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FROM STUDENT TO TEACHER:

FINDING MINDFUL WAYS TO GROW IN THE FACE OF STRESS

Lucy J Draper-Clarke

A thesis submitted to the Wits School of Education, Faculty of Humanities, University of the Witwatersrand in fulfilment of the requirements for the degree of Doctor of Philosophy.

Supervisors: Professor Brahm Fleisch, University of the Witwatersrand, Johannesburg
Professor David Edwards, Rhodes University, Grahamstown

Johannesburg

19th June 2014

Abstract

The severity of stress in the teaching profession is a worldwide phenomenon, and recent concern has focused on the number of student teachers who leave soon after qualifying. The benefits of mindfulness practices have been firmly established in the medical arena, particularly for stress-related illnesses. Studies are now being conducted within education, and research is investigating the potential of mindfulness for personal and professional growth. This interdisciplinary study focuses on student teachers, and by taking a developmental approach, explores whether mindfulness provides a catalyst for the effective transition from student to teacher.

The outcomes of a mindfulness-based intervention (MBI) were examined with a sample of South African student teachers at the Witwatersrand School of Education (n=14). Participants attended a series of interviews over a five-month period, attended a six-week MBI, and completed self report questionnaires on depression, anxiety and stress, facets of mindfulness, and self-compassion. Results from the mixed-methods study revealed that common causes of stress were seriously exacerbated by the Gauteng context. Most student teachers were experiencing depression, anxiety and stress of clinical levels, yet with the provision of little clinical support.

The students who participated in the MBI revealed a range of pre-existing coping strategies, and added mindfulness practices to their repertoire at differing levels of effectiveness. A Developmental Model of Mindfulness was developed as a result of the research process, in order to advise on the different types of practice, and different expectations of results, at each developmental stage. The proposed categories are *restorative*, *dynamic* and *transformative* mindfulness.

Qualitative data from interviews were explored to identify themes, showing dialectical shifts as tensions were identified and new behaviours explored. Further research is needed to explore long-term dispositional development beneficial for a teaching career, but initial findings provide subjective evidence from students that mindfulness may be a valuable mediator of change within the context of teacher education.

Key Words

Mindfulness; Mindfulness Based Intervention; Mindful Teaching; Mindfulness in Education; Teacher Education; Student Teachers; Professional Development; Developmental Model of Mindfulness; Human Development.

Candidate's Declaration

I declare that this thesis is my own unaided work. It is submitted for the degree of Doctor of Philosophy in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination in any other university.

_____

Lucy Draper-Clarke
Person number: 500763

19th day of June, 2014

Dedication

I would like to dedicate this thesis to three of the wonderful teachers in my life:

Choje Akong Tulku Rinpoche, in loving memory.

Rob Nairn, who first introduced me to mindfulness and encouraged me to move my love for teaching into this exciting field. You have always given me support in my practice, and shown interest in this academic work. It is an honour now to support you on mindfulness retreats.

Mike Draper, my adorable husband, who sits with me each morning and walks beside me on this journey. You taught me how to be at ease, and bring joy and laughter into each and every day. With you, Johannesburg has become a home that I dearly love.

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List of Acronyms

ACT	Acceptance and Commitment Therapy
BEd	Bachelor of Education
CAPS	Curriculum and Assessment Policy Statement
CARE	Cultivating Awareness and Resilience in Education
CCDU	Careers and Counselling Development Unit
CEB	Cultivating Emotional Balance
CEBC	Cultivating Emotional Balance in the Classroom
DASS	Depression, Anxiety and Stress Scale
DBT	Dialectical Behavioural Therapy
DoE	Department of Education
EEG	Electroencephalogram
EPP	Eight Point Program
FFMQ	Five Facet Mindfulness Questionnaire
fMRI	Functional Magnetic Resonance Imaging
HESA	Higher Education South Africa
IE	Inclusive Education
IPA	Interpretative Phenomenological Analysis
MBAT	Mindfulness Based Art Therapy
MBCT	Mindfulness Based Cognitive Therapy
MB-EAT	Mindfulness Based Eating Awareness Training
MBI	Mindfulness Based Intervention
MBI-TAC	Mindfulness Based Intervention – Teaching Assessment Criteria
MBLC	Mindfulness Based Living Course
MBSR	Mindfulness Based Stress Reduction
MBWE	Mindfulness Based Wellness Education
MSC	Mindful Self Compassion
MT	Mindfulness Training
OBE	Outcomes Based Education
OECD	Organisation for Economic Co-operation and Development
PGCE	Postgraduate Certificate in Education

RAIN	Recognise, Allow, Investigate and Non-identification
SCQ	Self Compassion Questionnaire
SCS	Self Compassion Scale
SMART	Stress Management and Relaxation Techniques
SMI	Stress Management Intervention
TE	Teaching Experience
TM	Transcendental Meditation
UCLA	University of California, Los Angeles
UCT	University of Cape Town
UK	United Kingdom
UMASS	University of Massachusetts
UNISA	University of South Africa
US(A)	United States (of America)
Wits	The University of the Witwatersrand
ZPD	Zone of Proximal Development

CHAPTER ONE: INTRODUCING THE STUDY

1.1 Introduction

> *Shulman argues that teaching is "perhaps the most complex, most challenging, and most demanding, subtle, nuanced, and frightening activity that our species has ever invented" (Shulman, 1997b, p. 504). Shulman (1997a) suggests that a teacher coping with the complexity of everyday classroom teaching is equivalent to a doctor coping in an emergency room of a hospital during a natural disaster. (Rusznyak, 2008:42-43)*

Shulman's quote might sound exaggerated to many, but there are few teachers who have not felt the tight-belly grip of terror at some point in their careers. The complexity, challenge and demands of the profession coalesce into overt fear for some or simmering stress for others, making teaching a top scorer in occupational stress research. Less research, though, is available on student teachers – those entering the profession for the first time with few of the skills needed to cope with the intensity. It is this group that forms the heart of the research thesis.

Exploring ways to develop human potential has always been at the heart of my work in education. Since moving to South Africa in 2010, the intention to assist where possible in the transformation of education, in this fascinatingly complex society, provided the motivation for this study. I have found myself in good company in the School of Education at the University of the Witwatersrand. Where my focus differs from others seeking transformation is my belief that change can, and must, take place at the level of the individual, through personal development, as well as through structural change. National scale policy change is critical to determine an overall direction, but without a willingness of individuals to change their perspectives, and to reflect on their own practice, policy changes will not be implemented effectively.

Transforming education can only take place by filling schools with committed, confident, competent and authentic teachers. This does not require 'cookie-cutter' competence, but teachers who teach through their own humanity (Palmer, 2010). Teacher Education

institutions and in-service programmes have a significant role to play. This is by no means an easy task. However, current research in human development, neuroscience, and ancient practices from the contemplative traditions, have shown that it is possible for us as individuals to train our minds, and 'rewire' our brains to be more conscious, more present, more aware and more compassionate, in a manner that can bring about the development of greater capabilities in our professional and personal lives.

A liberal view of education (Dewey, 1916, 2008) proposes that the main purpose of education is to develop the full potential of individual human beings. Schooling for all is intended to draw out and foster the intellectual, physical, emotional and spiritual talents of everyone. From this perspective, contemporary formal education lies at the heart of the human development paradigm. We can therefore pose these questions: What processes within primary, secondary and tertiary education institutions support child and adult development? And which practices allow the unfolding of human potential?

Rather than looking for new ways to create truly capable humans, many researchers are looking back to the ancient contemplative practices and traditions, and evaluating their effectiveness. Humans have not evolved as rapidly as the technology surrounding us, so evolutionary psychologists (Gilbert, 2010), and neuroscientists (Davidson & Lutz, 2008), have carried out studies on how we can train the mind, not only to develop more effective coping strategies, but to 'rewire' the brain in such a way that we can transform temporary states (such as tranquillity or compassion) into enduring personality traits. Davidson (2010), for example, has worked extensively with Buddhist monks, whose traditional mind training, through meditation, gives them a highly developed stability of mind, focus of attention and deep compassion. In both the Buddhist and secular contexts, this trait is known as *mindfulness*.

For 2500 years, the focus on mindfulness has primarily been the domain of Buddhism, where meditation has been taught as a way to train the mind in order to alleviate suffering and reach 'enlightenment' or 'liberation'. However, since the 1970s, formal documented evidence-based research on mindfulness has emerged, mainly in the health sector through the work of Jon Kabat-Zinn and his Mindfulness Based Stress Reduction (MBSR). In order to adapt to modern-day challenges, many researchers are testing the efficacy of these age-old practices, using predominantly quantitative research methodologies.

In the academic world, it is not just long-term meditators, such as monks, who have been shown to benefit from mindfulness practices, but also people suffering from physical and psychological problems. Less effort, however, has been invested in cultivating positive attributes of mind in individuals who are not suffering from stress, but would simply like to improve their sense of well-being or professional effectiveness (Ekman et al, 2005). The majority of studies have been carried out where participants take part in an eight-week mindfulness training. Consistently, these studies have revealed improvements in human functioning, as well as a reduction in stress levels.

A field that is increasingly providing evidence for the benefits of mindfulness meditation is that of neuroscience. Both EEG and functional MRI scans have been carried out on participants both before and after mindfulness courses, and significant changes in brain function are recorded. Davidson's 2003 results indicated that a meditation group demonstrated significantly increased left prefrontal cortex activity – an area of the brain associated with positive emotion (Wallace & Shapiro, 2006). Holzel et al (2009) noted "decreases in stress ratings which were correlated with reductions in amygdala gray matter density, providing objective evidence for the positive effects of MBSR on stress" (Zeidan et al, 2010:598). These findings support the emerging appreciation of neuroplasticity, the fact that many neural processes are malleable and can change in response to experience (Wallace & Shapiro, 2006). These were ground-breaking findings when applied to the field of human development. What this means is that people do change throughout their adult life and, given appropriate training, can experience a greater sense of well-being.

Through a process of training the mind it is possible to alleviate the effects of stress and anxiety, to improve cognitive skills such as concentration and focus, and to enhance intrinsic human qualities of awareness and kindness. This has implications for human development, for education, and for teacher education in particular. What could be more useful for student teachers and the teaching profession as a whole?

