (Kwee, 2015). Kabat-Zinn (1994) makes it clear in his MBSR training that mindfulness is not merely a cognitive practice as it needs to be infused with "heartfulness." The reflection of participants'

experience of “heartfulness” as a sense of integration and compassionate connection with self and others is elaborated below.

“It is mental training, like mental gym, but not in a technical way as it opens our hearts to deeper emotions” (A6)

“*I do feel I can connect more to my own heart and the hearts of everyone else. I feel very close to the people in the room and strangers in the street, or even irritating people in traffic…we are all connected.”* (D3)

Participants reported benefits related to a sense of integration between emotional, cognitive, and somatic experience as well as an expansive sense of trans-personal awareness and sometimes spiritual connection, with an improved sense of purpose and meaning. From the feedback, it is apparent that the “heartfulness” element of MT appeared to facilitate a greater sense of personal meaning and connectedness with the world, which seemed to offer additional buffers from empathic distress. As discussed in the literature review regarding theories of STI, it is often schemas related to safety and connectedness (Intimacy) that may become compromised and eroded when the individual succumbs to VT. Therefore, restoring and enhancing a sense of meaning and purpose would be valuable for counter-acting trauma impacts. Participants’ feedback, specifically on the LKM, seemed to reflect the sense of perspective they were able to gain that assisted in counteracting negative associations to traumatic material.

“Sometimes we get too stressed and caught up with the bad news of the world, like crime and politics... then we forget why we do this healing work. Then mindfulness reminds me to be connected to everyone and everything, birds, trees, God, everything…” (C6)

“It's lonely being a therapist, especially in private practice… and always facing the troubles of life on a daily basis… the workshops helped me remember where I fit in with everything and everyone and the importance of nurturing my heart and keep positive.” (D1)

Having discussed those areas of change that appeared to reflect positive changes, it is also necessary to reflect on the areas in which the MT intervention did not appear successful. The post-intervention increase in Avoidance is counter-intuitive and at odds with other research studies, such as the finding of Duarte and Pinto-Gouveia (2016) that MT significantly reduced experiential avoidance in nurses and Polusny and Follette (1995) who demonstrated that avoidance tends to increase psychological distress and the sequela of trauma. In addition, the Intrusion symptoms only decreased significantly in one of the intervention groups. Despite these anomalous sets of results, there was a statistically significant decrease in the PTSS total score over time, and a significant difference across experimental and control groups, in keeping with the directional hypothesis. Nevertheless, it seems vital, firstly, to consider possible negative impacts of MT, which may then provide further guidelines for ethical implementation of MT to address secondary traumatisation, and secondly, to theorise further on the mechanisms of change associated with mindfulness emerging from this study.

It is generally recognised in trauma psychotherapy that some traumatised individuals may have adverse effects to therapeutic interventions of any modality (Rothschild, 2000). Furthermore, it is conceded that possible negative impacts of MT have not been adequately researched and that there is limited information on adverse outcomes (Lustyk et al., 2009). Therefore, trauma treatment options and patient selection are carefully considered. For this study, the sample was considered low risk as they were trauma counsellors with some level of professional skills training and were exposed to indirect rather than direct trauma.

In general, the sample in this study did not report negative responses to the MT they received. However, the qualitative feedback indicated that increasing awareness was sometimes linked to a recognition of distress (which may be associated with intrusion) with what was being experienced. Participants reported that they found it rather challenging to navigate the paradox of avoiding and approaching in order to find a balanced position in relation to distress.

"*These are difficult waters. I'm not always happy to sit still and become anxious about what may arise."* (C3)

"For me, it's really hard especially when I'm stressed, yet I know it's good for my stress levels". (A2)

Interestingly, participants' description of navigating the dialectic between avoiding and approaching or the tendency toward polarized engagement and dis-engagement finds resonance with what Follette and Pistorello (2007) identify as being the 'central dialectic of trauma', as discussed in the literature review. The development of increased awareness associated with mindfulness may, for some individuals, be possibly related to an increased ability to recognize difficult emotions, thoughts or sensations leading to experiences of distress and consequently, an increased avoidance response. This likelihood resonates with reports that one of the risks of awareness training in MT is that novice meditators may experience amplified negative responses to unpleasant or distressing experiences (Grabovac et al., 2011) as well as Mor, and Winquist's (2002) observation that intense self-focused attention may be associated with increased negative affect.

In this study, there were reports of distress concerning the MT process in two key areas. Firstly, there were reports of distressing self-criticism at not being able to "get it right" and a struggle to cultivate a self-compassionate attitude.

"*I'm the hardest critic I know mostly to myself, I often battle with this."* (C3)

"I'm really not that good at this. My mind wanders about and I get really impatient with myself and my lack of disciple." (A5)

"I wish I could do more practice. I hate that I start and don't finish things" (D7)

The distress reported above may be understood in the light of research on the neural correlates of self-criticism and self-assurance, which reported that individuals who are self-critical tend to experience physiological threat responses which may challenge the development of self-

compassion (Longe et al., 2009). While this cannot be proven within this sample, it is plausible that a similar kind of process may have been at play.

Secondly, participants reported difficulty associated with balancing avoidance and approach of distressing thoughts, feelings or sensations that are intrusive (as reflected in the Paradox theme). Consequently, it may be theorised that in dealing with intrusion and associated distress, individuals remained somewhat stuck in navigating the polarities of intrusion and avoidance before they were able to modulate into a more balanced perspective associated with the witnessing observing self (as reflected in the theme of Equanimity and Mindsight). This dynamic may account for the elevated Avoidance scores and the lack of notable change in the Intrusion scores for one of the groups.

The MT process may be likened to learning to maintain a balanced position on a tightrope, a task that requires an intense and heightened awareness of internal and external stimuli, effortful concentration, and emotional composure in the face of distress. The individual may move from avoidance to intrusions or detachment to over-identification, attempting to balance between the two sets of experiences. The process may involve repeatedly falling off the tightrope then attempting the process again with an attitude of self-compassion. The increase in Avoidance scale scores may be an initial response to self-regulated training, and as distress tolerance skills develop further, the avoidance may decrease. However, in the absence of long-term follow-up assessments, it cannot be established whether Avoidance responses may have responded to more extended MT.

The idea that engaging mindfully with specific trauma-related content and imagery may be difficult to modulate is consistent with participants' reports that they sometimes felt caught up in ruminations and had to remind themselves to return to the practice. These reports concur with Shapiro's theory that re-perceiving develops over time as well as the observation that mindfulness skills progress gradually and require practice (Bishop et al., 2004; Grabovac et al., 2011). It is feasible that the increases in Avoidance and Intrusion (in the case of one group) reflect that some

participants were still struggling to manage the exposure to images and non-avoidance of distress, which is encouraged in MT.

Another interpretation of the increase in Avoidance scores may be that practitioners possibly assumed that the non-evaluative attitude of equanimity toward experience equates to detachment from or indifference to experience, which may easily translate into avoidance. This likelihood is endorsed by Desbordes et al. (2015) who assert that confusion may result from different connotations and understanding of equanimity in Western and Buddhist meditation. They report that in Buddhist meditation, equanimity is associated with a sense of caring attentiveness infused with "loving-kindness" toward experience, whereas it is a commonly encountered misinterpretation in western meditation that equanimity is associated with indifference toward or suppressing of emotions. Thus, it seems that it is possible that some essential tenets may be lost in translation from the original Buddhist concepts of mindfulness and misunderstandings may easily arise. The importance of clarity and explicit meditation instruction will be discussed further in the section on recommendations.

One further perspective on the increase in post-intervention Avoidance relates to the specific features of trauma exposure in the South African context. As discussed previously, researchers have suggested that the concept of continuous traumatic stress (CTS) may be more appropriate than PTSD in contexts of persistent and on-going threat and trauma such as that faced by many South Africans (Eagle & Kaminer, 2013). In CTS related contexts Somer and Ataria (2015) argue that increased avoidance may be an adaptive response as opposed to being viewed as necessarily maladaptive. In contexts of ongoing threat, avoidance symptoms are seen as being linked with the realistic anticipation of impending future threats and the need to manage associated anxiety in context. Accordingly, when viewed through the lens of CTS, the fact that avoidance was more intractable to change through MT may be an indicator that trauma counsellors appreciated the need to distance themselves from trauma-related stimuli in a context in which they were very much

aware of high poly-victimization and recurrent exposure. Again, this hypothesis would have to be more systematically studied to make any conclusive finding but suggests the need for MT to be delivered in a contextually sensitive manner.

Overall, the findings of the present study tend to substantiate various proposals on mechanisms of mindfulness, as discussed in the literature review. In this study, it appeared that MT was particularly effective in reducing Hyperarousal through greater equanimity, was effective in assisting shifts from over-identification and associated empathy to greater compassion, and was able to assist with negative trauma-related schemas through the cultivation of "heartfulness", amongst other aspects of MT training.

Research Question Five

This question investigated the participants' reported experience of the MT intervention in order to offer a more nuanced "first-person" perspective on how the MT course appeared to have been received. Based on participant feedback, there was an indication that MT seemed to have a holistic impact on trauma counsellors, shaping aspects of functioning in several key domains: physical, mental, emotional, inter-personal, trans-personal and spiritual, in both professional and personal contexts. These findings are consistent with findings in related qualitative studies (Christopher et al., 2006; Newsome et al., 2006; Schure et al., 2008). As one participant reported in her final feedback form:

"*I feel like I've been on a long journey of understanding myself and my world better, the mindfulness has helped me in every area of life, in learning to be my best self as a therapist, wife, mom. I think better and feel better and know myself more. I feel I am a better person generally.*" (C7)

Furthermore, the findings of decreased stress and anxiety, improved physical and mental well-being, improved compassion for self and others, and general improvement in professional quality of life in trauma counsellors echo those of related studies into MT impact (Boellinghaus et al., 2012; Irving et al., 2009; Neff, 2012; Shapiro et al., 2005; Shapiro et al., 2007). The study findings

appear to provide further empirical evidence for the proposal by Boellinghaus et al. (2014) that interventions like MT that facilitate compassion, may help to strengthen counsellor's relationships with clients, reduce distress linked to empathic fatigue, and burnout, and promote wellbeing.

"*I see many benefits and have a better relationship with myself and others too. Even tough family members. I'm more caring and have more compassion for them. And even hard clients, like borderlines. Mindful meditation helps you to tap into a great inner strength I think" (D2)*

Moreover, drawing from the findings of the present study, there appeared to be a reciprocal relationship between counsellors' reported sense of improved self-care and personal well-being and their reported professional development and an enhanced sense of job satisfaction. This finding of joint improvements in general well-being and professional skill tends to corroborate claims by researchers that there is a complementary relationship between mindfulness skills and psychotherapy skills (Anderson, 2005; Walsh, 2008). It would seem that MT benefits create a feedback loop whereby a sense of personal well-being generates greater compassion for self and others and increases motivation and work satisfaction, which translates into enhanced professional skill and an improved sense of personal and professional mastery and enjoyment.

The first of the major themes that emerged from the qualitative analysis, *Paradox*, referred to the challenges and enablers participants encountered in MT, the second two themes, *Therapeutic presence,* and *Mindsight*, relate to the professional and personal impact of MT, while the final theme, *Acquisition*, related to the progressive development of MT skills throughout the intervention. The theme of Paradox reflects the widely expressed view that while MT was generally experienced as positive and beneficial, it was also challenging on some levels.

"Sometimes I can feel clear-minded then find that I'm struggling with negative thoughts. I want to stay present, but it is easier to forget and run away into old patterns." (A16)

It appears that MT involves an effortful and gradual process of change as old dysfunctional patterns of avoidance of distress and self-criticism are intentionally replaced by the approaching of distress with a self-compassionate attitude. This notion is consistent with Grabovac et al. s' (2011) theory that there are "habitual reactions" of attachment and aversion that are encountered during MT, which need to be transcended and overcome in the process of developing mindfulness capabilities.

"Especially when I'm at work, I struggle to stay present with negative thoughts or upsetting personal feelings. I tend to avoid thinking of my personal stuff at work. Then it hits me hard at times when you least expect. We need space for self-care and to face stuff." (B9)

The idea that learning mindfulness practice requires both letting go and approach of what needs to be engaged, even if this seems aversive, is linked to the notion that MT helps develop an increasing capacity for non-reactivity (Equanimity) where the individual learns to override the conditioned responses of pulling away from negative experiences and moving toward non-evaluative experiences. This process of either aversion or attachment, from a Buddhist perspective, is seen as a root of suffering. In this regard, the *Paradox* theme relates to the dialectic of balancing between seemingly contradictory positions and attempting to move away from detachment or over-identification. For example, in the case of the sub-theme of self-compassion versus self-criticism, the individual acknowledges both tendencies within her/self and is then in a stronger position to choose

"*I can become self-critical without even realizing, like it's my factory setting, being hard on myself… good to know there's a choice here and I can learn to be kinder."*(B3)

From a more pragmatic perspective, the *Paradox* theme highlights the logistical and practical challenges that were encountered during the intervention. For example, many participants reported being torn between work and home demands and commitment to attending the course and complying with home-work requirements. Others reported on the struggle with time

limitations, wanting to spend time for meditation and self-care but also knowing that there were many other demands to be met.