1.2 Motivation

My initial curiosity for the proposed research developed from real-world observations, emerging from the interplay of my direct experience, theories and academic interests. Having been a teacher since 1989, and the deputy principal of a high school for four years, I have felt, witnessed and managed my own stress levels and those of my colleagues – both

experienced ones and those new to the profession. I have also experienced the benefits of a personal mindfulness practice and supported others in related service and business professions.

I regularly reflected on a number of questions: whether our schools could be better run; our students be better prepared for a changing world; and whether our teachers could learn to be less reactive, and more responsive to students' needs? Can our teachers find enjoyment in their work, maintain good health and remain for longer in the profession? Is mindfulness one way towards achieving these aspirations?

My view of what constitutes effective education into the 21st Century concurs with creativity expert, Ken Robinson (Robinson & Aronica, 2009). He talks of providing an education where children and young adults are able to discover, and explore, their innate talents and identify what they are most passionate about. As we are all moving into a knowledge-based society, where the world changes so rapidly, I feel that we need to be educating creative, resilient, adaptable individuals, who can navigate through their lives skilfully, basing their decisions on the bedrocks of knowledge and wisdom. Education is not just about developing a fixed set of skills and knowledge, but about enhancing the capacity for lifelong learning (Alheit & Dausian, 2002). In order to do this, we need teachers who are confident, knowledgeable and attentive to all aspects of a student's needs, and we need teacher training institutions that provide the foundation for these skill sets and dispositions.

1.3 Purpose of the Study

Given my personal motivation and interest in the fields of education, human development and contemplative practice, the overriding purpose of this study is to explore new ways of enhancing the professional development of student teachers. Given the promising findings in the psychological and medical literature around the benefits of mindfulness, the specific purpose is to explore the potential of mindfulness to alleviate the stress and support the transition from student teacher, to teacher.

1.4 Structure of the Thesis

In order to provide a structure for the research study, this thesis is divided into a sequence of chapters. **Chapter Two** provides an evaluation of the existing literature in the three fields of education, stress and mindfulness, which are drawn together in the research study. To start, models of student teacher development are summarised, with a focus on the stages where levels of stress reach a peak, often termed the 'struggle for survival'. These models are cross-referenced with contemporary adult development models, providing a conceptual foundation. The subsequent section summarises some of the stress in education literature, drawing out concepts of most relevance to student teachers, and a single model of Teacher Stress is then explored to ground the study. To conclude, an attempt is made to condense the burgeoning contemporary academic literature on mindfulness, and its empirically-established benefits both for people in crisis, and people committed to conscious growth. Several mindfulness and compassion models are described and evaluated. Finally, the gaps in the literature are identified, providing the motivation for the empirical work.

Chapter Three explains the chosen research design, based on the research question and an analysis of gaps in current research. The impact of mindfulness courses is widely researched in the medical field, but has received less attention in the area of education. The data collection methods are then outlined, revealing how the data are to be organised and analysed.

The results are presented in Chapters Four to Six:

Chapter Four gives portraits of seven of the student teachers as they progressed through their PGCE course. This chapter uses verbatim accounts from the research participants to reveal their individual experiences of stress, and of the mindfulness-based intervention.

Chapter Five focuses on the student teachers' experiences of stress and their stress responses, using data from the Depression, Anxiety, Stress Scale (DASS) and the interviews. Themes are categorised and explored, providing insights on stressors, coping mechanisms and personality characteristics.

Chapter Six draws together the student teachers' experiences of the MBI, in terms of outcomes, effectiveness and the change process. Key themes emerged from the

intervention which are shown to be of importance to the student teachers' personal and professional lives.

Chapter Seven provides an explanation of how the thesis has contributed to new knowledge through the recommendation of a developmental model of mindfulness, incorporating the concepts of restorative, dynamic and transformative mindfulness.

Chapter Eight draws conclusions from the results. The implications of the findings are discussed for bringing mindfulness into education in South Africa, and into teacher education programmes in particular.

CHAPTER TWO: LITERATURE REVIEW

The literature review explores three bodies of research: (2.1) student teachers' development; (2.2) stress research in education and (2.3) mindfulness as a stress management intervention. Each body of research is evaluated in order to construct arguments that have informed the direction of the research study. The intention of the literature review is to establish evidence for the significance of the study both for practice and policy, and to contribute to on-going contemporary discourse and the development of theory.

Grounded in the body of research on teacher education comes an analysis of student teacher development and the sense that student teachers inhabit an interesting transitional space, between student and teacher, adolescent and adult. For most young people, stress is an inherent aspect of this rite of passage, yet a careful understanding of these epochal transitions has the potential to allow for growth and increase resilience as an outcome of this challenging time.

The research around stress in education is extensive for teachers, yet still nascent for student teachers. By using a transactional model of teacher stress as a framework, I set out a conceptualisation of the progression from potential stressor to chronic stress symptoms, and reveal points at which this progression can be inhibited. The baseline model of teacher stress is then adapted for student teachers, incorporating insights from other theorists.

The rapidly expanding literature on mindfulness provides evidence that an intervention of this nature has a powerful potential to alleviate stress. My argument is based on research findings with medical populations, educators and tertiary students, with key aspects drawn out in order to advise on using mindfulness for student teachers. This allows for the development of a mindfulness-based intervention (MBI), which is suitable for this new population.

2.1 Student Teachers' Development

A review of the teacher education literature positions this research study within two dimensions: the growth and development that is possible and desirable for student teachers at teacher education institutions, and the point at which stress most often arises as they move through different stages of development.

2.1.1 Teacher Education Curriculum

Teacher education institutions worldwide have a challenging responsibility to identify where their student teachers have come from, and equip them for where they are going. This is particularly important in South Africa, where the education system is still polarised due to the legacy of apartheid. Choices need to be made regarding the curriculum focus. A number of contemporary Western researchers have cast light on aspects of the curriculum taught at teacher education institutions, which they consider to be essential, namely: content knowledge, pedagogical skills and the development of the dispositions of a teacher (Soloway, 2011; Darling-Hammond & Bransford, 2005; Noddings, 2003; Cochran-Smith, 2001; Reynolds, 1992; Fullan & Hargreaves, 1992).

Researchers in the African context have a significantly different focus, as they are concerned about the low academic level of teacher education entrants (Coultas & Lewin, 2002:256). They emphasise the need to focus on subject upgrading in order to support gaps in student teachers' knowledge. According to Marais and Meier, "teacher training should be designed to achieve four basic objectives: improving the general educational background of student teachers; increasing their knowledge and understanding of the subjects they are to teach, understanding the pedagogy of children, and learning and developing practical skills and competencies" (2004:221). These theorists have omitted the focus on dispositional development. In the West, the 'person of the teacher' has been gaining elevated status (Goodson, 1991), with the recognition that the teacher's "character, spirit, intellect and personality" play a significant role in students' learning, particularly in the area of values and attitudes (Noddings, 2003:5). In a globalised world, it has become even clearer that content knowledge and pedagogical skills are constantly changing and teachers cannot rely on what they learnt during a one-year postgraduate certificate in education (PGCE). They need to be open-minded lifelong learners, flexible, reflective and creative. This list falls under the realm of dispositions.

This contemporary shift in focus forms the essence of the research study, where the development of dispositions, 'the person of the teacher', takes centre stage (Miller, 2014; Roeser et al, 2012; Soloway, 2011; Palmer, 2010; Solloway, 1999). Another related factor is that student teachers get overwhelmed with theory once they are in the classroom, and need to learn how to navigate the complexity and ambiguity, and respond to situations intuitively. Singh et al (2013) propose that a different type of training is required for teachers to learn how to act wisely in the face of complex classroom dynamics, in the heat of the moment. Hamachek highlights these issues succinctly: "Consciously we teach what we know, unconsciously we teach who we are" (1999:209). However, very little guidance has been given in the literature on how dispositions can be developed, and how student teachers can be assisted to see complex situations clearly and respond appropriately. Through the intervention developed for this research study, it may be possible to evaluate whether this can be done.

2.1.2 Stages of Human Development

Within the broad human development literature, some models of development focus on cumulative, or progressive, changes (Kegan, 1982), while others are often associated with significant life crises or events and are referred to as epochal (Mezirow & Associates, 2000). The unstable periods of transition between different stages are often linked to stress and strong emotions. Student teachers face a rite of passage as their identities change and they transition in their role from student to teacher. The human development literature locates this shift in identity in its broader context. In 2.1.3, it is then conceptualised by Maynard and Furlong (1993), Guillaume and Rudney (1993) and Rusznyak (2008), in the specific context of student teachers.

Levinson (1986) has focused on human life stages, specifying the ages at which they generally occur. He talks of an early adulthood stage (17-45 years) as the:

> *"era of greatest energy and abundance, and the greatest contradiction and stress… In social and psychological terms, early adulthood is the season for forming and pursuing youthful aspirations, establishing a niche in society, raising a family" (Levinson, 1986:4).*

He recounts the opportunities for great satisfaction, but also 'crushing stresses', as people simultaneously undertake the burdens of parenthood and forming an occupation, incurring heavy financial obligations, while earning power is still relatively low. Levinson asserts

that “early adulthood is the era in which we are most buffeted by our own passions and ambitions from within and by the demands of family, community, and society from without” (p.5). This is the stage of most relevance to student teachers.

College students inhabit a liminal space, and as such are particularly vulnerable to ‘crushing stresses’ as they cope with a variety of academic, social, and personal challenges. Students walk the line between engaging with extension activities that promote personal growth and resilience, or experiencing excessive stress, which can detract from their willingness to try, and may lead to burnout or departure from the profession. An individual with functional coping strategies can develop resilience through cumulative stressful events, while an individual with dysfunctional coping strategies is likely to succumb to burnout. The diagram below provides a clear visual representation of this.