"I know I should meditate more and want to as I know it would be good for me, but where's the extra time? I must make an effort because it is good when I do actually do it." (A8)

Other MT studies have reported similar challenges for participants who feel overwhelmed by work and life demands, while simultaneously acknowledging that meditation may help them manage these demands better (Martinez et al. 2015; Tollstedt, 2017).

The related themes of *Therapeutic presence* (improvement in therapy and relationship skills and work resilience) and *Mindsight* (increased awareness, regulation and a sense of embodiment) reflect on the professional and personal outcomes associated with MT. The evidence from the analysis of participant self-reports is consistent with reports of improvements in health care professionals documented in related studies, as discussed below.

The reports of noticeable improvements in professional skills associated with MT resonate with the findings of Buser et al. (2012), who concluded that MT significantly improves counselling skills in both brief and extended MT programmes. Participants' reports in this study of an increased sense of competence and resilience in their workspace, greater therapeutic presence, and enhanced empathic capacity, align with reports by Greason & Cashwell, (2009) that MT improves counsellor's self-efficacy.

"*It is helping me feel more confident about myself and work and managing my case-loads and more excited about my chosen career." (B5)*

This reported sense of improved therapeutic capability was not entirely expected but appeared to be associated with the range of gains participants described as associated with taking part in the MT programme.

Another significant finding derived from the thematic analysis was the positive influence of MT in improving *Therapeutic presence*. This outcome validates the assertion by Geller & Greenberg (2012) that mindfulness enables a process whereby the counsellor becomes more open, accepting and attuned to their own responsive emotions, professional wisdom, and intuition, and develops the capacity to observe and experience while being open, accepting, and present with the client without becoming overwhelmed. Thus, the counsellor can be fully present in the moment on multiple levels. Furthermore, the findings resonate with Greason & Cashwell's (2009) assertion that mindfulness is associated with improved multidimensional, cognitive, and affective empathic responses to the client, as well as the development of strategic non-judgmental attention control which is essential to the therapy process.

"We should have had this course in masters training. It helps you be a better therapist overall in skills and confidence when you are mindful with yourself and clients, I find." (D7)

The implications of the impact of MT on cultivating therapeutic presence, while simultaneously reducing negative STI, as evidenced in this study, may be further appreciated in the context of related research. Geller & Porges (2014) observed how improved therapeutic presence, as a pre-condition to a positive therapeutic alliance, contributes to effective therapy outcomes. In a randomized, double-blind, control study Grepmair et al. (2007) similarly established that MT for the psychologist was associated with better clinical outcomes for patients. Similarly, Pereira et al. (2016) replicated these findings and concluded that the clients of counsellors with higher trait mindfulness scores showed better therapeutic gains relative to the clients of counsellors with lower levels of trait mindfulness. In addition, it has been reported that there is a strong association between mindfulness and the process skills essential for psychotherapy (Aggs & Bamblin, 2010). While these conclusions have not been empirically validated within the scope of this study, there were indications from the sample of their sense of how clients might be experiencing them differently:

"I think my clients feel the changes in me. Especially the hard-core ones. Where I work some have to come to group session and they resent it and act out. I think they feel my self-confidence levels grow as a young therapist and the males [patients] *respect me more now." (B6)*

Based on the findings of this study and linking with some of the evidence just presented, it is not unreasonable to infer that the positive impact of MT on reducing trauma impacts and work-related stress together with participants' reports of enhanced therapeutic skills, greater awareness, and improved self-regulation, may produce benefits that translate into improved client experiences.

Strengths and Limitations

This study produced significant results supporting all but one of the hypotheses tested, yet the evidence needs to be examined in relation to its strengths and limitations. Based on this critical appraisal, recommendations for further research are also presented.

There are limitations to the generalisability of the evidence meaning that some of the findings need to be interpreted cautiously. The first limitation is linked to convenience sampling, which was employed as the most logistically feasible method for the execution of this study. Specifically, the research employed a non-probability sampling method, generating a non-random sample, given that the researcher was reliant on volunteer participants who were willing to commit to a fairly time-consuming process and also self-selected into the first or second training cohorts based on their availability. It cannot be claimed that the sample was represented the entire population of trauma counsellors in South Africa, nor was the sample group randomly allocated to the control and intervention conditions. Hence, conclusions about causality are less definitive in this quasi-experimental design than they would have been in an RCT. However, it is noteworthy that this was still a relatively representative sample of counsellors who engage in trauma-related work in Johannesburg, given that the participants represented a range of professional identities and a range of length of experience in the field. Generalisability of the findings is also limited by the fact that the sample comprised mostly of females. There may potentially be gender differences in response to MT

interventions, which were not possible to investigate in this instance. Nevertheless, the profile of the sample tends to reflect the pervasive gender pattern regarding who enters and works in mental health professions in South Africa and some other regions of the world.

Another limitation is associated with the self-report assessments that were utilised, which may be prone to social desirability and response biases. In this instance, it is possible that participants felt the need to be complimentary about the MT given the trainer's investment in the process and also that there were some group effects in perceiving how others received and seemed to respond to the training. However, all the quantitative assessments were filled in on an individual basis and anonymised. In addition, the cross-cultural validity and reliability of the assessment instruments (Demetriou et al., 2014) cannot be taken for granted. However, all the instruments showed reasonable to good construct validity, and none of the participants indicated that they had any difficulty in responding to questions. In order to investigate the outcome variables chosen for this study, the researcher sought validated, and widely used instruments with sound psychometric properties, and in this instance, those available proved to be self-report questionnaires. Despite the concerns raised here, it is noted that the utilising self-report questionnaires is common practice in psychological research because of advantages such as cost-effectiveness and logistical considerations and therefore, the findings are comparable with much of the related research conducted in the area of the study.

In addition to the above, the study may have been prone to experimenter bias as the researcher, who has experience as a mindfulness practitioner and trainer, conducted the study and presented the MT intervention to the participants. Again, this factor may be viewed as both a strength and a limitation. Van Aalderen et al. (2014) report that the literature repeatedly emphasises that for training to be effective, mindfulness trainers should be theoretically knowledgeable and well-practised in mindfulness so that they can embody the qualities of mindfulness themselves. In this regard, the researcher's background and experience in mindfulness helped her to fit these

criteria. At the same time, conscious or unconscious bias may have influenced the researcher, such as the experimenter-expectancy effect. In light of the above, the following factors were introduced to mitigate possible experimenter bias: academic supervision of the project by an independent professor, who, for example, co-interpreted aspects of the qualitative data and the use of quantitative assessment procedures that were less prone to experimenter bias in interpretation.

Another shortcoming of the study was the sample size. The sample size was determined by logistical and practical considerations rather than by the ideal targets for statistical power. The final sample of 58 participants was nevertheless sufficiently large to conduct meaningful statistical analyses, and in fact, was a relatively large sample relative to many of those utilised in some similar mindfulness intervention studies. Hackshaw (2008) points out that small sample studies have both strengths and limitations. Despite the disadvantage that a small sample size reduces the confidence interval, Hackshaw (2008) recommends that new hypotheses be first tested on small samples as they are more logistically feasible and consume fewer resources. Subsequently, depending on results, it is recommended that small sample studies then be followed by confirmatory studies with large samples and extensive resources in order to validate emergent results. In this instance, it was intended that the methodological rigour associated with the triangulation of data in the mixed methods research design and the sound psychometric properties of the instruments selected would provide some compensation for detractions associated with the sample size.

A further shortcoming of the study relates to the possibility of sampling bias in that the individuals who volunteered to participate in the research may have had a positive bias in their interest in mindfulness interventions. However, the active control group research design was intended to compensate in large measure for this possible bias by allowing for comparison across groups. Indeed, many of the participants indicated that they found the psycho-education component useful and engaging and the results suggest that this component of the programme led to improved scores on some of the instruments. The fact that the MT related scores significantly surpassed improvement relative to the control condition gives credibility to the overall findings.

A common criticism of empirical studies on mindfulness is that many are methodologically flawed by their lack of employment of control groups (Baer 2003). The use of a control group in MT intervention studies has been recommended repeatedly in meta-reviews on MT studies. To this end, the control group element of the design was included to enable conclusions to be explicitly drawn about MT impact on self-care, while controlling for extraneous or co-occurring conditions, such as group support, guided facilitation of processing of work-related stressors, and psychoeducation, which may have been responsible for changes in scores.

Furthermore, many of the existing studies on trauma counsellors investigating the impact of MT and various outcome variables have been either correlation-based or purely qualitative studies. This study employed more advanced statistical analyses to contribute to the evidence base revealing a significant causal relationship between MT and decreased negative trauma impact scores. Additionally, the research design of the present study responds to arguments made by researchers such as Christopher & Maris (2010), that the evidence base of qualitative studies on the impact of MT on counsellors would be enhanced by experimental research that investigates the magnitude and range of the MT related changes.

It is acknowledged that exploration of the mechanisms of the MT intervention that appeared to be most helpful for secondary or vicarious traumatization could only be drawn by inference from the comparative statistical analysis across instruments and the qualitative assessment. This study did not utilise neuroimaging techniques, for example, which would have been a valuable method of investigating the impact of MT on brain structure and function. In this regard, reference was made to the emerging body of neurophysiological research in order to compare inferred mechanisms of action. However, it must be acknowledged that linkages between the change scores on self-report instruments used in this study and research using neuroimaging remains speculative.

The scope and design of this project may be considered a strength in that the study expanded evidence in the field of MT and trauma by encompassing both the positive trauma impact of CS and various negative trauma impacts, thereby offering insight into the variable influence of MT

on negative and positive secondary trauma effects. This study was designed to produce rich data on aspects of the impact of mindfulness on secondary trauma impacts as operationalized through a range of psychological constructs drawn from the literature. Furthermore, the study produced evidence of the magnitude and range of impact, complemented by experiential reports on how MT was perceived to have had an impact. Thus, this study provided evidence of personal and professional improvement from a single intervention, which was shown to have had a multi-dimensional impact on various problems that negatively impact on the well-being of trauma counsellors.

Furthermore, an unexpected contribution made by this study is the finding that in addition to providing an effective option for self-care for trauma counsellors by decreasing negative trauma impacts and potentially improving CS, MT was reported to have had a considerable impact on improving counsellors' self-efficacy and promoting professional skills development in the therapeutic context.

Finally, within the resource-constrained context of mental health in South Africa, the importance of evidence-based practice based on solid research and clinical expertise, which is appropriate for the specific context, becomes increasingly important. Pillay and Eagle (2019) presented a compelling conceptual argument for the use of MT for treating traumatic stress in contexts with elevated levels of violence and resource constraints such as South Africa. This study, following from that contention, provides empirical evidence for the employment of MT as an effective self-care strategy for South African trauma counsellors. It may also be possible to adapt and MT interventions to suit circumstances in which there are resource limitations as this research study indicates that a relatively short MT programme appears to have considerable benefits (Pillay & Eagle, 2019).

Recommendations

Based on the limitations outlined above, recommendations for further research and for application of MT to groups such as those targeted in this research may be made. The first recommended step would be to re-test the hypotheses of this study on a larger sample of trauma counsellors, with a full RCT design. While this may involve considerable time and financial resources, it would increase the generalisability of the findings, improve statistical power, and provide a more precise evaluation of the MT intervention. Furthermore, it would be useful to control for possible gender differences and possible researcher bias by using groups with identical numbers of females and males and using trainers to deliver the programme who are independent of the research process.

It is recommended that the MT intervention be tested on trauma counsellors and results compared with a wait-list control group rather than an active control group. It was evident in the results obtained from this study that the PE control condition had an impact, specifically with regards to increasing levels of CS. A wait-list control condition may provide a more accurate comparison condition for future research.

Furthermore, the assessment techniques could be expanded beyond the predominantly self-report measures to include other possible behavioural measures and triangulation of various assessment techniques to determine intervention outcome scores. There has been recent emerging research showing promising psychometric validity for alternatives such as behavioural measures of mindfulness (Hadash and Berstein, 2019) and psychophysiological assessments (Bostanov et al., 2018). It may also be useful to conduct follow-up assessments over a more extended period and to evaluate outcomes in relation to practice logs provided by participants. Additionally, it may be worthwhile to investigate how daily MT practice time generally impacts on changes in outcome variables, as well as to compare how formal practice time versus informal practice may contribute to MT impact. This recommendation is drawn from the reports of numerous participants who had cited time constraints as being a challenge to their MT practice.

Concerning training implementation recommendations, the following are proposed. Initially, concerning training instruction, the standard generic instruction for MT practice is that participants are taught that when learning to focus and sustain attention, it may be expected that the mind will wander, and they are requested to return to the object of attention with an attitude of self-kindness. It is suggested that participants also be made explicitly aware that distress may be expected and that they are invited to expect and tolerate distress rather than avoid it. Thus, distress and the modulation of distress may come to be viewed as a normalised aspect of MT and this may facilitate rather than hinder training. A further suggestion for facilitating training that emerged from this study is that the trainer may need to be alert to possible misunderstandings that may arise around notions of equanimity and detachment and to clarify to participants that detachment is not the desired outcome of MT.

Another recommendation relates to sensitivity to contextual issues. While there is some evidence indicating that MT may be used across different populations and socioeconomic groups (Dutton et al., 2013), as with the employment of all psychological interventions, it is recommended that cultural and contextual matters be carefully considered in the implementation of MT.