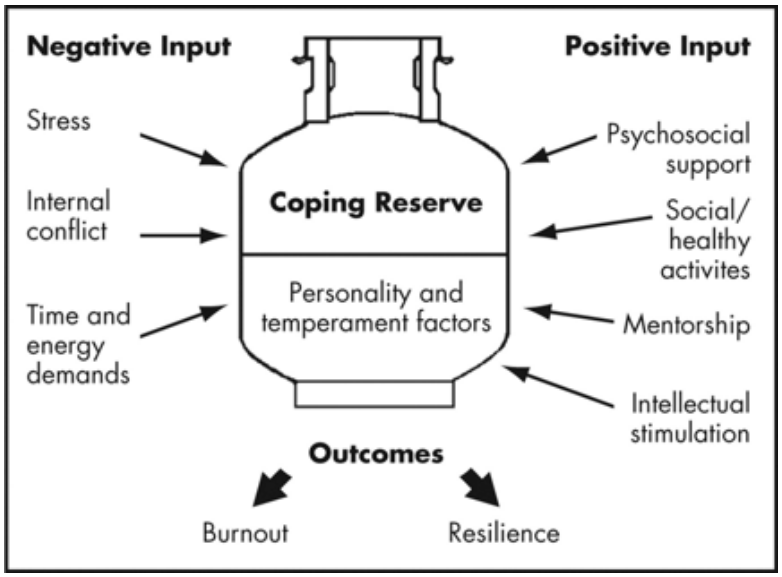


Figure 2-1: Coping Reserve Tank (Dunn, Inglewicz & Moutier, 2008)

There is an increasing body of literature addressing the emotional needs of college students, particularly those entering the caring professions (Cohen & Miller, 2009; Shapiro et al, 2008; Oman et al, 2008), as well as the stress experienced by student teachers (Chaplain, 2008; Kyriacou & Kunc, 2007; Liston, Whitcomb and Borko, 2006). This research study plans to contribute towards ensuring that the challenging circumstances associated with the teacher education process produces resilient teachers, rather than losing young ideological teachers to other professions, or to burnout.

2.1.3 Student Teachers' Developmental Stages

Theories of student teacher development are presented both as linear stage models and non-linear developmental models, outlining the anticipated progression of student teachers as they move through their training. Many of these 'learning to teach' models identify a specific stage where levels of stress reach a peak, usually during the teaching practicum where students have to shift their identity and start taking on the role of teacher. The Huberman (1993), Fuller (1969), Fuller and Brown (1975) and Maynard and Furlong (1993, 1995) models all identify this as a 'struggle for survival' stage.

Maynard and Furlong (1995) characterise the process of learning to teach as a sequence of changing conceptions and the development of a teacher identity. Their model is based on the PGCE programme and identifies distinct stages of development among student teachers: 1) early idealism, 2) survival, 3) recognising difficulties, 4) hitting the plateau and 5) moving on. After the pre-service programme, they are expected to progress to autonomous teaching.

The second stage is where student teachers face the realities of classroom life and become involved in 'the struggle for survival', while in the third stage they recognise the difficulties of teaching and become concerned with the need to give an impressive performance. These two stages are characterised by high stress levels and may therefore be conducive to stress-alleviating interventions. Most students move on to autonomous teaching once they begin teaching professionally, but some teachers may stay stuck in survival mode for the duration of their careers, if they do not have the content knowledge, pedagogical skills or dispositions which allow them to gain confidence in their praxis, and develop their professional identity.

Other theorists have constructed non-linear developmental models. Guillaume and Rudney's study revealed that "preservice teachers moved from thinking about educational matters in concrete, undifferentiated ways to thinking in ways which were more integrated, flexible, and holistic" (1993:78). They conclude by saying that student teachers hold multiple concerns simultaneously and they, "[. . .] did not so much think about different things as they grew; they thought about things differently" (1993:79). They make a case for de-emphasising discrete stages and addressing development as a general process, which seems to be internally driven and mediated by field and university experiences, particularly

dispositions such as reflexivity. Rusznyak, after empirical research at Wits, makes a similar case for a non-linear developmental model, concluding that "learning to teach is developmental in that hierarchical changes are observable over time. However, development is non-linear, as student teachers develop in different facets, at different rates, at different times." (Rusznyak, 2008:374).

Calderhead and Shorrock conclude this academic debate effectively:

> *Stage models are useful heuristics in highlighting the complexity of teaching and the possible routes of professional development, but the diversity of routes in becoming a teacher is wide, the people and the situations involved are different, and attempts to reduce learning to teach to a few stages inevitably remain broad generalisations. (1997:186)*

Another line of research from the student development literature, relevant to this study, accents the difficulties of counteracting 'an apprenticeship of observation' (Lortie, 1975). This apprenticeship can be skewed either by experiencing excellent teachers who make teaching look easy, or, more often in South Africa, by learning from minimally-trained teachers who demonstrate few of the skills necessary for enabling learning. Rusznyak (pers com, 2012) describes students from these two poles. Students from many township or rural schools were taught by teachers whose "subject knowledge is so low that they don't have the wherewithal to actually engage in pedagogical thinking, reasoning, making appropriate choices, so they are perpetually stuck in survival mode simply because they don't have the knowledge to engage with an informed practice." Students from these contexts have only observed low-level teaching, and are therefore unaware of the different skills required for effective teaching. It may take them longer to move through the developmental stages of learning to teach as "they go into a classroom and it is a shock for them and they realise how difficult it is, and it looked so easy." (Rusznyak, pers com, 2012).

On the other hand, she also notes how there are students who have had excellent teachers with sound content knowledge and pedagogical thinking, and the teachers have made it look so easy: "if you've had outstanding models of teaching, they are so fluid that they make it look unproblematic", resulting in students underestimating the cognitive and emotional demands of teaching. So she concludes that "going into schools is inherently stressful, but in South Africa we've got a whole different layer about context, lack of a public transport system, where they live and where the schools are, and how they are going to get there, and finance, and so on, and that adds another dimension."

In terms of this research study, Rusznyak identified a number of crucial issues and made clear recommendations. The year-long PGCE, for many students, feels like a baptism of fire. They are expected to come into the training with sufficient content knowledge, but this is not always the case, depending on their own schooling experiences. In addition, daily life circumstances in South Africa are stressful, such as finances, living conditions and lack of public transport. Different students, therefore, are at very different levels of development, and need personalised support. The majority of issues come to the fore during the teaching experience (TE) stage, where they experience the 'struggle for survival'. For this reason, Rusznyak recommended that the PGCE cohort, around TE, would benefit the most from a stress management intervention.

The linear stage models provide a useful lens through which to understand, and possibly predict, the stages in a student teacher's education that may be the most challenging, and therefore would benefit from specific interventions, such as the one at the heart of this research study. The non-linear developmental models, and Lortie's theory, assist in identifying possible divergence from the predicted stages, as they take individual differences and contexts into account.

2.1.4 Stress among Student Teachers

Strangely, stress among student teachers had not been widely researched until recently, possibly, "as Murray-Harvey et al. (2000) suggested, it is viewed as a normal part of teacher development and therefore accepted as a natural element of the transition from novice to qualified teacher" (Chaplain, 2008:195). However, it appears to be a serious problem:

> *The relative lack of research into stress and psychological distress among UK trainee teachers is perhaps surprising, given the numbers who reportedly never commence teaching, who leave very early in their careers, or who go on to potentially add to the high levels of teachers who report being stressed or experiencing mental health issues. (Chaplain, 2008:197)*

The rate of student teacher withdrawal from teacher training programmes has been a global cause for concern for at least two decades. Kyriacou and Kunc reported, "In England, about 40 per cent of those who embark on a training course (on all routes) never become teachers and of those who do become teachers, about 40 per cent are not teaching 5 years later" (2007:1).

In order to bridge the gap between student teachers' expectation of teaching as a career, and the reality of the challenges that they experience, teacher education institutions have an important role to play. They need to find the right balance between attending to the academic and emotional needs of their students. Liston, Whitcomb and Borko (2006) carried out research on the experiences of first-year students in the United States and drew the following conclusions:

> *Given what we know about the nature of new teachers' learning and development, how might teacher education respond to the challenges of the first years of teaching? To address this question, we need some understanding of the sources of beginning teachers' struggles. We offer three common explanations: First, new teachers say the theoretical grounding learned in teacher preparation does not equip them sufficiently for the demands of daily classroom life; second, they wrestle with the emotional intensity of teaching; and third, they often teach in workplaces that are not adequately organized to support their learning. (2006:352)*

Oman et al note that, in the US at least, "among college students, high levels of distress have been linked with multiple adverse outcomes, including anxiety and depression, suicidal ideation and hopelessness, poor health behaviors, increases in headaches, sleep disturbances, increased rates of athletic injury, and the common cold" (2008:569). An international study of students aged 17-30 years from 23 countries (both developed and developing) reported a mean prevalence of 20% (19% for males and 22% for females) for depression. Highest rates were in Korea (44%), Taiwan (43.5%), Japan (35.5%) and South Africa (33.5%) (Ibrahim et al, 2010).

If we know that student teachers are likely to go through these stages of 'crushing stresses' and 'struggle for survival', and that young adults in South Africa rank the fourth most depressed in the world, it seems critical to explore effective approaches to managing their depression, anxiety and stress, and tertiary institutions stand in a good position to do this. Mabelebele, from Higher Education South Africa (HESA), draws attention to the findings of Beck, namely the low throughput and retention rate, and high drop-out rate of higher education students in South Africa:

> *From a number of studies, it is estimated that 25% of first entering South African students exit before or by the start of their second year, 30% pass under 50% of their first year subjects, and only 21% graduate in minimum time. In addition, the overall graduation rate of 15% across the South African universities is among the lowest in the world. (Mabelebele, 2012:1)*

In terms of recommended solutions to these challenges worldwide, Liston et al (2006:356), carrying out research in the USA, conclude their study by saying that "teacher educators should consider models of professional development that focus on teacher formation, cultivating teachers' emotional balance, and creating contemplative spaces." Chaplain's recommendations from the UK are that,

> *more comprehensive training in behaviour management techniques is needed, including providing trainees with greater knowledge and understanding of pupil behaviour and behaviour difficulties… Second, training is needed in stress management techniques… Third, more efforts should be made to match trainees to placement schools, mentors, and optimal types of support* [. . .] *(Chaplain, 2008:207)*

This research study provides the opportunity to evaluate whether a specific type of intervention might offer support for student teachers' and alleviate their stressors, in the context of South Africa.