Lastly, it is recommended that MT be introduced and offered as a self-care strategy to counsellors at an early stage in their training and employment. Many participants reported that the risk of secondary traumatic effects related to their counselling work in the trauma field and ameliorative interventions had received minimal or no attention during their training. As was evident, the impact of MT in this sample was positive, and no serious risks or adverse outcomes were apparent. However, even with a relatively low-risk population, such as trained trauma counsellors, it recommended MT interventions be conducted with the appropriate clinical caution as with other interventions for trauma and secondary trauma (Briere & Scott 2014). Generally, as this study has demonstrated, MT has a positive impact not just on the personal and professional well-being of the counsellor but may also improve counsellor skills and therapeutic presence and should perhaps be rolled out more broadly as part of trauma counsellor training.

Chapter Six: Conclusion

The intention of the study was to examine the impact of mindfulness training (MT) as a self-care strategy on aspects of the quality of life for South African trauma counsellors in relation to both positive and negative secondary trauma impacts. Various contextual factors were identified as predisposing trauma counsellors in South Africa to developing negative STI, including dealing with poly-victimization and exposure to ongoing threats. While a variety of STI was identified in the literature as having the potential to affect trauma counsellors, there seemed to be a lack of research into empirically validated interventions to counter negative STI and enhance the potential of positive STI.

MT was selected for investigation as an STI intervention based on the expanding body of research that has emerged over the last forty years and has demonstrated the efficacy of MT interventions for a range of clinical and non-clinical conditions, both physical and psychological. While there have been valid criticisms regarding MT research regarding the lack of methodological rigour and concern about exaggerated claims of impact in the popular press, there appeared to be sufficient credible evidence to justify an investigation of this intervention for addressing STI in trauma counsellors.

The conceptual basis of this study was linked to emerging research and theorising on MT, which substantiates its potential to impact positively on the first-hand experience of trauma. Based on this evidence and literature confirming that the indirect exposure associated with STI tends to produce parallel effects to those produced by direct trauma exposure, it was inferred that MT might be an appropriate intervention for ameliorating STI in counsellors.

MT was shown to be effective in reducing negative trauma impacts, and in increasing trait mindfulness and these outcomes were largely sustained over three months post-intervention. However, while there was a distinct increasing trend in CS associated with MT, this was not a significant result and therefore, did not support the hypothesis that MT improves CS in trauma

counsellors. Generally, the MT intervention was received positively by the counsellors, and participants reported many benefits in both personal and professional spheres.

Additionally, MT was found to be associated with variable rates of change on each of the outcomes assessed, with the most significant positive impact being on PTSS Total scores, followed in descending order by, the Non-Reactivity and Awareness facets of mindfulness, STS scores, and BO scores and a relatively smaller impact on VT. The qualitative Thematic analysis identified four major themes drawing the conclusion that MT, while challenging and effortful (as reflected by the theme of *Paradox or balancing of polarities*), results in both a reduction of negative trauma impacts well as improvements in both personal and professional areas of the counsellors' lives (as reflected in the themes of *Therapeutic skills and Mindsight*) and that MT skills and knowledge improve gradually over time (as reflected in the theme of *Acquisition*).

While the limitations of the study are noted, the findings have significance on several levels. The research fills a gap in the literature relating to the limited documentation of empirically based interventions for STI and shows the potential benefit of MT for addressing STI in trauma counsellors. Arguably this is especially important in South Africa and similar high-violence, low resource contexts where a limited number of counsellors are available to serve a substantial number of traumatized people and maintaining the well-being of over-burdened health care providers is crucial. The finding that the impact of MT was mostly sustainable over the three-month post-intervention period also suggests the intervention may offer both reparative and resilience-building benefits which is advantageous to trauma counsellors in these kinds of contexts.

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Appendices

Appendix A: The case for mindfulness interventions for traumatic stress in high violence, low resource settings.

Pillay, K., & Eagle, G. (2019). The case for mindfulness interventions for traumatic stress in high violence, low resource settings. *Current Psychology*, 1-15.

Abstract

Academic research on mindfulness has grown exponentially over the last few decades. Despite initial skepticism from some Western sources, the evidence base suggests that mindfulness training (MT) may impact positively on physical and psychological health in both clinical and non-clinical contexts. This paper explores the contention that MT may offer an evidenced-based, comprehensive, contextually relevant, and holistic approach to addressing the individually intensive and socially extensive impact of psychological trauma in South Africa and other similar settings characterized by high levels of violence and limited professional intervention resources. Three inter-related issues are explored in support of this proposal: firstly, evidence that mechanisms of trauma impact and mindfulness benefit are closely inter-related; secondly, the fact that mindfulness can produce both immediate therapeutic and long term prophylactic gain and may therefore be of benefit not only for past traumatization but also in contexts of continuous traumatic stress; and thirdly, the contention that MT may be an appropriate community based intervention in mental health resource constrained contexts.

Keywords: Mindfulness, Traumatic Stress, Continuous Traumatic Stress, mindfulness training, community-based intervention

For many decades Eastern meditation practices have been stigmatized, regarded with suspicion and associated with fraudulent mysticism within Western scientific practice (Kabat-Zinn, 1990). Westernized psychology has historically eschewed Eastern meditation practices, however the status of Buddhist meditation practice in the form of MT has shifted radically within the last two decades. Secularized meditation training such as mindfulness-based stress reduction (MBSR) is currently being embraced for self-development and healing. Additionally, Mindfulness Training (MT) practices have also been incorporated into broader clinical treatment approaches such as, mindfulness-based cognitive therapy (MBCT), acceptance and commitment therapy (ACT), and Dialectical Behavior Therapy (DBT) (Didonna, 2009). Internationally, MT practices have also found their way into mainstream culture with meditation practices being introduced into non-clinical settings such as schools, police services, government departments, prisons and the military (Cullen, 2011). Within this paper we seek to extend an appreciation of the potential applicability of MT for mental health difficulties with a particular focus on traumatic stress. Although there is a burgeoning body of research seeking to demonstrate the merits of mindfulness for a variety of traumatized populations, we make a conceptual argument that MT

may be particularly useful in contexts of high and ongoing violence exposure and in contexts within which there are limited mental health intervention resources. In this instance we take South Africa as our focus but would suggest that the arguments put forward have relevance for many countries in which populations are consistently exposed to high levels of violence and in which intervention resources to deal with traumatization are severely limited. For example, this might apply to the large numbers of displaced people living in refugee camps around the world or to those living in countries affected by civil wars or conflicts.

What is Encapsulated by the Term Mindfulness?

Mindfulness, a form of insight-oriented meditation practice, was extracted from its Buddhist roots, secularized for Western consumption, and transplanted into the field of psychology in the late 1970s. Meditation is an umbrella term for various forms of healing and self-growth practices in Buddhism and in Western literature, the term "mindfulness" is often used interchangeable with "meditation". The literature generally refers to two basic types of meditation practice, concentrative meditation where attention is held on a single object, and insight/mindfulness meditation where attention is expanded to awareness of various objects within and external to the meditator (Smith, 1975). Mindfulness is a complex concept to distinguish and define and it remains challenging to comprehensively convey in words what is an essentially phenomenological experience. Kabat-Zinn's (1994, p.145) frequently quoted definition of mindfulness captures the essential distinguishing dimensions of this construct as a specific form of meditation: ''the awareness that emerges through paying attention, on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment by moment''. Training designed to cultivate mindfulness, or MT, involves intentionally focusing attention on objects such as breath, bodily sensations, sensory perceptions, cognitions, and emotions, while maintaining a curious, accepting and non-judgmental attitude (Bishop et al, 2004; Shapiro, Carlson, Astin & Freedman, 2006). Practice may be formal where time if set aside specifically to develop the skill, or informal, where MT is incorporated into aspects of everyday life such as walking and washing dishes. In Western psychology "mindfulness" has been used variously to describe a psychological state of awareness, a practice that promotes this awareness, a mode of processing information, and a personality trait (Davis & Hayes, 2011).

A useful way to distinguish MT from other forms of meditation training that may involve concentrated focus on a single object is provided by Olendzki's (2009), who likens MT to a floodlight as opposed to a spotlight. MT involves initially attending intentionally to a chosen object and sustaining attention over time. However, subsequently MT encourages practitioners to open attention to a broader range of phenomena such as inner body sensations like the heartbeat, as well as to sensations arising from outside the body (smell, sound etc.). "Like a floodlight rather than a spotlight, mindfulness illuminates a more fluid phenomenological field of ever-changing experience rather than isolating a particular object for intensive scrutiny" (Olendzki, 2009, p.42).

Langer and Moldoveanu's (2000) describe being mindful as being alert to the present moment, to distinctions, context, a multiplicity of perspectives and novelty, highlighting the expansion of consciousness that is entailed in MT. Focused observation of the contents of the mind is believed to help develop the set of skills that Siegal (2010) calls "Mindsight", the term he uses to refer to the learned ability to "see" the mind, and over time to

develop the ability to regulate the flow of the contents of the mind. The term "Mindsight" succinctly captures the essence of the skill set that MT is believed to advance with repeated practice. MT is seen to result in the awareness and acceptance of what is currently being experienced, the promotion of self-regulation, mental flexibility, integrated mental functioning, and compassion for self and others. The development of these skills may be salient in recovery from trauma as well as in the development of resilience in relation to exposure to current and future traumatic stressors.

One reason for the explosion of interest in mindfulness in clinical and research contexts is the large and growing evidence base for the effectiveness of MT, especially from neurobiological and cognitive-behavioral perspectives. Walsh and Shapiro (2006) report that meditation (and by implication also mindfulness practices) has become one of the most widely studied psychotherapeutic interventions. The growing popularity of mindfulness is linked to the fact that science is catching up with practice as Eastern contemplative practices are being validated by scientific research in a range of domains, in part because of improved neuropsychological research instrumentation (Siegal, 2009). A strong evidence base shows that MT is an effective treatment for various psychological problems, including anxiety, depression, and stress (Khoury, et al., 2013). The accumulating research validation on the efficacy of MT suggests that it may be a valuable intervention to consider integrating into psychological trauma treatment approaches as has already been suggested.

Mindfulness in South Africa

Mindfulness does not appear to have had a notable impact on South African psychology until recently but is gaining increasing popularity in this context as evidenced, for example, in the increasing numbers of courses being offered in this modality. In 2014 one of South Africa's leading private medical aid service providers, Discovery Health, invited Harvard University academic, Dr. Ellen Langer, to present a keynote lecture for their annual conference; promoting her talk with the headline "Mind over matter – how mindfulness can fix, virtually, everything". Discovery Health's invitation to Langer is indicative of the fact that MT is becoming increasingly accepted within the professional health community. However, the promotional headline also highlights a shadow aspect of mindfulness where extravagant claims about impact are advanced within popular culture and the press. Together with the secularization of mindfulness (separating it from its Buddhist philosophical roots), unsubstantiated claims about efficacy and growing commercialization have contributed to criticism of deployment of mindfulness practices in "Western contexts", or skepticism about what has been termed the "McMindfulness" movement (Purser & Loy, 2013). Additional criticisms on the current state of mindfulness practice have been raised in the literature, including concerns about ambiguous definitions of mindfulness and the employment of dubious methodologies in research claiming to verify mindfulness interventions (Van Dam et al., 2018). While a detailed examination of the critiques of mindfulness is tangential to the focus of this specific paper, it is acknowledged that any promotion of mindfulness interventions needs to remain circumspect regarding the kinds of claims that are put forward and wary of the potential for alignment with exploitative practices.

There is a substantial and growing international body of research that demonstrates the effectiveness of MT in improving psychological and physical health. Based on this available research, as well as the confluence between cognitive-behavioral and neuropsychological theories on the mechanisms of trauma impact and how

mindfulness is understood to work to produce benefit, it may be argued that mindfulness is a potentially useful intervention to address trauma exposure in South Africa (SA) and related Low to Middle Income countries (LMIC's), both by reducing negative trauma impacts and by building psychological resilience. Within this article we aim to address three interlinked issues related to the potential deployment of mindfulness in such contexts. Firstly, we wish to present evidence suggesting that MT may be a particularly helpful intervention in addressing the psychological sequelae of trauma exposure. Secondly, we will argue that beyond its efficacy in addressing traumatic stress conditions such as posttraumatic stress disorder (PTSD), mindfulness may be particularly beneficial as an intervention in high violence contexts in which there is poly-victimization and trauma exposure is ongoing. Thirdly, we hope to demonstrate that MT may be useful in low resource contexts in which relatively brief-term, holistic mental health interventions, potentially deliverable by auxiliary mental health workers, are desirable. In keeping with a set of community intervention principles outlined by Kazdin (2014) we argue that it may be helpful to integrate MT as a form of community responsive intervention in relation to both single event and ongoing trauma exposure, thus perhaps reclaiming some of the egalitarian and compassion enhancing aspects of mindfulness as a way of being and set of related practices.