2.2 Stress Research in Education

Research into occupational stress among teachers worldwide has expanded rapidly in the last 50 years. Much contemporary literature states that the expectations of, and demands within, education have never been greater (Kyriacou, 2000). In European and American studies, teaching ranks as one of the most stressful occupations (Johnson, Onwuegbuzie & Turner, 2005; Anderson et al, 1999) and there is widespread concern that stress is impacting the future of the profession and the welfare of children (Cecil & Forman, 1990; Blase, 1986). At the national level, studies in the UK and USA reveal worrying statistics on teacher retention. The number of secondary school teachers taking early retirement has increased by 93 per cent over the last seven years; many blame this on the stress resulting from managing pupil behaviour and from successive government initiatives (Chaplain, 2008). There is a 10 per cent dropout rate each year and only 59 per cent of teachers stay for more than 4 years in the classroom (Jennings & Greenberg, 2009; Mark & Anderson, 1978). A 1995 Organisation for Economic Co-operation and Development (OECD) report revealed that in the US, 30 per cent of new teachers leave within three years, and half within five years of joining the profession.

The attrition rate of teachers in South Africa was found to run between five and six per cent annually (DoE, 2005), with a reported 20,000 teachers leaving the profession in 2006,

and only 6,000 new teachers entering it (DoE, 2007:7). However, whether this attrition rate is related to stress needs to be further investigated. South Africa has a distinctive history, and there are likely to be multiple causal factors. Likely causes of few young people entering teaching include the poor public image of the profession, challenging working conditions, uncertainty about where new teachers will be sent to teach, the lure of competing job opportunities, and the decline of bursaries awarded to student teachers.

At the international level, the OECD published *Teachers Matter: Attracting, Developing and Retaining Effective Teachers* (OECD, 2005), which provides a comprehensive review of teacher policies in twenty-five nations. The report confirms the concern across countries about the quality and retention of teachers. Not only do teachers leave the profession, but as a career that rates high on the stress scales, there are also increasingly high absenteeism rates.

These reports and figures support the argument that stress is a serious issue within education. A conceptualisation of stress, and an understanding of the most common times that it arises, can highlight opportunities for stress to be addressed effectively.

2.2.1 Conceptualisation of Stress

Different definitions of stress determine its conceptualisation. Some have been categorised as 'engineering' definitions, which focus solely on the pressure exerted by the external environment on an individual. Others are termed 'transactional' definitions and view stress in terms of the affective response state displayed by an individual to the pressure of the external environment (Kyriacou, 2001; Abel & Sewel, 2001; Blase, 1986; Fimian, 1982; Kyriacou & Sutcliffe, 1978a). Teachers show marked individual differences in their reactions to stressors in the teaching profession with some teachers developing more psychological symptoms than others (Chan, 2003). This thesis will therefore focus on transactional definitions of stress, which take the individual's personal characteristics into account and is in line with Blase's definition of stress as the "perceived imbalance between demands on an individual and the individual's ability to cope with these demands" (1986:23).

According to Fimian:

> *Stress is a hypothetical construct that represents an equilibrium state that exists between the individual responding to environmental demands and the actual environment. Disequilibrium may have actual causes, perceived causes or, frequently, a combination of both actual and perceived causes. Stress, therefore, can be positive or negative, desirable or undesirable, and a good or bad reaction to a real or perceived imbalance between the demands of the environment and the individual's capability of responding appropriately to those demands. (Fimian, 1982:101)*

Fimian's definition points to the growth in resilience that can be made possible, if people learn how to cope with stress, but few teachers have had access to such training, and the profession is experiencing the devastating consequences of this. Stress, therefore, is most often defined in a negative way, such as "the experience by a teacher of unpleasant, negative emotions, such as anger, anxiety, tension, frustration or depression, resulting from some aspect of their work as a teacher" (Kyriacou, 2001:28).

The above conceptualisations of stress encompass the following aspects, which provide the broad parameters for constructing a stress model: the teacher's personality characteristics, environmental demands, their perception of their ability to cope and their emotional response. Abel and Sewell go one step further, linking emotional responses to physiological manifestations. They propose that "the experience of stress results from the teachers' perceptions of demands, the inability or difficulty in meeting such demands stemming from a lack of effective coping resources, and the ultimate threat to the teachers' mental or physical well-being" (2001:287). These physical manifestations can lead to longer-term consequences of stress, which are measurable by medical researchers, and have provided empirical evidence for the severity of stress that teachers are dealing with in contemporary society.

2.2.2 A Model of Teacher Stress

A much-cited model of Teacher Stress was developed in 1978 by Kyriacou and Sutcliffe, and still provides a clear conceptualisation of the transactional definition of stress outlined above. I will provide commentary on this model with reference both to literature on teacher stress, particularly from South Africa, and on student teacher stress, where available.

The model progresses from box 1 through 8, with a variety of feedback loops and points at which stress could be prevented or alleviated significantly.

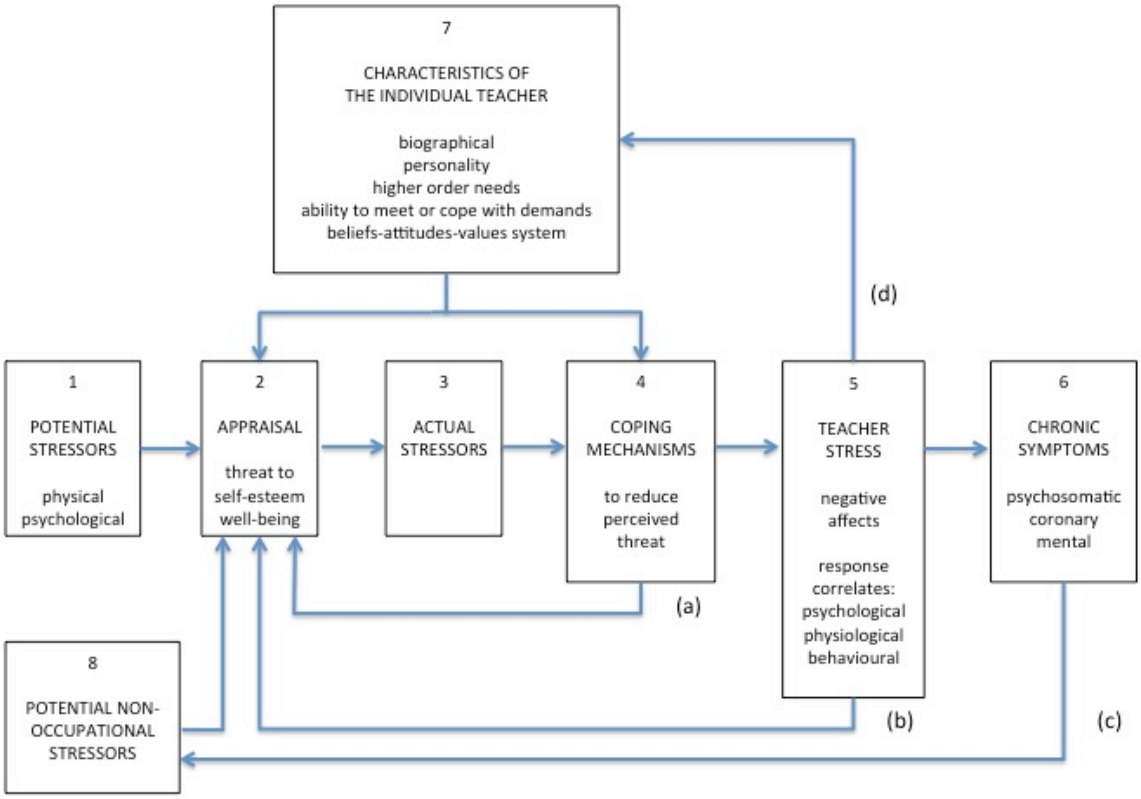


Figure 2-2: A Model of Teacher Stress (Kyriacou & Sutcliffe, 1978a)

i) Potential Stressors (box 1)

Potential occupational stressors are categorised as either physical or psychological. Certain contexts present significantly more potential stressors than others, and South Africa is a case in point. The physical factors that could be attributed to the legacy of apartheid and the deeply divided socio-economic cultural context include poorly resourced schools, large student to teacher ratios, and inadequate salaries:

> *Working conditions for black educators in particular have not been favourable since they have been confronted with overcrowded classrooms, and a lack of resources and facilities due to disparities during the apartheid dispensation. (Ngidi and Sibaya, 2002), in Steyn and Kamper (2006:116)*

Challenges are not restricted to rural and township schools. In the former low-density suburbs, cluster housing has raised the population density and the demand on school places. A school such as Robertsham Primary, south of Johannesburg, once designed for

400 students, must now house over 1000 learners, without funding for any significant development in its infrastructure.

Psychological factors include discipline issues, uninvolved parents, learners' negative attitudes, and lack of learners' motivation or self-esteem (Schulze & Steyn, 2007). Other potential stressors include redeployment, retrenchments and retirement packages, poor relationships with school administrators and new governing bodies, the high crime rate in the country, and the current political change and corruption in state departments (Peltzer et al, 2009; Olivier & Venter, 2003; Saptoe, 2000; Marais, 1992).

School reform has also been identified as a major potential stressor. Kyriacou (2000) emphasises that, in many countries, schools have undergone periods of rapid change affecting teaching methods, the content of the school curriculum and assessment procedures, and changes in how the quality of teachers' work is monitored. South Africa is a prime example. The passing of the South African Schools Act in 1996, with its introduction of the new curriculum approaches, namely Outcomes Based Education (OBE) and the model of Inclusive Education (IE), the abolition of corporal punishment, additional mediums of instruction (especially the shift to English) have been shown to have had a significant impact on teachers and have been attributed to rising levels of stress (Steyn & Kamper, 2006; Paulse, 2005; and Saptoe, 2000). After nationwide concern, the 2001 review of OBE found it to be problematic both in its approach and its concentration on skills and the processes of learning, without sufficient specification on content and knowledge. The recent change in emphasis to Curriculum and Assessment Policy Statement (CAPS) may have addressed some of these concerns, but any reform requires change, and change, for many teachers, provides a potential source of stress.

For student teachers, the potential stressors are many, and predominantly psychological. An early study by Thompson (1963) surveyed student teachers and discovered that they were most anxious about mastery of subject, making lesson plans, pupil reaction, teacher standards, inability to answer questions, and student discipline. Fuller (1969) reviewed 10 studies of student teacher concerns conducted over a 36-year period and reported that classroom control, student discipline, their own knowledge adequacy, and evaluations of them by students and administrators consistently were areas of greatest concern to student teachers (Pettegrew & Wolf, 1982). More recent studies cite excessive workload, poor

interpersonal relationships with mentors and colleagues, problems related to student discipline, financial problems, the impact on the trainee's personal relationships and stress, or general unhappiness (Chambers, Hobson & Tracey, 2010:112). Research in South Africa backs up these claims, revealing that "student teachers tend to be anxious about factors such as the maintenance of discipline and learner control, the quality of their professional relationships with their supervisors, the level of their knowledge of the curriculum content and the quality of their understanding of the learners" (Marais & Meier, 2008:224).

ii) Potential Non-Occupational Stressors (box 8)

Non-occupational stressors include aspects of a teacher's domestic or social life, life crises or their health, which may contribute additional stressors. The domestic environment is critical to well-being, but carries the potential for disruptive interpersonal conflicts.