Trauma in South Africa

High rates of criminal, intimate partner and sexual violence, and of motor vehicle accidents (amongst other features), in conjunction with a noteworthy history of political violence, means that SA represents a context that could be viewed as "natural laboratory in which to study the impact of traumatic events and their consequences" (Kaminer & Eagle, 2010, p.4). Exposure to psychological trauma, either first-hand or vicariously, appears to be the norm rather than the exception for the average South African. Statistics from a 2007 study on a nationally representative sample of adult South Africans highlight that almost 75% had experienced at least one traumatic event in their lifetime and that many individuals had experienced multiple traumatic events (Williams et al., 2007). While over 50% of responders had experienced more than one traumatic event, some individuals had experienced as many as six or seven such events, with those with higher levels of exposure in the form of poly-victimization demonstrating greater vulnerability to developing mental health conditions (Williams et al., 2007). Researchers writing on the current state of traumatic stress in SA cite concerns about collective and pervasive forms of violence in addition to single incident, individually perpetrated crime, and argue that the formulation of traumatic stress exposure as *continuous* as opposed to *post* may be more apt for both indirect and direct victims in pervasively conflictual contexts (Eagle & Kaminer, 2013; Stevens, Eagle, Kaminer & Higson-Smith, 2013). While people living in high violence contexts on an ongoing basis may well present with some features of PTSD it is often the case that their preoccupation is with current and future threats as opposed to with events that have already taken place.

The construct of Continuous Traumatic Stress (CTS) (Eagle & Kaminer, 2013), similar to that of Ongoing Traumatic Stress Reaction (OTSR) (Nuttman-Shwartz, & Shoval-Zuckerman, 2016), has been proposed as a formulation designed to capture the psychological and contextual features associated with living under conditions requiring realistic appreciation of current and future life threat to self and members of one's immediate community. As proposed by Eagle and Kaminer (2013) one of the cardinal features of CTS is that not only is the individual faced with ongoing threat of traumatic magnitude, but that such circumstances are inescapable. This is usually because

people are too impoverished to relocate or because social and political circumstances are such that mobility is severely constrained. In situations of war or civil conflicts, such as in Israel and Palestine with air missile exchanges, or Syria in which drone strikes are a constant source of danger, or in northern parts of Nigeria in which Boko Haram insurgents can destroy entire villages, citizens may have to accustom themselves to living with daily risk that is inescapable. In SA it is argued that many political refugees are exposed to similar risks of danger, as are people living in very high violence, crime-ridden communities in which antisocial forces such as gangs operate almost unchecked (Eagle & Kaminer, 2013). A further feature of CTS contexts is the absence of social protections, with government forces often incapacitated or impotent to protect citizens from threat, or in some instances complicit or implicated in violence perpetration (Eagle & Kaminer, 2013). While research into CTS and OTSR is ongoing, there is some evidence to suggest that people living under such conditions may present with particular response patterns that are not entirely consistent with PTSD. For example, being hyper alert appears to be common, and given that this characteristic may be functional to a degree, it is difficult to determine at which point this presentation should be considered symptomatic. It is also evident that avoidant symptoms appear to take prominence over intrusion related symptoms, given the preoccupation with potential threats rather than only or primarily past events (Somer & Ataria, 2015). In addition, somatization and depressed mood also appear to be present as a consequence of the chronicity of exposure (Somer & Ataria, 2015). It is thus argued that intervention approaches may need to be modified in such contexts. While PTSD is recognized to be a clearly pathological or syndromatic response to extreme threat, there is debate as to whether CTS and OSTR can be considered pathological or whether they may rather describe a set or responses that are context-dependent, even if they are highly distressing to individuals (Eagle & Kaminer, 2013). This tends to be borne out by research suggesting that mental health difficulties associated with living with extreme environmental threats may remit when people are able to relocate from such environments (Diamond et al., 2010). Nevertheless, it is important to consider mechanisms for ameliorating psychological distress associated with living in such dangerous conditions and the possible consequences this has for both compromised mental and physical health. The literature on trauma in SA suggests that traumatic stress related conditions emerge as a broad-based societal problem with corresponding inter-personal, economic and political impacts. It therefore appears that developing interventions that are supported by research, flexible in implementation and appropriate for contexts of single, multiple and continuous traumatization, would be very beneficial in this and related global contexts. We suggest that MT is a particularly appropriate form of intervention in such high violence, low mental health resource contexts.

Theorization of Traumatic Stress Impact and Mechanisms of Mindfulness Intervention

Traumatic stress may be viewed as being situated on a continuum of severity with the most extreme form being the clinically diagnosable condition of Posttraumatic Stress Disorder (PTSD). Within the Fifth version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (American Psychiatric Association, 2013) PTSD is described as characterized by five clusters of symptoms: re-experiencing, avoidance, negative cognitions, negative mood, and arousal. While not everyone who experiences a traumatic event will go on to develop PTSD, it is clear from the DSM-5 description of symptoms and their impact that traumatic stress has a debilitating impact on an individual's well-being, and inter-personal and social functioning. As will be suggested in this

article, MT may potentially impact positively on the full spectrum of traumatic stress symptoms and psychological effects.

Neuropsychological and cognitive-behavioral theories of trauma offer theories of traumatic stress impact that are currently most strongly supported by empirical evidence (Follette, Palm & Pearson, 2006). It is noteworthy that most of the evidence base for the impact of mindfulness on various conditions also arises from the schools of neuroscience and cognitive-behavioral psychology.

Neurobiological mechanisms of traumatic stress impact and mindfulness

There is consensus in the neuropsychology literature that traumatic stress symptoms reflect a disruption in self-regulation concomitant with dysfunction in the "normal" stress survival response, whereby the brain engages and then becomes held in the mode of threat, anticipating the need for continuing self-protective responses. The stress response is regulated by the hypothalamic- pituitary-adrenal (HPA) axis and the autonomic nervous system (ANS) of the brain (Rothschild, 2000). When a threat is encountered, the amygdala sends signals to the hypothalamus to activate the sympathetic nervous system (SNS), which results in the release of epinephrine and norepinephrine by the adrenal glands in preparation for the fight, flight or freeze response (Rothschild, 2000). This SNS activation results in physical symptoms such as increased heart rate, respiration and blood pressure, dilated pupils and decrease in digestion, all of which are understood to have evolutionarily significant protective functions against threat (Scaer, 2001). When the perception of threat has passed, the hypothalamus sends signals to the pituitary gland which releases cortisol to stop the alarm reaction and the body is restored to homeostasis (Rothschild, 2000; Scaer, 2001).

In certain conditions, the brain threat detection systems may become dysfunctional. Chronic dysregulation of these systems may lead to functional impairment and neurobiological abnormalities that are reflected in the presentation of PTSD (Sherin & Nemeroff, 2011). Brain imaging studies investigating trauma related responses reveal neural circuit disruptions in brain areas responsible for mediating stress and fear responses, such as in the amygdala, hippocampus, anterior cingulate, insula, and orbitofrontal regions (Rothschild, 2000).

Impairment of neural circuitry results in the brainstem and limbic system "hijacking" the functions of the pre-frontal cortex (PFC). The over-reaction of the amygdala, known to be critical in fear conditioning and threat detection (Roberts-Wolfe, Sacchet, Hastings, Roth, & Britton, 2012) and impairment of the self-regulatory functions of the pre-frontal cortex, may be linked to the functional impairments observed in trauma responses and symptoms, such as those of avoidance, hyperarousal, intrusion, and impaired emotion modulation. Shin,

Rauch and Pitman (2006) confirmed that increases in amygdala reaction are linked to more severe PTSD symptoms while increases in prefrontal cortex response are associated with less severe PTSD presentations.

The pre-frontal cortex. more specifically the middle pre-frontal cortex, is the brain area responsible for several important executive functions such as body regulation, attuned communication, emotional modulation, response flexibility, and fear modulation (Siegal, 2010). Thus the pre-frontal cortex is responsible for modification and modulation of the survival responses generated by the amygdala. In successful recovery from trauma exposure the automatic reflexive fear reaction is interrupted by messages from the pre-frontal cortex that generate strategic responses to the situation (Dowd & Proulx, 2012).

From the linkages in research across the two fields it appears that MT may be a particularly apt intervention for traumatic stress related conditions. Broadly speaking, MT facilitates the executive functions of the the prefrontal cortex, the activation of the anterior cingulate cortex and insular cortex and the deactivation of amygdala activity (Wheeler, Arnkoff, & Glass, 2017) thus promoting self-regulation and optimal integration of mental and behavioural functioning, consequently ameliorating the kinds of symptoms generated by exposure to traumatic events (Dowd & Proulx, 2012; Siegal, 2009). A range of studies show that MT has benefits in enhancing pre-frontal cortex functioning and by implication, may alleviate symptoms associated with trauma (Roberts-Wolfe, Sacchet, Hastings, Roth & Britton, 2012). Thus, from a neuropsychology perspective, the pre-frontal cortex functions of arousal regulation and distress tolerance are central to understanding the management of and recovery from trauma.

MT is associated with neuroplastic changes in the anterior cingulate cortex, insula, temporo-parietal junction, and fronto-limbic network that work synergistically to enhance self-regulation (Holzel et al., 2011). This would suggest that individuals who evidence neural and brain function disintegration associated with trauma symptoms may benefit from the functional integrative impact of MT. This contention is supported by Follette et al (2006) who argue that individuals who have experienced traumatic events and are exhibiting posttraumatic stress disorder and/or related conditions would benefit from MT.

The research findings summarized below highlight many of the pre-frontal cortex functions that are activated during MT. Mindfulness reduces stress arousal and facilitates effective monitoring of internal states (Lutz, Stagter, Dunne, & Davidson, 2008), facilitates behavioural and emotion regulation (Heim, Shugart, Craighead & Nemeroft, 2010; Linehan 1993; Langer & & Moldoveanu, 2000), reduces anxiety (Hofmann, Sawyer, Witt, &

Oh, 2010), reduces depression (Teasdale, Williams, Segal, Ridgeway, & Lau, 2000), and reduces the tendency to ruminate on distressing thoughts and images (Lutz et al., 2008). Treadway and Lazur (2009) produced an extensive literature review citing various empirical studies that demonstrate that MT can increase positive affect and cognitive vitality and decrease stress reactivity and the tendency to ruminate. Similarly, Davis and Hayes (2011) conclude that MT elicits positive emotions, minimizes negative affect and rumination, promotes emotion regulation and response flexibility, and decreases reactivity to negative thoughts and emotions. Additionally, MT has been linked with decreased PTSD symptoms through improvements in attention and concentration; the ability to stay focused on the present with less rumination on memories of trauma; less self-judgement and greater self-compassion; as well as decreased emotional numbing, physiological arousal and anhedonia. (Frewen, Rogers, Flodrowski, & Lanius, 2015). Many of these findings may be linked neuropsychologically to the executive and self-regulatory functions of the PFC and it is evident that there is a good "match" between what trauma survivors require to overcome the neuropsychological impact of exposure and the functions that MT may facilitate in this regard.

Cognitive behavioural theories on the mechanisms of trauma impact and mindfulness interventions

Cognitive-behavioural writing on traumatic stress reinforces the links established between neuropsychological research on trauma impact and those that have established the primary mechanisms by means of which MT appears to be of benefit. Cognitive and behavioural theories have encompassed a range of models of mechanisms of traumatization (for example Brewin, Dalgleish & Joseph, 1996; Ehlers and Clark, 2000; Foa, Steketee & Rothbaum, 1989). Based on these kinds of formulations within the traumatic stress field it is accepted that Cognitive/behavioural (CB) theorists appear to have developed the most well-established evidence-based intervention approaches for the treatment of trauma (Follette et al, 2006; Kaminer & Eagle, 2017).

In summarising the common features of cognitive behavioral theories of trauma, Brewin and Holmes (2003) advise that there appears to be agreement that trauma is associated with disruptions in a wide range of psychological functioning processes including memory, attention, cognitive and affective reactions, belief systems, coping strategies, and accessing of social support. To further advance the argument that MT may be beneficial in the treatment of trauma related pathology, the section below highlights salient mechanisms of trauma impact and associated symptoms as proposed by CB theorists in conjunction with suggestions as to the

corresponding mechanisms of mindfulness that may alleviate these symptoms. In particular the core features of avoidance, intrusion and negative cognitive shifts are elaborated.

Avoidance addressed by the acceptance engendered by MT.

Avoidance, taking various forms, is generally recognised as a primary trauma symptom cluster that has the paradoxical effect of exacerbating and maintaining pathological outcomes. While the trauma victim engages in avoidance behavior in an attempt to cope with the distress of trauma memories and associations, avoidance appears to trap the individual in an iterative loop that sustains trauma symptoms. Ehlers and Clarke (2000) propose that exaggerated negative cognitive appraisals of traumatic events tend to generate situational fear as well as avoidance behavior, that in turn maintains over-generalization of anxiety. There is accumulating evidence supporting the view that elevated experiential avoidance in individuals with PTSD plays a significant role in the onset and maintenance of the disorder (Thompson, Arnkoff & Glass, 2011). A further complication associated with avoidance is that traumatized individuals tend to oscillate between obsessive pre-occupation with the traumatic event and the desire to avoid all reminders of the trauma. Follette and Vijay (2009, p. 301) identify this tendency toward polarized engagement and dis-engagement as being “the central dialectic of trauma”.

MT is seen to promote a relationship of equanimity between the individual and his/her thoughts, feeling and body sensations. The individual is encouraged to observe with compassionate curiosity all that arises in his/her internal and external environment without becoming over-identified or detached from the object of awareness and attention. This process termed “reperceiving” or “intimate detachment” (Shapiro et al., 2006) may be valuable in training the individual to find balance between the two polarized tendencies of becoming overwhelmed by or overly distant from the experience of trauma.

MT promotes the acceptance and awareness of the internal and external world as is, in contrast to many western orientated psychological theories in which the approach to suffering would generally be to facilitate change in the individual’s distressing internal and/or external situation. Siegal (2007) suggests that MT promotes an “approach” state that is designed to counteract the traumatized individual’s tendency to avoid memories, thoughts, emotions and body sensations related to stimuli, including traumatic stimuli. MT may be seen as promoting a shift in the way an individual processes mental contents rather than attempting to change these contents (Davidson, 2001). The observer and the observed become disentangled during MT and this

facilitate a particular relationship of non-judgment and non-evaluation of experience. From the perspective of MT, within its location in Buddhist philosophy, the idea of "non-attachment" means that one is encouraged to accept that environmental shifts, both internal and external, are inevitable and that clinging to what is judged as pleasant, or rejecting what is unpleasant, will result in suffering. In MT the individual is invited to experience life with curiosity and to cultivate an attitude of acceptance that allows for the possibility that whatever arises (internally or externally) can be experienced with equanimity.

Re-experiencing, intrusion, negative cognitions/emotions and memory disturbances addressed by distress tolerance.

A further common feature of traumatic stress is intrusion related symptoms such as flashbacks and nightmares. Intrusions have been linked to memory distortions, another common feature of traumatic stress. Memory disturbances are a central feature of the dual representation theory (Brewin, Dalgleish & Joseph, 1996) in which it is contended that aspects of the traumatic experience are stored in two different memory systems. The verbally accessible memory (VAM) system contains the more consciously-processed, temporally-located memories that are encoded in the hippocampus, while the sensorially accessible memory (SAM) stores the less consciously processed, perceptually-based, and sensory memories that have not been encoded in the hippocampus. Memories that are not consciously processed are more likely to result in intrusions such as anxiety provoking, invasive images and emotions (Brewin et al, 1996).

The processing of the trauma, through the integration of the contents of these two memory systems, is seen to be dependent on reducing distressing arousal and affect by means of exposure-oriented treatments, aiming to reduce associated anxiety in order to make it possible to assimilate memories of the trauma. MT may be a useful adjunct to exposure therapy for PTSD in that it allows for the modulation of arousal and emotion while maintaining contact with disturbing images and thoughts (Follette & Ajay, 2009; Rothschild, 2000). In addition, there have been recent trends in trauma therapy that highlight the importance of staying fully aware of, rather than avoiding, body sensations related to traumatization (Goodman & Calderon, 2012), a process that occupies a significant place in MT.

Central to the elimination of intrusive trauma symptoms and the stabilizing of memory systems is the individual's ability to tolerate the intense distress associated with trauma related intrusions. MT focuses on distress tolerance and reducing emotional reactivity to inner and outer generated experiences, enabling

individuals to be guided toward approaching and assimilating intrusive material, and the activation of the PFC during mindfulness practice allows for the diminishing of fear responses. MT is also seen to be effective in counter-acting rumination, anxiety, worry, fear and anger, all of which are associated with tendencies to either avoid or over-engage with distressing thoughts and emotions (Keng, Smoski, & Robins, 2011). The individual is then able to respond with greater equanimity to whatever is being experienced, whether pleasant or distressing, without being constrained by automatic and conditioned reflex responses.

Negative cognitive schemas addressed by phenomenological perspective.

Exposure to traumatic events may result in the transformation of the individual's stabilizing cognitive schemas, as reflected in the theory of "shattered assumptions" (Janoff-Bulman, 1989) and the problematic entertainment of overly negative attributions (Ehlers & Clark, 2000). It is theorized that core belief systems about the world, the self and others, that have served to provide a foundational sense of predictability, trust and meaning, may be severely challenged by the experience of trauma. With regards to the changes in cognitive schema that are proposed to occur consequent upon trauma exposure, it may be argued that the particular mode of cognitive processing engendered by MT may serve to counteract the consolidation of negative cognitive schemas. MT facilitates a "bottom-up" rather than a "top-down" mode of processing information. This is similar to what the philosopher Husserl called the second mode of processing or the phenomenological attitude, in which attention is turned toward reality simply as it appears as a flow of phenomena without cognitive mediation (Brown & Cordon, 2009). Shapiro et al (2006) extend this description of mindfulness arguing that mindfulness allows the individual to suspend interpretation and analysis of experience and to attend to experience as it arises in the present moment, adopting a phenomenological perspective towards everyday life. It may be extrapolated from this description that MT has the potential to facilitate present moment experience, unprejudiced by the impact of negative cognitive schema.

Ehlers & Clark (2000) propose that a characteristic feature of traumatic stress is what they term "mental defeat", a phenomenon that appears to be related to the destruction of functional and healthy schemas about the self. This concept refers to a profound sense of helplessness and disempowerment where the traumatized individual may perceive him/herself as having become unworthy, lacking in agency, and defeated. A related point is that trauma is often associated with self-blame, shame and trauma-related guilt (Bockers, Roepeke,

Renneberg & Knaevelsrud, 2016), which in turn can lead to states of paralysis and powerlessness. Again, MT may prove beneficial in counteracting tendencies towards mental defeat, self-recrimination and/or survivor guilt in promoting greater acceptance of reality as it is, or has been experienced, and in encouraging self and other acceptance.

According to Shapiro et al (2006) intention, attention, and attitude, are the three core mechanisms of MT that are simultaneously activated during "re-perceiving". Bishop et al (2004, p.232) describe the attitudinal component as "adopting a particular orientation toward one's experience that is characterized by curiosity, openness, and acceptance". Siegal (2007) extends this description to include compassion, openness and acceptance. In this light, MT may provide a potent response to the "mental defeat" of the traumatized individual and may assist in re-constructing belief systems that serve to create or restore functional meaning systems in relation to the self, the world and others.

Traditionally, MT practices encourage the development of an attitude of compassion as exemplified in the Buddhist "Metta or loving-kindness meditation" which was incorporated into the MBSR program and into most MT programs. Compassion for sentient and non-sentient beings and self-compassion is a key focus in MT and this practice may be useful in facilitating the re-entertainment of the idea that the world can be a benevolent place in which (at least some) others and the self may be trusted. The self-compassion, acceptance, and emotional flexibility that is engendered in MT may counteract trauma symptoms related to negative, hostile and defeatist attributions and may assist individuals to survive with greater equanimity, freeing them to be able to devote psychic energy to other tasks or activities.

In a review of theoretical and empirical literature on the impact of MT on trauma symptoms, four main categories of influence emerge as pertinent: present moment awareness and a non-judgmental acceptance of distressing internal states and trauma-related triggers; decreased arousal and stress reactivity; attention control involving selective switching or sustaining of attention to stimuli on an adaptive basis; and finally, effective engagement in psychotherapy treatment by fostering increased openness and awareness of thoughts and feelings (Vujanovic et al., 2011). This summary appears to resonate well with the dimensions of impact elaborated with regards to the range of symptom clusters discussed above.

Research Evidence Related to Mindfulness Interventions and Traumatic Stress

Hölzel, et al. (2011) propose a meta-analytic model on the benefits of mindfulness supported by an extensive review of empirical research drawn from both cognitive and neuroscience studies. They contend that the cognitive mechanisms of mindfulness comprise four core components: attention regulation, body awareness, emotion regulation (including reappraisal and exposure, extinction and reconsolidation), and change in perspective on the self. As discussed thus far it would seem that all of these dimensions of mindfulness contribute meaningfully to understanding how MT may address trauma symptoms and build resilience.

While South African research on mindfulness is very limited to date, Ives-Deliperi (2008) conducted a series of four studies to investigate the cognitive and neural mechanisms associated with the adoption of mindfulness practices amongst members of the South African population. In a matched-control, clinical intervention study comprising 206 volunteer participants she concluded that the evidence supports MT as an intervention to improve affective and cognitive well-being and to reduce vulnerability to stress. Of relevance to the current discussion is Ives-Deliperi's (2008) identification of ten, what might be termed "sub-mechanisms" of mindfulness: self-regulation, exposure, cognitive flexibility, acceptance, dis-identification, awareness/insight, reattribution, attention, meta-cognition and relaxation. International studies have identified similar sub-mechanisms including: attention regulation (Brown & Ryan, 2003, Treadway & Lazur, 2009); decreased habituation (Jha, Krompinger, & Baime, 2007); meta-cognitive awareness (Kocovski, Segal, & Battista, 2009); decreased rumination (Jain et al, 2007); increased acceptance (Treadway & Lazur, 2009); and decreased experiential avoidance (Kocovski, et al, 2009). Evidently, there are a wide range of cognitive mechanisms implicated in MT many of which appear to be related to the executive functions of the pre-frontal cortex brain region and many of which appear to be potentially beneficial in the amelioration of traumatic stress related conditions.

Empirical support for MT as an effective trauma intervention

In addition to the theoretical and research evidence that MT produces various psychological benefits, there is a growing research base on the impact of MT specifically on trauma related conditions. The research on MT impact validates MT as an effective treatment for trauma on populations as varied as women who have experienced intimate partner violence or interpersonal trauma (Dutton, Bermudez, Mata, Majid, & Myers, 2013; Smith 2009), patients manging cancer diagnosis related trauma (Bränström, Kvillemo, Brandberg &

Moskowitz, 2010), adult survivors of childhood sexual abuse and cumulative trauma (Bolduc, Bigras, Daspe, Hébert, & Godbout, 2018; Kimbrough, Magyari, Langenber, Chesney, & Berman, 2009), firefighters (Smith, et al., 2011) and war veterans (Müller-Engelmann, Wünsch, Volk, & Steil, 2017; Schure, Simpson, Martinez, Sayre & Kearney, 2018; Stephenson, Simpson, Martinez, & Kearney, 2017). Some of these research findings are elaborated further.

MT was found to be effective in reducing PTSD symptoms amongst war veterans, teaching them to recognize trauma triggers and distressing emotional states and to cultivate the psychological flexibility required to engage effectively in treatment leading to decreases in hyper-arousal and stress reactivity (Vujanovic et al, 2011). Kearney et al (2013) found sustained positive impact of MBSR four months after intervention in a randomised control study conducted on 47 veterans. A pilot study by Goldsmith et al (2014) found that an MBSR intervention with nine adults with PTSD symptoms and depression substantially reduced shame-based trauma appraisals. Another study, conducted on 27 adult survivors of childhood sexual abuse, found sustained improvements in trauma related symptoms up to 24 weeks after participation in MT, with avoidance and numbing related PTSD symptoms particularly being greatly reduced. (Kimbrough , Magyari, Langenberg, Chesney , & Berman, 2010). Although limited in generalizability by small sample sizes, findings from these studies conducted on a diverse range of traumatized populations support the proposition that MT can effectively reduce primary trauma symptoms.

A more recent randomized control trial (RCT) study based upon research with a larger sample of 116 veterans suffering from PTSD compared MT with present-centred group therapy (Polusny et al., 2015) Results provide further support for the positive impact of MT for PTSD and depression related symptoms, both on immediate assessment after completion of an MBSR program and at 2 months follow-up. There is thus evidence suggesting that the effects of MT in ameliorating trauma symptoms are be sustainable.

The results of three recent meta-analytic reviews provide further convincing support to the growing evidence-base that MT is effective in ameliorating trauma symptoms. Banks, Newman and Saleem (2015) in a systematic review of 12 studies reported positive outcomes on the impact of MT on PTSD post intervention and found that these improvements were sustained from between 4 to 30 months post-intervention. The authors conclude that there is pre-preliminary evidence for the use of MT to treat trauma but called for the execution of more studies with greater methodological rigour. Hopwood and Schutte's (2017) meta-analytic investigation

refined their criteria for inclusion, reviewing only impact studies that met RCT design criteria. Their review of studies conducted on the impact of MT on PTSD covered the recent period of 2008 to 2016. In the total sample of 1219 participants across the 18 studies reviewed, MT was generally found to have had a significant impact on reducing symptoms of PTSD (Hopwood and Schutte, 2017). Similarly, Boyd, Lanius, & McKinnon, (2018) contribute evidence from their scoping literature review, observing that MT in general impacts positively on PTSD symptoms with medium to large effect sizes. Additionally, they report neuro-biological evidence showing that MT may effectively restore large-scale brain network connectivity in PTSD sufferers thus lending further credibility to the theorization of the neuro-plastic changes associated with MT.

It is evident that research into the impact of MT on traumatic stress related responses and conditions, albeit relatively recent and requiring further consolidation, suggests considerable efficacy in reducing a range of symptoms and the possibility of sustained benefits. The meta-analytic studies are particularly convincing in providing a critical overview perspective and it is evident that positive findings are being generated even from more rigorous RCT based studies (Creswell, 2017).

Continuous trauma exposure: Mindfulness, neuroplasticity and building resilience

Thus far we hope to have presented a convincing case to suggest that MT is an effective intervention for trauma related responses and psychological conditions in general. In this second broad section of the paper we seek to emphasize the place of MT as a prophylactic and resilience building intervention for complex forms of traumatic stress. We propose that MT may be particularly beneficial in contexts in which exposure to multiple and continuous trauma is extensive. Within such environments it is evident that individuals and communities feel severely constrained in terms of the options open to them to manage exposure to violence and threat. On the one hand individuals may become hypervigilant, constantly attempting to gage situations in anticipation of impending danger and contributing to a rather pervasive sense of mistrust, irritability and suspicion. On the other hand, the sense of mental defeat may be exaggerated with tendencies towards social withdrawal, resignation, cynicism and hopelessness. For a variety of logistical reasons affecting both treatment seekers and providers, such as accessibility of services and case-load management, it is also the case that for those facing recurrent traumatization it is not viable to seek formal treatment on a (semi-)permanent basis. This is despite recognition that external circumstances are such as to contribute to likelihood of ongoing exposure to traumatic stressors and that guarantees of safety are not possible. Within such conditions the availability of an

intervention approach that promises consolidation of beneficial change and enduring impact is immensely appealing. The neuroplastic changes associated with MT suggest that the intervention may assist in this kind of manner, being designed not only to reduce immediate trauma symptoms but also to build long-term psychological resilience.