Taken into the context of South Africa, the historical, and on-going political, economic and social transformations result in a society where citizens are reported as being under extremely high levels of stress in their personal lives, which has knock-on implications for their professional lives (Kaminer & Eagle, 2010; Peltzer et al, 2009). The PGCE and TE coordinators at Wits both talked of the daily life stressors for students, such as financial concerns, the poor public transport system, and challenging living conditions.

iii) Appraisal

Teachers appraise potential stressors, both occupational and non-occupational, in two distinct ways. Lazarus and Folkman (1984) distinguish primary appraisal (does this make significant demands on me and my resources?) and secondary appraisal (do I have the resources to meet these demands?). The way an individual appraises the external environment is, to a significant degree, dependent on their personality characteristics (box 7) as well as on their characteristic ways of coping (box 4). These may, indeed, be dysfunctional coping strategies – coping strategies that were developed at an earlier stage in life to address a particular life event, and are no longer appropriate to the current situation – which have become entrenched personality traits. These might include avoidance techniques or neurotic perfectionism.

iv) Actual Stressors

Potential stressors do not always become actual stressors, as long as moderating factors come into play through appropriate secondary appraisal. This is revealed in the model by the loops around Actual Stressors, showing how individual characteristics or coping mechanisms can prevent the move from potential to actual. For example, one student may view TE as exciting and challenging, while another may view it as terrifying.

Many studies note that the teaching practicum ranks as one of the highest stressors for student teachers (Macdonald, 1993; Chaplain, 2008; Kyriacou & Stephens, 1999), yet it is also seen as "the most useful part of the teacher education curriculum because it provides hands-on experience" (Reddy, 2003:187). This point illustrates how careful anticipation and preparation on the part of teacher educators could mitigate the stress experienced in vulnerable student teachers.

v) Coping Mechanisms

Coping mechanisms provide an intermediary position between actual stressors and teacher stress, helping to reduce the perceived threat. They are utilised to deal with actual occupational stressors, and are partly determined by the teacher's (or student teacher's) individual characteristics. A summary of different coping strategies is provided by Neff, Hsieh & Dejitterat (2005), below:

> *In the coping literature, coping is typically defined as: "cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding resources of the person'' (Folkman & Lazarus, 1991, p. 210). Coping strategies are generally classified into three broad categories: (1) problem-focused; (2) emotion-focused; and (3) avoidance-oriented (Zeidner, 1995). Problem-focused coping attempts to change stressful situations by taking proactive actions to change circumstances for the better. This coping strategy may employ attempts directly to remove the stressor, to plan out future productive action, to curtail other activities in order to focus on the problem at hand, or to seek instrumental help in the situation. Emotion-focused coping attempts to change the way a person attends to or interprets the situation so that the resulting affective reaction is altered. This may involve efforts to seek emotional support, to reappraise the meaning of a situation, to focus on and vent negative feelings, or to accept a situation with equilibrium. Avoidance-oriented coping is aimed at avoiding the stressor rather than facing it, and may include denying the reality of a situation, giving up, or mentally disengaging through excessive sleep or intoxicants. (Neff et al, 2005:278)*

Problem-focused and emotion-focused strategies are often termed adaptive or functional, as they are beneficial in both the short and long term, even allowing the progression to stress to be prevented, while dysfunctional coping strategies serve to avoid, deny or

suppress feelings of stress temporarily, while setting the stage for longer term stress, including chronic symptoms. The intervention at the heart of this research study aims to develop adaptive coping mechanisms, in order to prevent the negative feedback loops represented by (a), (b), (c) and (d) on the model.

In the education literature there is a different conceptualisation of coping strategies. Kyriacou (2001) discusses strategies as falling into the categories of direct action techniques and palliative techniques, and describes a number of adaptive strategies:

> *Direct action techniques refer to things that a teacher can do that eliminate the source of stress* [. . .]. *Direct action techniques may involve simply managing or organising oneself more effectively; it may involve developing new knowledge, skills and working practices; it may involve negotiating with colleagues, so that aspects of one's situation are changed or dealt with by others. Palliative techniques do not deal with the source of stress itself, but rather are aimed at lessening the feeling of stress that occurs. Palliative techniques can be mental or physical. Mental strategies involve the teacher in trying to change how the situation is appraised. Physical strategies involve activities that help the teacher retain or regain a sense of being relaxed, by relieving any tension and anxiety that has built up. (2001:30)*

Wilson, in her report for the Scottish Council of Research in Education (2002), describes common direct action and palliative coping strategies. Examples of both adaptive and avoidant direct action involves leaving the profession; removing disruptive pupils from the classroom; moving schools; taking a sabbatical; being open about the feelings of stress and learning ways to accept the problems. In terms of palliative approaches, she identifies both dysfunctional and functional coping strategies. The dysfunctional approaches include the use of drugs and alcohol ('a stiff whisky'), which over the long term, and when taken to excess, only serve to increase feelings of stress. Functional or adaptive palliative techniques, noted in Wilson's study, include activities outside of school, such as jogging and meditation, which give teachers the 'time-out' needed to unwind, and the 'time-in' necessary for self reflection and reperceiving stressful situations.

A final interesting area to address, when looking at coping, is the difference between dispositional coping and situational coping (Carver, Sheier & Weintraub, 1989). Many people develop preferred coping strategies during childhood, which they apply to all situations. These strategies have often developed over time as a dispositional trait or personality characteristic. These are not always adaptive, such as avoidance of difficult situations, suppression of uncomfortable feelings or overcompensation. Other people are able to develop a range of coping strategies, which they apply depending on the particular

situation at hand. Being able to evaluate the most functional, or adaptive, coping strategy in the moment in which the stressor arises requires a considerable presence of mind, and a range of coping mechanisms.

vi) Stress Responses

Stress is conceptualised as an emotional response or negative affect as a result of excessive external events, as a physiological response such as insomnia or muscle tension, or a behavioural response, such as absenteeism. Common emotional responses described in the stress literature include anxiety, anger or depression (Kyriacou & Sutcliffe, 1977, 1978b); hostility, anxiety and depression (Derogatis, 1987); rumination, depression and anxiety (Jennings & Greenberg, 2009); and depression, distress and anxiety (Brown et al, 1997; Lovibond & Lovibond, 1995; Clark & Watson, 1991). This study focuses on the most commonly discussed emotional responses: depression, anxiety and (di)stress.

Depression reflects experiences such as fatigue, loss of interest, feelings of loneliness and lowered self-esteem, as well as suicidal ideation, and is linked with anhedonia (inability to feel pleasure). Depression is associated with loss events, in which something or someone that is valued is lost and perceived as hard or impossible to regain; an experience of failure; a feeling of not being good enough; or helplessness. Anxiety includes characteristics such as tension, worry, fear, nervousness and apprehension resulting in body sensations such as a pounding heart, trembling or shaking. Anxiety has been linked to danger or threat events, in which an unpleasant specific future crisis is considered likely (Eysenck, Payne and Santos, 2006). Negative affect, or general distress, underlie both anxiety and depression (Clark & Watson, 1991).

vi) Chronic Symptoms

Kyriacou and Sutcliffe describe the potentially pathogenic nature of the physiological and biochemical changes that accompany stress, such as peptic ulcers, heart disease and mental ill health. Olivier and Venter's paper cites van Wyk (1998), who indicates that teachers in South Africa hand in more medical insurance claims than persons in other professions, have a four-year shorter life expectancy than the national average and often blame stress as the reason for sick leave from school (2003:186). A national study by Peltzer et al (2009) concluded that four stress-related conditions are most prevalent amongst teachers, namely hypertension (15.6 per cent), stomach ulcer (9.1 per cent), diabetes (4.5 per cent) and

major mental distress (3.9 per cent). They do not, however, contrast these scores with the normative studies of the general population. Overall, the research revealed there to be high stress levels among educators and low job satisfaction levels.

Chronic symptoms often require medical or psychological interventions. Burnout is a further manifestation of unmanaged stress, widely reported as problematic within the teaching profession. Indeed, fear of burnout, from witnessing its impact on colleagues, can also become a source of anxiety. Edelwich and Brodsky assert that burnout may be defined as a "progressive loss of idealism, energy, purpose, and concern as a result of conditions of work" (Farber, 1984:325). In general, burnout is a function of feeling inconsequential, feeling that no matter how hard one works, the payoffs in terms of accomplishment, recognition, or appreciation are not there. In a profession so often termed 'a vocation', the recorded occurrence of burnout is significant and worrying (Abel & Sewell, 2001; Cordes & Dougherty, 1993; Farber, 1984; DuBrin et al, 1979).

Montgomery and Rupp's meta-analysis of 65 teacher stress studies concluded that exposure to stressful events, if not mediated through appropriate coping mechanisms, can lead to different magnitudes of burnout. They conclude their study on a positive note, however, by saying that "understanding and uncovering negative emotions related to external stressors is the first step towards a better performance, a higher degree of professional satisfaction, and, consequently, a higher level of teacher retention" (2005:283).

vii) Characteristics of the Individual Teacher

Characteristics, as listed in box 7, are often termed predispositional factors (Fimian, 1982) or personality mediators. Kyriacou and Sutcliffe specify biographical aspects, such as age and sex; personality; higher order needs; ability to meet or cope with demands; and beliefs-attitudes-values system. People appraise events differently and utilise different coping skills, as they "differ in the degree to which they perceive themselves to have control over their environment" (Kyriacou & Sutcliffe, 1978a:4).

Challenging work and life events also serve as opportunities for growth and improvements in resilience. Kyriacou defined teacher resilience as the extent to which a teacher is able to maintain a set of positive attributes regarding their work as a teacher in the face of a range of challenges, pressures and demands inherent in their work as a teacher (Kyriacou, 2011).