Research reveals that MT impacts at the palliative level of symptom relief, and with repeated practice, simultaneously promotes the building of personal psychological resources and resilience (Brown & Ryan, 2003; Davidson, et al., 2003; Siegal, 2010; Keng, Smoski, & Robins, 2011). The mindfulness state may be cultivated and developed through MT and may ultimately promote the development of mindfulness traits (Siegal, 2007) through neuroplastic alterations (Shapiro, Britton, & Walsh, 2004). With more extended "practice" of mindfulness the brain is understood to change in both structure and function (Davidson et al., 2003). Mindfulness practice induces a state of brain activation that with repetition can become an enduring mode of responding to everyday life (Siegal, 2009), including to ongoing stressful experiences. Recipients of MT may become autonomous practitioners of mindfulness over time as this becomes a way of being rather than therapeutic-input reliant. This is one of the egalitarian aspects of mindfulness – once comprehended the recipient can become an autonomous practitioner. Thus, MT may be effective as both a treatment and preventative approach to trauma impact, in a sense potentially providing some level of "stress inoculation" for individuals who are exposed to repeated trauma.

The hypothesis that MT produces both functional and structural neuro-plastic changes in the brain has been empirically validated by neuroscientific research. Davidson et al (2003) investigated the impact of an eight-week MBSR intervention on brain and immune functions and were able to demonstrate that in comparison with non-meditators meditators showed significant increases in left-sided anterior activation, a pattern associated with positive affect states. At the end of the MBSR intervention both experimental and control participants were vaccinated with an influenza vaccine. It was found that there was a significant increase in antibody titers among subjects in the meditation group as compared to those in the wait-list control group and that the magnitude of increase in left-sided activation predicted the magnitude of antibody titer rise to the vaccine (Davidson, et al., 2003). While these findings pertain to physiological risk and immunity it is possible to infer that MT may also provide a form of immunity to psychological stressors. In the small body of writing on interventions for CTS (Kaminer, Eagle & Crawford-Brown, 2018) and OTSR (Diamond et al., 2010; Nuttman-

Shwartz, & Shoval-Zuckerman, 2016) it has been proposed that aspects of mindfulness may well be helpful in addressing both excessive arousal and anxiety and pessimism and helplessness associated with living circumstances. One of the cardinal features of CTS is the difficulty in discriminating between real and imagined or anticipated threats within the environment (Eagle & Kaminer, 2013). Optimal threat detection is important for survival and minimization of harm and yet over-generalization of anxiety to a range of threat cues can deplete psychological resources and lead to suspicious and constrained ways of dealing with people and the environment, in turn compromising supportive social network bonds (Eagle, 2015). As discussed previously, MT contributes to the development of a particular kind of attentional awareness that may allow for optimal alertness to environmental cues without the associated anxiety that CTS produces. Individuals may feel that they are sufficiently aware of their environment to trust that they can respond adaptively to minimize threat of harm without either being flooded by anxiety or succumbing to resignation. In addition, CTS has been associated with the potential development of health-related problems, such as hypertension and headaches, as is commonly the case with chronic stress exposure. MT is also viewed as potentially beneficial for these kinds of psychosomatic presentations that may accompany CTS (Kaminer, Eagle & Crawford-Brown, 2018) and as indicated previously may improve immunological functioning.

Although it is difficult to predict under what circumstances recipients of MT are likely to sustain the practices associated with such inputs it is important to note that the exercises are not tied to access to material resources, such as computers, but rather require cultivating certain states of mind. Such states of mind may enable people to live with greater equanimity under conditions of violence and threat when these are inescapable. Interestingly in a study conducted with college students exposed to continuous threat in Israel, Acceptance as a coping style was found to be beneficial in reducing the risk of pathology (Nuttman-Shwartz & Dekel, 2009). This is not to suggest that mindfulness equates to resignation and in fact it could be argued that some degree of freedom from the intense anxiety associated with such conditions may free up psychic energy to engage in the world in more proactive and communitarian ways. While engagement with this aspect of mindfulness entails more extended philosophical discussion, it is evident that within its Buddhist roots mindfulness also assumes the development of increased compassion and respect for others and one's environment and that this too may be beneficial in situations of enduring intergroup or civil conflict. The practice of mindfulness may thus assist not only with the amelioration of individual distress but may play some

role in assisting people to build social support networks in contexts of ongoing threat. This is not to suggest that MT should be viewed as a panacea for all forms of traumatization but rather to suggest that the cultivation of the kinds of states of mind associated with being mindful may be beneficial in contexts of inescapable threat and that the enduring benefits of MT may be important in situations where trauma exposure may reoccur.

Mindfulness as Appropriate Intervention in Contexts of Limited Mental Health Resources

The discussion thus far has sought to build a compelling case that MT appears to offer a holistic approach to dealing with the impact of traumatic stressors and may provide resilience building in the face of the kind of multiple and continuous trauma exposure that tends to be more prevalent in LMIC's (Stevens et al., 2013). It may seem, however, that MT may not be easily viewed as compatible with community-based interventions given the association of MT with middle class preoccupations and privileges in the West as briefly discussed at the outset of the article. Those who have critiqued the popularization of mindfulness over the past decade or so suggest that it has been appropriated to some extent by positive psychology, with connotations of "entitlement" to happiness and commercialization of training. However, we argue that re-appropriation of mindfulness in the interests of those who suffer and who live in under-resourced communities may be both possible and desirable.

The number of people in SA who suffer from exposure to traumatic stressors and their impact far outstrip the number of service providers available to offer therapeutic interventions. One of the ongoing challenges in the humanitarian and mental health terrain is to develop and implement interventions for traumatic stress related conditions that are able to meet the burden of demand within SA society across a wide range of contexts. Kazdin (2014) has proposed a model of mental health service delivery that appears to be directly relevant to thinking through aspects of mental health care and community-oriented delivery in relation to traumatization in limited resource contexts. We argue that MT appears to fulfil many of the best practice criteria for interventions that he advocates. In a commentary on global mental health service delivery, Kazdin (2014) argues that the current widespread use of the one-to-one model of psychological intervention fails to meet the scale of demand in society. He suggests that the convergence of the following problems creates the necessity for the development of innovative models of mental health service delivery: high rates of psychiatric disorders in community samples; the absence of psychological services for most individuals in need of

treatment; the paucity of services for vulnerable individuals with the greatest needs; and the paucity of service delivery professionals.

Kazdin (2014) proposes that four key concepts need to be borne in mind in optimizing service delivery to meet broad social needs, these being *reach*, *scalability*, *affordability*, and *expansion of nonprofessional service delivery*. We propose that MT may be a good fit in terms of meeting these optimal service delivery criteria and briefly discuss each with respect to mindfulness and trauma related interventions.

Reach in Kazdin's model refers to the capacity to access people who are not well served by traditional one-on-one service delivery models. Services may also need to extend beyond secondary interventions designed to treat those suffering from clearly diagnosable mental illnesses to meeting the needs of those with more hidden difficulties and those who may not conventionally utilize mental health services. Although the mechanisms for achieving such reach would need to be developed, for example by accessing women's organizations or schools, there is evidence that MT may have benefit for the kinds of groups on the margins who may benefit from such interventions. MT was initially designed to be offered in a group format and has been implemented with participants ranging from children (Burke, 2010) to older adults (Alexander et al, 1989). The renowned MBSR program (Kabat-Zinn, 1982) is an intervention in which group discussions and active group participation play a role in effecting change. Considering the volumes of people exposed to traumatic stress in LMIC's such as SA and limited numbers of professionally trained service providers, group format MT interventions offer *reach* and seem ideally suited to this form of implementation.

Scalability refers to the capacity for an intervention to be applied on a large scale. As already discussed, MT may be executed in group formats across a range of different contexts. Internationally, MT is currently being offered in a range of non-conventionally therapeutic settings such as schools, general health clinics, and corporate organisations (Purser & Loy, 2013). It is evident that MT interventions can be up scaled to teach large numbers of people at the same time. Although caution is probably required in terms of the maximum number of people that can be trained with good efficacy, MT approaches certainly offer a more flexible large-scale mode of the delivery than individual therapy. While there would have to be acceptance and commitment from those in organizational formations, MT is a non-intrusive (and increasingly non-sectarian) form of intervention that can be adapted for personal use. In a sense then, the growing popularity and proliferation of

MT interventions may provide a useful platform from which to promote the employment of such programs in contexts and communities where it may be most needed.

Affordability is also understood to be a vital component of more socially responsive mental health interventions. Kazdin indicates that it is important for interventionists to develop low cost modes of delivery that are not solely reliant on highly trained graduate professionals. Many mindfulness-based interventions are offered on an eight-week basis, sometimes with further intermittent follow-up. This kind of time commitment seems reasonable to expect of people living in resource constrained contexts given the kind of cost benefit ratio offered by such interventions. Once traumatized individuals (in this instance) have received intervention, they may continue to self-regulate and self-employ their training without further need for a trainer.

It can also be argued that MT resources are widely and freely available to the public. For example, free online training materials on mindfulness make this intervention an accessible option for those who have access to computers and cell-phones (van Emmerik, Berings, & Lancee, 2018). Research on the efficacy of modes of MT such as online and self-help methods is meagre relative to the traditional methods, such as MBSR training over 8 weeks with a trainer. However, those studies that have investigated online and self-training methods report positive results For example, Dimidjian et al., (2014) investigated the impact of online MBCT on depression symptoms with a sample size of 100 and found a significant increase in self-reported Mindfulness and significant decrease in both depression and rumination in the treatment group in comparison with the control group. Another RCT on the effectiveness of self-help mindfulness-based cognitive therapy with a sample of 80 students reported significant impact of web-based MT on measures of depression, anxiety, stress, satisfaction with life, mindfulness, and self-compassion in the treatment group and concluded that online MT has the potential to be a low-cost, readily available effective intervention. (Taylor, Strauss, Cavanagh, & Jones, 2014).

Two recent meta-analyses and systematic reviews conducted on the effectiveness of online MT both report on the significant impact of MT online on various mental health outcomes (Sevilla-Llewellyn-Jones et al., 2018; Spijkerman et al., 2016) The findings indicate that online MT has the potential to contribute to improving mental health outcomes, particularly stress. Other studies have also reported on the feasibility and positive impact of shorter-term and online MT programs (Banerjee et al., 2018, Cavanagh et al. 2013; Krusche et al., 2013; Taylor et al., 2014). It could be questioned whether such programs would be accessible to people living

in LMIC's, but it is noteworthy that health related applications in relation to a range of health conditions are already being implemented in such contexts and that cell phone access in particular is widespread across the African continent (Goldbach et al., 2013). While some have bemoaned the lack of standardization and quality control that the proliferation of mindfulness approaches has introduced, the other side of this coin is that "ownership" and patenting of MT is not possible, meaning that there is more egalitarian access to the knowledge and practice base. MT can be offered and accessed without incurring unnecessarily high costs.

Kazdin also advocates for the introduction of modes of mental health service delivery that can include *nonprofessionals*. He recommends increasing numbers of intervention providers, expanding service provision sites and adapting interventions to varying local conditions to reach diverse groups. In LMIC environments it is important to develop interventions that can be offered by auxiliary health workers as professional service providers are limited in number and often work under highly stressful conditions in attempting to cope with very high patient volumes. What is envisaged is that initial mindfulness training may be offered by experienced practitioners to groups of people who may be invested not only in their own welfare but also in becoming exponents of the principles and methods themselves. For example, teachers, nurses, occupational therapists, social workers, and community development workers may find benefit in becoming self-practitioners of mindfulness and subsequently in becoming trainers and supporters of others' development. In this respect MT could become part of primary mental health care services and could be used both acutely and prophylactically to address or manage traumatic stress impact (amongst other conditions) before it becomes intractable or syndromatic. The possibility of skills benefit that is both personal and communal may also be attractive in this instance.

It should be evident that MT interventions may be offered at a relatively low cost in under-resourced areas and may be incorporated into existing practices as an effective community psychology intervention. MT has shown empirically validated benefits across a wide range of psychological and psychiatric conditions and appears to be a comprehensive, affordable, holistic form of intervention that addresses multiple psychological problems on multiple levels. MT is usually offered in group format and can be delivered by non-professionals as well as professionals. It is also an approach in which there is minimal risk of harm as the methods are non-intrusive and designed to be integrated and practiced in a manner that is personally resonant for each

individual. As has already been argued, it is also the case that mindfulness may produce enduring benefits for those for whom it becomes a way of life or 'trait'.

Challenges and recommendations

In evaluating the arguments put forward in the paper some cautions are warranted and are elaborated as possible limitations in implementing MT interventions in the kinds of contexts we have proposed. Firstly, it should be acknowledged that the eight-week time period commitment required for most MT's, such as the MBSR training program, may result in participants dropping out from the training for various resource related, logistical and/or personal reasons. It may be necessary to adapt and tailor-make MT to suit logistical constraints such as time and resources. The research cited earlier does indicate that shorter MT programmes, online programmes as well as self-study MT may still have benefit. It is also possible that for people living in high violence contexts there may be some appreciation of the opportunity to connect with other individuals on a weekly basis over a more extended period of time, even if there are constraints in reaching venues, and in refugee camps participation in training may also act to solidify relationships amongst displaced people.