Overview

Kyriacou and Sutcliffe's transactional model of teacher stress provides a clear conceptualisation, and is of significant relevance to this research study. The consequences of stress are manifold at the individual, institutional and national level and need to be addressed proactively and urgently in South Africa. The physical and psychological manifestations have knock-on effects on pupils, colleagues and the teacher's family. Blase noted that, "while under stress, teachers behave differently with students; they become less tolerant, less patient, less caring, and, overall, less involved" (1986:32). Blase identifies strong negative feelings, particularly "anger towards others" as the predominant consequence of stress in teachers, and draws a strong correlation between increased stress and decreased work performance (1986:33). Schulze and Steyn's study on secondary school educators in South Africa supports these findings. They note that the consequences of excessive pressure on the individual are distress, poor teaching, poor decision-making, lowered self-esteem, low job satisfaction and lack of commitment in terms of remaining in the profession (Schulze & Steyn, 2007). Abel and Sewell conclude their study by saying that, "achieving educational goals for students in the classroom mandates addressing the negative implications of stress and burnout among teachers" (2001:293).

2.3 Stress Management Interventions

2.3.1 Types of Stress Management Intervention

Stress management interventions (SMIs) in the workplace are classified into primary, secondary and tertiary, depending on the point at which they are implemented (Richardson & Rothstein, 2008; Cox, 1993). Primary interventions address some form of organisational or work development, which attempts to reduce or eliminate potential external stressors, and thus prevent them from becoming actual stressors. Secondary interventions provide training to alter the ways in which individuals internally respond, through appraisal or coping, to potential or actual stressors in their workplace. Tertiary interventions serve to heal those who have already been traumatised or distressed at work, such as through therapeutic counselling. Within schools worldwide, few of these interventions are implemented, and this is particularly true of South Africa.

Anderson et al (1999) note the irony that:

> [. . .] *programs to address the problem of teacher stress are far from commonplace. According to a study done for the US Department of Health and Human Services, two-thirds of all work sites in the United States have some kind of health promotion activity and more than one-half of these include stress management programs (Snyder, 1990). Farber (1991) noted that corporations view such programs as a cost effective means to increase employee productivity and decrease stress and illness. In contrast, it would appear that systems professing to nurture individuals, such as schools, do not provide comparable services for their needy employees. (1999:6)*

Within the education system, it is rare to hear about primary interventions. Steinberg (2011 pers com) makes a strong point that the majority of education establishments in South Africa "do not consider the institutional factors that place unrealistic, unproductive and unnecessary-to-the-purpose-of-teaching demands on teachers that contribute to stress generation". She is also concerned that the language of stress research so often blames teachers for not managing their stress well enough, rather than finding ways to limit the potential external stressors at their source.

A number of secondary interventions are being used in UK and US schools in the form of stress management workshops, such as developing skills of emotion control, learning the use of self-reflection and stress journals, breathing and relaxation techniques, enhancing the supportive environment of the school (Kyriacou, 2001), and body-based therapies such as yoga and tai chi (Detert et al, 2006).

As a tertiary intervention, counselling services within schools have also been tried, although this has cost implications and requires self-referral, which depends largely on the personality type of teachers and their willingness to ask for help. The willingness to do this seems to be gender-specific with more women than men seeking counselling (Clemens, 2007).

A meta-analysis of occupational SMIs in the USA, including cognitive-behavioural skills training, meditation, relaxation, deep breathing, exercise, journaling, time management and goal setting was conducted by Richardson and Rothstein (2008). Four of the fifty-five interventions analysed were carried out with teachers, while the others were conducted in business and healthcare settings. Their effectiveness was measured at the organisational level (e.g. absenteeism), or at the individual level using psychological or physiological measures. Overall, SMIs were shown to be effective, in the short-term at least, particularly

the cognitive-behavioural interventions. Relaxation interventions (some including meditation) were the most common, possibly due to their low cost and simplicity, yet not found to be the most effective. Alternative SMIs (designed to improve job skills) were successful in schools, such as providing classroom management training to teachers (Sharp & Forman, 1985).

In trying to explain why the cognitive-behavioural interventions were the most effective, Richardson and Rothstein compared the goals of the methods.

> *Relaxation and meditation aim to refocus attention away from the source of stress, to increase the person's awareness of the tension in his or her body and mind, and to reduce this tension by "letting go." Although they may reduce or eliminate troubling thoughts or feelings, they do not direct the individual to confront dysfunctional ideas, emotions, or behaviors. Thus, these are basically passive techniques. Cognitive–behavioral interventions, on the other hand, are more active. These interventions encourage individuals to take charge of their negative thoughts, feelings, and resulting behavior by changing their cognitions and emotions to more adaptive ones and by identifying and practicing more functional behavioral responses. In other words, cognitive–behavioral interventions promote the development of proactive as well as reactive responses to stress. (2008:88)*

Although their generalisation may be true for some types of meditation and relaxation, mindfulness meditation interventions, in their standard eight-week format, usually offer progressive training, which also incorporates an active investigation into the underlying causes of stress and tension, with the aim of allowing participants to accept, and then choose more skilful ways to address, their dysfunctional behaviour. Clarifying definitions and specific types of practices is clearly important when comparing different stress management interventions, and the concepts will be explored later in the literature review [2.3.3 and 2.4.3].

The South African Department of Education's 2004 Annual Report indicated that the status, causes and possible prevention of stress-related diseases in educators should be investigated. Peltzer et al's (2009) nationwide study resulted from this call to action, but no proposals were made for the prevention of stress-related diseases except a brief reference to the inclusion of stress and time management techniques. Similarly, a recent quantitative study with UNISA's in-service teachers, revealed that:

> *Most teachers have difficulty coping with teaching-related stress. They appear unable to pay attention to the emotional needs of learners because they seem to need emotional support themselves. Their stress is compounded because they do not seem able to plan their working days in order to have enough time to complete their work. (Jacobs, Kemp & Mitchell, 2006:140)*

Jacobs et al conclude with recommendations for the consideration of the affective domain in both pre- and in-service teacher training – an interesting contrast to Marais and Meier (2008), also from UNISA. They assert that, "emotional intelligence is the hidden ingredient for teacher success in the face of adverse circumstances" (Jacobs et al, 2006:141). However, they give no information on how to develop these skills with pre- or in-service teachers. These concerns support the focus of this research study, which proposes an experiential mindfulness intervention for stress management, focused on the affective domain, and techniques to enhance teacher resilience.

To conclude, stress is widely reported as having a serious impact on student teachers and teachers. Kyriacou and others, in South Africa and overseas, note that there are a variety of stress management interventions to improve coping skills, which can be taught to alleviate the symptoms of stress, and point out that much more research is needed in this field. To provide effective support, more practical programmes need to be developed and implemented. Mindfulness-based interventions are being widely used as effective stress management interventions in the medical and business arenas. This study seeks to investigate whether mindfulness training could be not only an effective stress reduction intervention, but also a useful developmental approach to unfolding the potential of student teachers at teacher education institutions.

2.3.2 Mindfulness-Based Interventions

Mindfulness-based interventions, within the medical profession at least, have arisen out of the confluence of increasing East-West dialogue. According to Dryden and Still (2006), a significant influence of Eastern thought on Western medicine developed after World War II, when American physicians, scientists and intellectuals held posts in the American occupation of Japan, and were exposed to Zen Buddhism. One direct influence on psychotherapeutic thought is linked back to the exposure of American military psychiatrists to the Zen-informed psychotherapy of Shoma Morita, "which reversed the Western medical approach of attacking the symptoms. Instead, he taught patients to accept symptoms, such as anxiety, with calm awareness, or mindfulness" (McCown, Reibel &

Micozzi, 2010). This paradoxical approach was found to be surprisingly effective and is seen in stress management interventions today, where participants are taught the difference between approach and avoidance coping styles.

Other influences were coming to the West as migration for economic opportunities or to escape from political conflicts became more common. Teachers from many of the Eastern traditions started to offer instruction in the West and learnt to adapt their practices for a Western audience. Maharishi Mahesh Yogi is one of the most widely known for his repackaging of Hindu mantra meditation as Transcendental Meditation (TM), which found its way to South Africa as well as Europe and the States (e.g. Dillbeck & Orme-Johnson, 1987; Maharishi, 1963).

With China's occupation of Tibet and the escape of many high lamas and meditation teachers, Tibetan Buddhism has also come to Africa and the West, where different traditions have set up retreat and *dharma* (teaching) centres, and have adapted the ancient teachings to be meaningful for beginning practitioners seeking support. Samye Ling, in Scotland, was set up by Akong Tulku Rinpoche, a Tibetan lama from the Kagyu lineage, in order to preserve and develop Tibetan Buddhism. From Scotland, it was brought to Southern Africa by Rob Nairn, and Centres are now open in Zimbabwe, the Democratic Republic of Congo and South Africa.

Many universities worldwide are now exploring mindfulness as a way not only to improve well-being by reducing stress, but also to enhance the development of people's talents and signature strengths. The Mindful Awareness Research Centre at UCLA, the Oxford Mindfulness Centre, the Centre for Mindfulness at Bangor University, the University of Aberdeen and the Center for Mindfulness at the University of Massachusetts Medical School are just some of the institutions carrying out work in related fields. The Witwatersrand University does not yet have researchers dedicated to the field, although the University of Cape Town (UCT) has introduced mindfulness in their Executive MBA programme and Stellenbosch University has started a mindfulness teacher training programme.

2.3.3 Definitions of Mindfulness

Despite the rapid expansion of research, mindfulness, as a concept, is not yet fully developed within the research community (Davidson 2010; Hayes & Shenk, 2004) and has even been termed a 'prescientific concept' (Hayes & Wilson, 2003):

> *The lack of a clear operational definition of mindfulness has given rise to considerable and unfortunate ambiguity in the field, such as the equation of mindfulness interventions with acceptance interventions or with meditation, the confusion between mindfulness and relaxation, and the like. Moreover, the lack of widespread consensus on this issue has hindered the progress of research on determining the active ingredients of mindfulness interventions and mechanisms of change. (Dimidjian & Lineham 2003:166)*

Different conceptualisations consider mindfulness to have a single focus (Brown & Ryan, 2003), or to be multi-faceted (Baer et al, 2006, 2004; Dimidjian & Lineham, 2003; Kabat-Zinn, 1994). Others contrast the internal world of mindfulness (Bishop et al, 2004) with its external outcomes (Langer, 1989). Buddhist conceptualisations include intentional and ethical components (Holmes, 2010), in contrast to many secular definitions. Finally, some conceptualisations include the technique, or collection of techniques utilised to develop mindfulness. The terms 'awareness', 'attention' and 'consciousness' are related to mindfulness, but not synonymous.

One way of exploring a definition is first to look at its opposite. The cause of so much stress and suffering for human beings is the habitual tendency to ruminate about the past, repeatedly and anxiously plan for the future, or analyse and judge present moment experiences. People tend to live their lives on 'automatic pilot', reacting to their perception of reality (based on past experiences), rather than opening to the full range of experience in each moment. Put simply, therefore, mindfulness is the ability to orient the mind towards the present moment. Goleman explains:

> *Our natural tendency is to become habituated to the world around us, no longer to notice the familiar. We also substitute abstract names or preconceptions for the raw evidence of the senses. In mindfulness, the meditator methodically faces the bare facts of his experience, seeing each event as though occurring for the first time. (1988:20)*

The simple conceptualisation above accords with Brown and Ryan (2003), who consider that mindfulness has a single focus, namely, the capacity to pay full attention to the present moment. In contrast, Bishop et al (2004) argue that mindfulness encompasses both an attentional and an acceptance-based component. Mindfulness, in their conceptualisation,

contains two qualities: *self-regulation of attention* so that it is maintained on immediate experience, thereby allowing for increased recognition of mental events in the present moment and *orientation to experience* – adopting a particular orientation toward one's experiences in the present moment, an orientation that is characterised by curiosity, openness and acceptance. They exclude qualities and components that are more likely to be *outcomes* of learning mindfulness skills, or maintaining a mindfulness practice over time, and do not consider them implicit in the construct. This bears similarities to Nairn's (2009) definition, "Knowing what's happening, while it's happening without preference".

Baer et al (2006) include additional elements, including outcomes, namely the capacity to observe experiences, to describe observations with accuracy, to act with awareness, not to judge inner experiences and not to react to inner experiences. They refer to these as the five facets of mindfulness.

These differences in view are encouraging theorists to break down the concept in detail, in an attempt to identify the key mechanisms of change, which lead to desirable outcomes. Dimidjian and Linehan's (2003) conceptualisation identifies three qualities related to what one does when practicing mindfulness: (i) observing, noticing, bringing awareness; (ii) describing, labeling, noting; and (iii) participating. It also identifies three qualities related to the ways in which one does these activities: (i) non-judgmentally, with acceptance, allowing; (ii) in the present moment, with beginner's mind; and (iii) effectively. To continue in this vein, some definitions expand on where the awareness is placed, and many identify four points of attention: physical sensations, emotions, thoughts and sensory inputs (sight, sound, smell etc.) (Nairn, 2009).

In the Buddhist world, debate is also ongoing around the most appropriate translation of the Sanskrit term, *smrti*, or Pali term, *sati,* which has come to be translated as mindfulness, but originally means *remembering.* Remembering includes an aspect of intention, where the practitioner commits to, and focuses on, the continuous process of remembering to come back to the present moment each time the mind wanders away. Mindfulness in Buddhism also includes an ethical dimension, and is precisely about knowing the difference between helpful and harmful behaviours (Holmes, 2010). In the Buddhist definition, mindfulness is not just what takes place during a meditation session, but also focuses on the way people live their lives. By releasing the ego-centric focus, ethical

behaviour becomes a natural outcome in considering the needs of others. For Holmes, the secular definitions of mindfulness relate more closely to the Buddhist definitions of awareness as they do not include any ethical underpinning.

This research study supports a multi-faceted conceptualisation of mindfulness, which incorporates aspects of intentionality, present-moment awareness, acceptance and ethical behaviour. Kabat-Zinn's definition encompasses the first three elements explicitly, "paying attention in a particular way: on purpose, in the present moment, and non-judgmentally (1994:4). Paying attention is a skill that is cultivated through meditation practices.

Mindfulness meditation is a type of meditation practice that teaches focused attention and open awareness, in the present moment, through the "observation of constantly changing internal and external stimuli as they arise" (Bishop et al, 2004). Mindfulness practices are a specific set of formal and informal activities or techniques that are regularly repeated in order to cultivate mindfulness intentionally, as a state of consciousness. Mindfulness Based Interventions (MBI) or Mindfulness Trainings (MT) are complete programmes incorporating both theory and mindfulness practices, with the intention of enhancing mindfulness as a state of consciousness. The programmes are either used to develop a greater sense of well-being in participants, to gain insight into habits of mind, or as interventions to address particular physiological or psychological concerns. These programmes, therefore, assume that cultivating mindful awareness can result in specific beneficial outcomes.

Langer, from the social psychology field, has approached mindfulness from a different historical and cultural background, without any reference to meditation. She contrasts mindfulness with mindlessness, and views it as a goal-oriented cognitive ability, which can produce specific outcomes. Her definition is "a state of alertness and lively awareness [. . .] expressed in active information processing, characterized by cognitive differentiation: the creation of categories and distinctions" (1989:138). Her work views mindfulness as a creative construct stimulated, primarily, by paying attention to external objects. One of her studies particularly focuses on the effectiveness of mindful teaching (Langer & Piper, 1987). Langer's work does not include techniques with which to improve mindfulness. This is the domain of the meditation-based approaches.

A final clarification is required on the similar and related terms of 'consciousness', 'awareness' and 'attention'. Consciousness is notoriously difficult to define, even though people seem to know what it is from direct experience. A definition combined from philosophy and psychology is the state of being awake and aware of one's inner (sensations, thoughts, feelings etc.) and outer environment, in the present moment. Consciousness cannot be in the past – that is memory, or in the future – that is anticipation. This sounds very much like mindfulness, yet is more a matter of degree. Mindfulness, in contrast to consciousness, is characterised by enhanced attention, and an accepting awareness.

Awareness is the state or ability to perceive, to feel, or to be conscious of events, objects, or sensory patterns; or knowledge or perception of a situation or fact. Awareness is a meta-skill, an awareness of being conscious. Attention is a concentrated or focused awareness.

To conclude, this thesis therefore conceptualises mindfulness as an umbrella term, consisting of four aspects. (i) Being 'mindful' presupposes the intention to keep bringing attention back to the present moment. Incorporated in this is the sense of remembering. (ii) This process produces a state, trait or condition of 'mindful awareness' where the internal environment of a person is witnessed without involvement or judgement. (iii) Specific techniques or practices, usually known as mindfulness meditation, are utilised to develop mindful awareness. (iv) A variety of outcomes are associated with the quality of mindful awareness, such as more vivid perception, emotional regulation, and ethical behaviour, and these are being explored to identify specific mechanisms of change.

2.3.4 Researched Benefits of Mindfulness

The ancient Buddhist teachings (popularly termed 'science of mind' or 'mind training') and current-day evidence-based research agree that learning the techniques of mindfulness meditation and practicing those techniques daily have been shown to enhance the faculty, or personality trait, of mindfulness in daily life, which in term leads to improvements in well-being. These techniques are increasingly being employed by clinicians to help alleviate a variety of mental and physical conditions, including those related to stress (Shapiro & Carlson, 2009; Moore & Malinowski, 2009; Baer, 2003; Teasdale et al, 2000).

The vast majority of literature around mindfulness has focused on two mindfulness interventions: Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based

Cognitive Therapy (MBCT). The former was initiated at UMASS, for patients who continued to suffer from disorders, which were not being alleviated through allopathic medicine (Kabat-Zinn, 2003). The latter, MBCT, was an adapted form of MBSR, focusing specifically on patients with depressive relapse. Randomised control trials have produced convincing data on the effectiveness of these interventions (Coelho et al, 2007; Jain et al, 2007; Mason & Hargreaves, 2001; Speca et al, 2000; Teasdale et al, 2000). Recently, there has also been the transfer of mindfulness training into new fields, such as business (Dalai Lama & Muyzenberg, 2008; Carroll, 2007; Hooper & Potter, 2000) and education (Singh et al, 2013; Jennings & Greenberg, 2009). Qualitative studies are now being conducted to provide insights into the underlying mechanisms of change for individual participants.

Many mindfulness teachers point out that mindfulness is not primarily a goal-directed activity despite the fact that practice does have beneficial secondary effects (MAMIG, 2006). The primary benefits of MBIs are simply the uncovering of innate qualities of mindful awareness and compassionate acceptance, in the present moment. However, secondary benefits such as emotion regulation have been linked to mindfulness training and tested through evidence-based research studies.

Research studies on meditation, in general, and mindfulness meditation, in particular, have been shown to have physiological, cognitive, emotional, and behavioural benefits. Although the vast majority of research studies have been conducted on clinical populations, their findings are also relevant for the field of teacher education. Studies have provided evidence that mindfulness can reduce stress, anxiety, rumination and depression; improve attention, and therefore the ability to concentrate and learn; boost the immune system; reduce arousal as measured by blood pressure, heart rate, cortisol and other neurochemical markers; create a sense of well-being and a widening of the gap between stimulus and response, thereby providing an opportunity for non-reactive decision-making; improve interpersonal relationships; enhance job satisfaction; reduce the desire to change jobs; increase professional effectiveness; and support emotion regulation (McGarvey, 2010; Chambers et al, 2009; Oman et al, 2008; Williams et al, 2007; Carson et al, 2004; Ramel et al, 2004; Brown & Ryan, 2003; Delmonte, 1984).