Secondly it is important that sensitivity to cultural and contextual issues is encouraged in the implementation of MT, as would be the case in applying any psychological intervention method designed for a context other than that within which it is being utilized. The secularisation of MT, while controversial for some, does make MT more accessible to individuals of varied cultural backgrounds. MT may be promoted as a form of "mental training" with explicitly stated benefits for mental well-being and health in the same way that physical training impacts on physical health, and in this sense may be presented as a more generally applicable kind of intervention. Mindfulness interventions have been employed to some benefit with African American groups in poor inner-city areas (Dutton et al., 2013), suggesting that the principles can be usefully applied across different populations. There is also the possibility that the cultivation of awareness of the self in environment in MT may resonate with African belief systems in which mind-body and human-physical environment connections are strongly entertained.

Thirdly, it should be acknowledged that the possible adverse impacts of MT have not been adequately researched and little information on any negative outcomes has been reported in the literature. It is recommended MT be delivered with the same level of clinical caution that informs the implementation of other psychotherapeutic intervention for traumatic stress conditions (Briere & Scott 2014). Given the fact that

MT is not designed to engage directly with traumatic material, as is the case in exposure-based therapies, the risk of re-traumatization is low. However, it is possible that for individuals with severe PTSD symptoms, MT may need to be used in conjunction with other best practice interventions that are designed to implement exposure-based interventions, for example, as discussed earlier.

Taking account of conditions for professional and ethical mental health service delivery, ongoing critical evaluation of MT is recommended with attention to utilizing MT in accordance with the evidence derived from the rapidly growing research literature. At this stage it may be judicious to view MT as an invaluable complement to other forms of psychotherapeutic interventions for traumatic stress. Recently two leading organizations in the field of psychological trauma management have made recommendations in support of this kind of proposal. In 2011 the American Department of Veteran affairs, based upon consolidation of existing research findings, recommended that MT could be used by itself or together with other traditional treatment practices as an effective response to PTSD (Briere and Scott, 2014). The International Society for Traumatic Stress Studies Complex Trauma Task Force conducted an expert opinion survey to identify best practices for the treatment of Complex Traumatic Stress Disorder (CTSD) and found that there was strong support for meditation and mindfulness interventions as second-line treatments for CTSD (Cloitre, et al., 2011). While these taskforce recommendations do not speak directly to implementing MT in the kinds of contexts we have foregrounded in this paper, they indicate that there is increasing receptivity to these kinds of interventions in mainstream trauma treatment.

In conclusion we argue that there is a compelling case for the application and implementation of MT in high violence, low mental health resource contexts. It is evident that MT may have particular benefit for individuals suffering not only from PTSD and acute traumatic stress conditions but also for those living under conditions of ongoing and continuous exposure to violence and threat. The beneficial effects of mindfulness encompass neurological, somatic, cognitive, attitudinal, interpersonal and existential dimensions, all of which have resonance for traumatic stress conditions. In addition, MT can be offered to groups of individuals at low cost by both professional and auxiliary care workers in a range of humanitarian settings. In this respect we argue that promotion of mindfulness in such contexts represents an alignment of practice with core philosophical premises.

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Appendix B: Mindfulness Training for counsellors: course information

(adapted from Kabat-Zinn, 1996)

Core Mindfulness skills components of MT for trauma counsellors

A) Formal Mindfulness Training practices

Mindful breathing, body scan meditation, loving-kindness meditation, sitting meditation, mindful movement, gentle yoga, walking meditation, 3-minute breathing space exercise, "Mountain meditation", "Choiceless Awareness", Sound Meditation

B) Informal Mindfulness training practices

Applications of mindfulness to daily routine everyday activities such as mindful listening, eating, driving, making decisions, communicating, daily chores, planning, and responding to stressful situations.

C) Daily homework assignments. Recommendation of 30-45 minutes per day of formal mindfulness practice and 5-15 minutes of informal practice, 6 days per week for the duration of the course.

D) Individual and group dialogue to facilitate mindful inquiry: Increasing the ability to answer self-reflective questions such as: "what am I experiencing right now? What am I feeling? What is happening in my body? What am I thinking?" Discussions focused on weekly home assignment regarding development and integration of mindfulness- based self-regulatory skills.

E) Didactic elements/contextual information which link the practices to challenges encountered in personal and professional life.

F) Review of the course and participants' feedback and evaluation

Weekly Course Outline

The intervention was adapted from content and guidelines contained in the Center for Mindfulness in Medicine, Health Care, and Society (CFM) University of Massachusetts Medical School Mindfulness-Based Stress Reduction (MBSR) Authorized Curriculum Guide (2014).

Session one: *Theme*: Introducing the key concepts of MT, overview of course and learning contract. *Practices*: eating meditation, body scan, mindfulness of a routine activity

Session two: *Theme*: Dealing with barriers: perception and creative responding versus reactivity. *Practices:* Earlier practices plus awareness of breathing.

Session three: *Theme:* Triangle of awareness: body sensation, thought, and emotion, *Practices:* Earlier practices plus mindful movement

Session Four: *Theme*: Staying present with difficulty and cultivating mindfulness can reduce the negative effects of stress reactivity stress. *Practices:* Earlier practices plus expanding focus from awareness of breath to all sensations.

Session five**:** *Theme*: Reacting vs. responding to stress. *Practices:* Some of the earlier practices plus "choiceless awareness.'

Session six: *Theme*: Mindful communication in stressful situations. *Practices:* Earlier practices plus walking meditation.

All Day Retreat: *Theme*: Integrating and deepening MT practice experience within a silent retreat. *Practices:* Practices from earlier sessions are reinforced; and additional practices such as mountain meditation and loving-kindness meditation.

Session Seven: *Theme*: Cultivating kindness and compassion towards oneself and others. *Practices:* Loving-kindness practice, plus some of the previous practices

Session eight: *Theme*: Consolidating and integrating MT practices into daily life as on-going practice. *Practices:* Selected by the group

Appendix C: Psychoeducation Workshops

Theory Component: Self- Care for trauma counsellors: Psychoeducation on Secondary Trauma Impacts (ST). (Adapted from Mescia and Gentry (2004).

Course Learning Objectives

1. To introduce and distinguish STI concepts of Compassion Fatigue (Secondary Traumatic Stress and Burnout), Vicarious Trauma and Compassion Satisfaction

2. To educating counsellors on risk factors and preventative factors for negative STI.

3. To identify strategies to improve Compassion Satisfaction

Course Content Outline

Session one: Defining and distinguishing between different STI.

Session two: Discussing the causes and risk factors for STI.

Session three: Describing the signs and symptoms of STI

Session four: Stress reduction strategies for prevention, treatment and building resilience and identifying strategies to increase compassion fatigue resources.

Process

Workshops facilitated by the researcher. Including educational material and group discussions based on recommended reading material.

Appendix D: Confidential Demographic Questionnaire

PARTICIPANT NUMBER _____ Date _____

The information below will be kept strictly private and confidential.

1. Gender: Male/ Female (please circle your response)

2. Age ____

3. Level of education_____

4. Occupation ((please circle one option)

a) Psychologist b) Social Worker c) Registered counsellord) Volunteer

e) Other (Please provide details) _____

6. How many years have you been working as a trauma counsellor_____

7. How many trauma related clients on average do you counsel per week_____

8. Have you had any previous experience with trauma counsellor self-care training theory courses? (please circle one option)

a) Yes b) No

9. Have you had previous experience with trauma counsellor self-care training practical mindfulness courses? (please circle one option)

a) Yes b) No

Appendix E: Life Events Checklist for DSM-5 (LEC-5)

Listed below are a number of difficult or stressful things that sometimes happen to people. For each event check one or more of the boxes to the right to indicate that: (a) it *happened to you* personally; (b) you *witnessed it* happen to someone else; (c) you *learned about it* happening to a close family member or close friend; (d) you were exposed to it as *part of your job* (for example, paramedic, police, military, or other first responder); (e) you're *not sure* if it fits; or (f) it *doesn't apply* to you. Be sure to consider your *entire life* (growing up as well as adulthood) as you go through the list of events.

Event	Happened to me	Witnessed It	Learned about it	Part of my job	Not sure	Does not apply
1. Natural disaster E.g., flood, hurricane, tornado, earthquake						
2. Fire or explosion						
3. Transportation accident (for example, car accident, boat accident, train wreck, plane crash)						
4. Serious accident at work, home, or during recreational activity						
5. Exposure to toxic substance (for example, dangerous chemicals, radiation)						
6. Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)						
7. Assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb)						
8. Sexual assault (rape) attempted rape, made to						

perform any type of sexual act through force or threat of harm						
9. Other unwanted or uncomfortable sexual experience						
10. Combat or exposure to a warzone (in the military or as a civilian)						
11. Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war)						
12. Life-threatening illness or injury						
13. Severe human suffering						
14. Sudden violent death (for example, homicide, suicide						
15. Sudden accidental death						
16. Serious injury, harm, or death you caused to someone else						

Appendix F: Five Facet Mindfulness Questionnaire (FFMQ)

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your own opinion of what is generally true for you.

1 – Never 2 – Rarely True 3 – Sometimes True 4- Often True 5 – Always True

_____1. When I'm walking, I deliberately notice the sensations of my body moving.

_____ 2. I'm good at finding words to describe my feelings.

_____ 3. I criticize myself for having irrational or inappropriate emotions.

_____4. I perceive my feelings and emotions without having to react to them.

_____5. When I do things, my mind wanders off and I'm easily distracted.

_____ 6. When I take a shower or bath, I stay alert to the sensations of water on my body.

_____7. I can easily put my beliefs, opinions, and expectations into words.

_____ 8. I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.

_____9. I watch my feelings without getting lost in them.

_____ 10. I tell myself I shouldn't be feeling the way I'm feeling.

_____ 11. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.

_____12. It is hard for me to find the words to describe what I'm thinking.

_____ 13. I am easily distracted.

_____ 14. I believe some of my thoughts are abnormal or bad and I shouldn't think that way.

_____ 15. I pay attention to sensations, such as the wind in my hair or sun on my face.

_____16. I have trouble thinking of the right words to express how I feel about things

_____ 17. I make judgments about whether my thoughts are good or bad.

_____ 18. I find it difficult to stay focused on what's happening in the present.

_____19. When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it.

_____20. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.

_____21. In difficult situations, I can pause without immediately reacting.

_____22. When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.

_____23. It seems I am “running on automatic” without much awareness of what I’m doing.

_____24. When I have distressing thoughts or images, I feel calm soon after.

_____ 25. I tell myself that I shouldn’t be thinking the way I’m thinking.

_____26. I notice the smells and aromas of things.

_____ 27. Even when I’m feeling terribly upset, I can find a way to put it into words.

_____ 28. I rush through activities without being really attentive to them.

_____29. When I have distressing thoughts or images I am able just to notice them without reacting.

_____30. I think some of my emotions are bad or inappropriate and I shouldn’t feel them.

_____31. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.

_____32. My natural tendency is to put my experiences into words.

_____33. When I have distressing thoughts or images, I just notice them and let them go.

_____ 34. I do jobs or tasks automatically without being aware of what I’m doing.

_____35. When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought/image is about.

_____36. I pay attention to how my emotions affect my thoughts and behavior.

_____37. I can usually describe how I feel at the moment in considerable detail.

_____38. I find myself doing things without paying attention.

_____ 39. I disapprove of myself when I have irrational ideas.

Appendix G: Compassion Satisfaction and Compassion Fatigue (PRoQOL)

When you counsel people you have direct contact with their lives. As you may have found, your compassion for those you counsel can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a counsellor. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the *last 30 days*.

1 = Never 2 = Rarely 3 = Sometimes 4 = Often 5 = Very Often

1. I am happy. ____
2. I am preoccupied with more than one person I counsel. ____
3. I get satisfaction from being able to counsel people. ____
4. I feel connected to others. ____
5. I jump or am startled by unexpected sounds. ____
6. I feel invigorated after working with those I counsel. ____
7. I find it difficult to separate my personal life from my life as a counsellor. ____
8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I counsel. ___
9. think that I might have been affected by the traumatic stress of those I help. ____
10. I feel trapped by my job as a counsellor ____
11. Because of my counselling, I have felt "on edge" about various things.____
12. I like my work as a counsellor.____
13. I feel depressed because of the traumatic experiences of the people I counsel.____
14. I feel as though I am experiencing the trauma of someone I have counselled ____
15. I have beliefs that sustain me.____
16. I am pleased with how I am able to keep up with counselling techniques and protocols.____
17. I am the person I always wanted to be.____
18. My work makes me feel satisfied.____
19. I feel worn out because of my work as a counsellor.____
20. I have happy thoughts and feelings about those I counsel and how I could counsel them. ___.
21. I feel overwhelmed because my case [work] load seems endless.____
22. I believe I can make a difference through my work.____
23. I avoid certain activities or situations because they remind me of frightening experiences of the people I counsel. ___
24. I am proud of what I can do to counsel. ____
25. As a result of my counselling, I have intrusive, frightening thoughts ____
26. I feel "bogged down" by the system ____
27. I have thoughts that I am a "success" as a counsellor. ____
28. I can't recall important parts of my work with trauma victims. ____
29. I am a very caring person. ____
30. I am happy that I chose to do this work. ____

Appendix H: The Traumatic Stress Institute Belief Scale (TSI-BLS)

This questionnaire is used to learn how individuals view themselves and others. As people differ from one another in many ways, there are no right or wrong answers. Please answer with an x. Try to complete every item.

	Strongly disagree	Disagree	Disagree somewhat	Agree somewhat	Agree	Agree strongly
1. I generally feel safe from danger						
2. People are wonderful						
3. I can comfort myself when I'm in pain						
4. I find myself worrying a lot about my safety						
5. I don't feel like I deserve much						
6. I can usually trust my own judgment						
7. I feel empty when I am alone						
8. I have a lot of bad feelings about myself						
9. I'm reasonably comfortable about the safety of those I care about						
10. Most people destroy what they build						
11. I have a difficult time being myself around other people						
12. I enjoy my own company						
13. I don't trust my instincts						
14. I often think the worst of others						
15. I believe I can protect myself if my thoughts become self-destructive.						
16. You can't trust anyone						
17. I am uncomfortable when somebody else is leading the group						
18. I feel good about myself most days						
19. Sometimes I think I'm more concerned about the safety of others than they are						
20. Other people are not good						
21. Sometimes when I'm with people I feel disconnected						
22. People shouldn't place too much trust in their friends						
23. Mostly, I don't feel like I'm worth much						
24. I don't have much control in relationships.						
25. I am often involved in conflicts with other people						
26. For the most part, I like other people						

27. I deserve to have good things happen to me.						
28. I usually feel safe when I'm alone						
29. If I really need them, people will come through for me						
30. I can't stand to be alone						
31. This world is filled with emotionally disturbed people.						
32. I am basically a good person						
33. For the most part; I protect myself from harm						
34. Bad things happen to me because I'm bad.						
35. Some of my happiest experiences involve other						
36. There are many people to whom I feel close and connected.						
37. Sometimes I'm afraid of what I might do to						
38. I am often involved in conflicts with other						
39. I often feel cut off and distant from other						
40. I worry a lot about the safety of loved ones						
41. I don't experience much love from anyone						
42. Even when I'm with other people I feel alone						
43. There is an evil force inside me						
44. I feel uncertain about my ability to make						
45. When I'm alone I don't feel safe						
46. When I'm alone, it's like there is no one there						
47. I can depend on my friends to be there when I need them.						
48. Sometimes I feel like I can't control myself						
49. I feel out of touch with people						
50. Most people are basically good at heart.						
51. I sometimes wish that I don't have any						
52. I am often afraid I will harm myself						
53. I am my own best friend						
54. I feel able to control whether I harm others						
55. I often feel helpless in my relationships with others.						
56. I don't have a lot of respect for the people closest to me.						
57. I enjoy feeling like part of my community						
58. I look forward to time I spend alone						
59. I often feel others are trying to control me						
60. I envy people who are always in control						

61. The most important people in my life are relatively safe from danger						
62. The most uncomfortable feeling for me is losing control over myself						
63. If people really knew me, they wouldn't like me						
64. Most people don't keep the promises they make						
65. Strong people don't need to ask for others' help.						
66. Trusting other people is generally not very						
67. I fear my capacity to harm others						
68. I feel bad about myself when I need others						
69. To feel at ease I need to be in charge						
70. I have sound judgment.						
71. People who trust too much are foolish						
72. When my loved ones aren't with me, I fear they may be in danger						
73. At times my actions pose danger to others						
74. I feel confident in my decision-making						
75. I can't work effectively unless I am the leader						
76. I often doubt myself						
77. I can generally seize up my situations pretty well						
78. I generally don't believe the things people tell						
79. Sometimes I really want to hurt someone						
80. When someone suggests I relax, I feel anxious.						

Appendix I: The Posttraumatic Stress Disorder Checklist (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?					
2. Repeated, disturbing dreams of the stressful experience?					
3. Suddenly feeling or acting as if the stressful experience were actually happening again *(as if you were actually back there reliving it)*?					
4.Feeling very upset when something reminded you of the stressful experience?					
5.Having strong physical reactions when something reminded you of the stressful experience *(for example, heart pounding, trouble breathing, sweating)*?					
6. Avoiding memories, thoughts, or feelings related to the stressful experience?					
7. Avoiding external reminders of the stressful experience *(for example, people, places, conversations, activities, objects, or situations)*?					
8.Trouble remembering important parts of the stressful experience?					

9.Having strong negative beliefs about yourself, other people, or the world *(for example, having thoughts such as: I am 1bad, there is something seriously 1wrong 0with me, no one can be trusted, the world is completely dangerous)*?					
210. Blaming yourself or someone else for the stressful experience or what happened after it?					
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?					
12. Loss of interest in activities that you used to enjoy?					
13. Feeling distant or cut off from other people?					
14. Trouble experiencing positive feelings *(for example, being unable to feel happiness or have loving feelings for people close to you)*?					
15. Irritable behavior, angry outbursts, or acting aggressively?					
16. Taking too many risks or doing things that could cause you harm?					
17. Being "superalert" or watchful or on guard?					
18. Feeling jumpy or easily startled?					
19. Having difficulty concentrating?					
20. Trouble falling or staying asleep?					

Appendix J: Summary of Results

ANOVA Results

Dependent Variable	MS Error (Between Subjects	F (Group)	MS Error (Within Subjects	F (Group * Time	*p*	*Partial Eta Squared*
CS	24.71	3.82	7.40	3.32	.056	
BO	28.03	5.32	8.36	12.61	.00	.18
STS	59.04	1.99	10.66	12.41	.00	.18
PCL-5 Total	80.26	3.35	7.47	23.83	.00	.29
Intrusion	9.29	2.10	1.50	9.23	.00	.14
Avoidance	1.94	2.98	.34	4.61	.058	
Negative Cognitions/Mood	13.75	3.43	3.06	11.70	.00	.17
Arousal/Reactivity	6.75	1.02	1.26	9.83	.00	.15
TSI-BLS Total	55.09	0.24	2.79	38.22	.00	.40
Self-Safety	.67	.02	.06	22.76	.00	.28
Self- Esteem.	.60	1.01	.10	7.85	.00	.12
Other-Esteem.	.66	.00	.16	5.16	.00	.08
Self-Trust	.63	.62	.08	6.53	.00	.10
Other-Trust.	.65	.04	.07	11.02	.00	.16
Other- Intimacy.	.64	1.22	.11	9.05	.00	.14
Self-Control.	.65	.04	.11	8.05	.00	.13
Other-Control.	.99	.12	.09	10.59	.00	.16
FFMQ Total	138.67	2.91	47.95	74.07	.00	.56
FFMQ Observing	21.00	.04	4.87	30.76	.00	.36
FFMQ Awareness	15.88	.10	6.16	22.89	.00	.290
FFMQ Non-Judging	20.56	.84	3.94	21.92	.00	.28
FFMQ Non-Reacting	14.29	4.10	4.35	31.94	.00	.36
FFMQ Describing	11.37	3.30	5.86	23.39	.00	.29

Non-Parametric Test Results

Homogeneity of variances assumption was violated for TSI-BLS Other-Safety and TSI-BLS- Self Intimacy subscales. Non-parametric Friedman's test result for within-group differences and Mann Whitney U results for between-group differences. Both results do not support Hypothesis Five

Other safety. Friedman's test of differences among repeated measures was used to determine within-group differences. For Group 1 there was a significant difference between TSI-BLS Other-safety scores measured before MT and after MT: χ^2 (2) = 30.46, *p* = .00. For Group 2, there was a significant difference between scores measured before MT and after MT: χ2 = 28.58, *p* = .00. Results indicate that there was no significant difference in the scores of the two groups for time1 (z = - 0.93, *p* = 0.35) and no significant difference during t2 (z = - 0.89, *p* = 0.37) and no significant difference for t3 (z = - 0.62, *p* = 0.53), thus this result does not support Hypothesis five.

Self- Intimacy. Friedman's test was used to determine within-group differences. For Group 1 there was a significant difference between TSI-BLS Self Intimacy scores measured before MT and after MT: χ2 (2) = 29.15, *p* = .00. For Group 2, there was a significant difference between scores measured before MT and after MT: χ2 (2) = 26.85, *p* = .00. The Mann-Whitney U test was used to determine the significance of between-group differences. Results indicates that there was no significant difference in the scores of the two groups for t1 (z = -0.26, *p* = 0.79, no significant difference at t2 (z = -1.51, *p* = .13) and no significant difference at t3 (z = -0.22, *p* = .83). This evidence does not support Hypothesis Five.

Appendix K: Feedback Reports

Weekly Reflection Report Request

Please take a few moments to note your reflections, thoughts, and feelings in relation to last week's training workshop and homework exercises. Please note what effect the workshop may have had on your professional and/or personal life last week. Please illustrate with examples where possible.

End of Course Evaluation Report Request

Thank you for taking the time to join this self-care programme. I invite you to report on your experiences of the course and the impact, if any, you feel it may have had on both your personal and professional life as a trauma counsellor. This will assist me in my research project to assess both the positive and negative aspects of the course as well as the positive and negative impact on you as a participant. I remind you that everything you share will be kept strictly confidential and your identity as a participant will remain anonymous. Please comment on the questions below and feel free to add any further information.

1. What made you decide to join this course?

2. What were your expectations of the course?

3. What did you think of the presentation and process of the course in respect of elements like the length, the format, the facilitation, and the materials of the theory and practical components?

4. What impact, if any, has your self-care training had on your personal life? Which aspects have had impact?

5. What impact, if any, has your self-care training had on your professional life as a trauma counsellor? Which aspects have had impact?

6. Are there specific examples you may have to illustrate the ways in which this course has impacted on your work life? Which aspects have had impact?

7. Did the course have any kind of impact on your personal and work stress levels? If so, please share examples

8. Did the course have any kind of impact on your work satisfaction levels? If so, please share examples.

9. How important has this course been to you and why?

10. What aspects of the overall course did you specially enjoy and why?

11. What aspects did you find challenging and why?

12. Any other comments on the course and its impact on your personal and professional life would be welcomed

Appendix L: Participant Information Form

As a trauma counsellor, you may be vulnerable to the secondary traumatic impact of your professional duties on both your personal and professional life. Your participation in this research would offer an opportunity to assess the effectiveness of self-care intervention programmes. Participation is entirely voluntary and will be based on the principle of informed consent. Please take time to read this information form carefully before making your decision. This study forms part of my PHD Psychology research at Wits University. The aim is to investigate two components of self-care intervention strategies: theoretical and applied, and to assess the impact of these interventions on compassion fatigue and vicarious trauma and compassion satisfaction in trauma counsellors. I will present two self-care intervention training programmes offering theoretical or applied components of counsellor self-care. You will be asked to fill in questionnaires at various points during the research process. These assessments are designed to assess the impact of the intervention programmes on your professional and personal lives. If you decide to take part in this study, I will request that you sign a consent document. You may also choose to withdraw from the study at any point if you so choose. In order to understand further your rights as a research participant, you may consult the following ethics website of Wits University: www.wits.ac.za/Academic/Research/Ethics.htm.

As a registered psychologist and a researcher, I am bound by two ethical codes: The Ethics code of the HPCSA Professional Board of Psychology and the Wits University Human Research Ethics Committee (HREC). As such I am ethically bound to protect your privacy and confidentiality and will do everything possible to ensure your confidentiality and anonymity. All data used in the doctoral thesis or published in scientific journals will be treated as confidential and your identity will be protected. This research study protocol has been submitted to the University of the Witwatersrand, Human Research Ethics Committee (HREC) and written approval has been granted by this committee. The final doctoral thesis will be stored in the Thesis Collection at the Library of the University of the Witwatersrand and some material from the thesis may be submitted for publication in academic journals. The benefit to you as a participant will be that you will receive two self-care intervention training programmes and training materials free of charge. The training programmes may offer both personal and professional stress-management benefits. There are no major risks anticipated. However, if you do experience extreme distress in response to any component of the course, I will refer you to the appropriate resources. The course will be divided into 2 parts: Theory (4 fortnightly sessions) and Practical (mindfulness training for 8 weekly sessions). Workshops will be about 3 hours each with on extended practical session of 5 hours duration. If you are interested in participation, please let me know as I will send you further logistic information including possible dates that you may choose to attend the programme.

If there are any further questions you may have that may assist you in deciding on your participation in the study, please email me on kanthapsych@gmail.com.

Appendix M: Consent Form

Participant Number_____

Participant Consent Form for PHD Psychology research investigating self-care strategies for trauma counsellors

I, the undersigned, hereby voluntarily grant consent for participation in the above research study. I have read and understood the participant information form. I have considered the information, had the opportunity to ask questions, and appreciate what the commitment to taking part in the study will involve. I understand that personal identification details will be kept private and confidential in accordance with the ethical codes of conduct to which the researcher Kanthamoney Pillay is bound as a registered psychologist and as a Wits University doctoral student under the supervision of Prof. Gill Eagle. I understand that my name will not appear in any research reports, articles, or presentations. I understand further that I may withdraw from the study at any time should I choose not to continue. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

_____ _____ _____

Name of Participant Date Signature

_____ _____ _____

Researcher Date Signature