Furthermore, mindfulness is expanding out from the medical field into fields that focus on enhancing human potential, such as education. Until now, limited effort has been invested

in cultivating positive attributes of mind in individuals who are not suffering from stress, but would like to improve their sense of well-being or professional effectiveness (Ekman et al, 2005; Seligman & Csikszentmihalyi, 2000), or take preventive steps towards stress management. Neuroscience adds weight to the argument that different levels of skill are attainable over time, as the brain changes its neural pathways:

> [. . .] *many of our core mental processes, such as awareness and attention and emotion regulation, including our very capacity for happiness and compassion, should best be conceptualized as trainable skills. The meditative traditions provide a compelling example of strategies and techniques that have evolved over time to enhance and optimize human potential and well-being. The neuroscientific study of these traditions is still in its infancy, but the early findings promise both to reveal the mechanisms by which such training may exert its effects and underscore the plasticity of the brain circuits that underlie complex mental functions. (Lutz, Dunne & Davidson, 2008: 543)*

Emotion regulation is often referred to as a key dimension of stress management (Kyriacou, 2001; Roger & Hudson, 1995) and is an area where much research has been conducted using MBIs. A particularly interesting recent metastudy by Chiesa, Serretti and Jakobsen (2013), using functional neuro-imaging, reveals that mindfulness practices can support both 'top-down' and 'bottom-up' emotional regulation. Top-down emotion regulation involves cognitive reappraisal where inputs to the emotion-generative system are regulated in order to modify the emotional impact. By reinterpreting emotional stimuli, the 'threat' centres of the brain (e.g. the amygdala) are less activated. Bottom-up emotional regulation involves direct modulation of the emotion-generative brain regions in order to reduce reactivity to external stimuli. They hypothesise that "short-term mindfulness training is associated with significant alterations of brain patterns that, in the long-term, might lead to robust structural changes. This might explain why long-term meditators frequently report increased mental stability rather than continuous need to regulate their own mental processes" (2013:93).

In drawing an analogy with Kyriacou and Sutcliffe's model of teacher stress, bottom-up emotion regulation would mean that a potential stressor is not viewed as such, and would therefore not become an actual stressor, while top-down emotion regulation would prevent adventitious suffering once an actual stressor had been addressed.

2.4 Mindfulness Models

Four contrasting sets of models or frameworks have been emerging in the mindfulness and psychology literature. The first set of models is focused on understanding the underlying mechanisms of change inherent in MBIs, the area of focus for Dimidjian and Linehan (2003). The Reperceiving Model and the Buddhist Psychological Model are introduced as, "Collectively, these models further our understanding of specific aspects of MBIs while highlighting the complexity of the individualised change process resulting from participation in MBIs" (Grabovac, Lau & Willett, 2011). The second set of models has emerged from the psychology literature, and focus explicitly on compassion. These include the Emotion Regulating Systems Model and the Self-Compassion model. The third framework that has strongly influenced mindfulness comes from the Buddhist psychology literature, and it is specifically the Mahayana Buddhist tradition that is overviewed below. The fourth type of model presented here is related to the education field, and assumes specific beneficial outcomes as a result of an MBI. It has been named the Logic Model of Mindfulness.

The assumptions and underlying theories explored through these sets of models were borne in mind for this research study, when considering which approaches might most benefit student teachers, and which type of mindfulness programme to offer. Criteria such as clarity, parsimony, suitability, observability, and logical coherence are often used when evaluating models for their use in new research work.

2.4.1 Mechanisms of Change Models

A summary of existing models exploring mechanisms of change include: the Reperceiving Model (Shapiro et al, 2006), the Attention Regulation Model (Carmody et al, 2009), the S-REF model (Myers & Wells, 2005), the Diffusion Model (Fresco et al, 2007), the Statistically Derived Model (Coffey et al, 2010), the Buddhist Psychological Model (Grabovac et al, 2011), and the Mindful Coping Model (Garland et al, 2009). MBCT was formulated around Sheppard and Teasdale's Differential Activation Hypothesis theory. In the words of Ma and Teasdale (2004), "MBCT was derived from a model of cognitive vulnerability to depressive relapse". The mechanism of change is decreased rumination through the development of meta-cognitive awareness (Grabovac et al, 2011) in order to

achieve the skill of "decentering from the cascade of automatic negative thoughts associated with negative moods" (Shapiro et al, 2006).

Many of these models have been excluded from this theoretical framework on the grounds that they are not suitable to the target population. They were developed from a paradigm of mental disease and did not seem appropriate for research about student teachers who were not anticipated to have a history of mental illness. The models that align more closely onto the positive psychology paradigm, or well-being approach, are the Reperceiving Model of Shapiro et al (2006) and the Buddhist Psychological Model (Grabovac et al, 2011).

Grabovac et al argue for theoretical transparency when discussing effective use of MBIs, as they believe it serves to motivate and orient the intention of the practice. They also note that contemporary mindfulness models contrast different possible mechanisms of change. These include: Cognitive mediators, such as metacognitive awareness (Teasdale et al, 2002); Attentional mediators, such as focused attention or open monitoring (Lutz et al, 2008); and, Neurobiological mediators, such as neurofunctional changes (Fletcher et al, 2010). This research study provides an opportunity to explore whether cognitive or attentional mediators account for change, in the perception of the participants, but will not be able to establish the efficacy of neurobiological mediators.

2.4.1.1 The Reperceiving Model

One widely cited model of mindfulness was developed by Shapiro, Carlson, Astin and Freedman, and has been linked to Kabat-Zinn's Mindfulness Based Stress Reduction (McCown, Reibel & Micozzi, 2010). Their *reperceiving model* identifies three axioms: intention (I), attention (A) and attitude (A), which are simultaneously manifesting elements of the moment-to-moment practice of mindfulness (formal or informal). These three axioms are the building blocks from which transformation can occur. They are not separate processes or stages, but rather are interwoven aspects of the cyclic process and occur simultaneously.

Axiom 1: Intention. When Western psychology initially attempted to extract the essence of mindfulness practice from its Buddhist roots, it lost the focus on intention and motivation, which for Mahayana Buddhists is enlightenment or self-liberation, and the wish to alleviate the suffering of all beings. Shapiro et al (2006) have brought this back into their model, as Kabat-Zinn, after years of exploring MBSR, notes that it is our

intentions that set the stage for what is possible, and it is one's personal vision that is necessary to maintain the commitment to, and benefit from, a mindfulness practice.

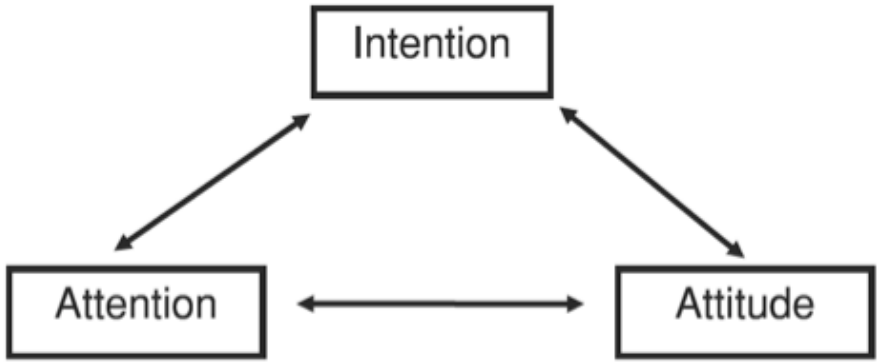


Figure 2-3: The Three Axioms of Mindfulness - Intention, Attention, and Attitude (Shapiro et al, 2006)

Axiom 2: Attention. In the context of mindfulness practice, paying attention involves observing the operations of one's moment-to-moment, internal and external experience. The ability to pay attention to physical sensations, thoughts and feelings, without secondary elaborative processing, allows a suspension of the interpretation of the experience, and an attention to the experience itself.

Axiom 3: Attitude. This axiom focuses on the 'heart' qualities that one brings to the attention, particularly "an affectionate, compassionate quality [. . .] a sense of openhearted, friendly presence and interest" (Kabat-Zinn, 2003:145). Through intentionally bringing the attitudes of patience, compassion and non-striving to the attentional practice, one develops the capacity not to seek out only pleasant experiences, or push away unpleasant ones, but to be present with all experiences without judging them.

Meta Mechanism of Change. Shapiro et al's theory posits that a meta mechanism of change in mindfulness is that of *reperceiving*, where one is able to disidentify from the contents of consciousness (i.e. one's thoughts) and view the moment-by-moment experience with greater clarity and objectivity. The term reperceiving is used as it involves a fundamental shift in perspective from being immersed in the drama of our personal lives, to be able to stand back and simply witness it.

2.4.1.2 The Buddhist Psychological Model

Grabovac et al's (2011) model has further developed the field in exploring possible change mechanisms underlying MBIs. Their model is derived from Buddhist psychology and simplified from the Abhidhamma Pitaka texts.



Figure 2-4: The Buddhist Psychological Model (Grabovac et al, 2011)

They explain the components of mental activity as the arising and passing away of sense impressions (a stimulus from the sense organs) or mental events (thoughts, memories or emotions). As these sensations arise, they are accompanied by a feeling tone – pleasant, unpleasant or neutral – which often goes unnoticed due to the rapid nature of these arising sensations, and can serve as a trigger to a chain reaction of thoughts or emotions that lead to suffering. Our habitual patterns are to attach to pleasant sensations, and to feel aversion for unpleasant ones. Attachment and aversion arise in reaction to the feeling state rather

than to the object itself, and mental proliferation or rumination then occur if we are not aware of these habitual patterns.

At the centre of the BPM are three main foci of mindfulness practice that are common to all sense impressions or mental events that arise in our minds. These are: 1) Impermanence (sensations are transient – they arise and pass away); 2) Suffering/Unsatisfactoriness (habitual reactions of attachment or aversion, and the lack of awareness of these reactions, cause us to experience negative emotions); 3) Not-self (sensations do not contain or constitute any lasting, separate entity). In Theravaden Buddhist teachings, these are termed the 'three characteristics'.

Improvement in well-being is attained when sensory or mental events are allowed to arise and naturally pass away without subsequent cognitive processing from either attachment or aversion. Unpleasant feeling tones will still be experienced, but, without the unconscious mental proliferation, less adventitious suffering is experienced.

This model makes a clear distinction between concentration and mindfulness (or insight) practices. Concentration practices focus attention on a single object of meditation (a mantra, breath, a flower) with the aim of stabilising and calming the mind. Mindfulness practice, as defined in this model, has a different intention, to directly experience the three characteristics of sensations as they appear in awareness. Initially this feels conceptual, but over time becomes more experiential.

Important components that feed into the BPM are acceptance, concentration / attentional regulation and ethical practices. The attitude of acceptance is a common theme in all mindfulness programmes, as it prevents negative thoughts such as self-judgement arising, which can result in the mindfulness practice itself becoming a source of aversion. Attention regulation is used as it can lead to momentary reductions in mental proliferation, particularly when experiencing sensations that are too difficult to observe without getting lost in their content.

The model does not state 'intention' as a separate process, but does ground the model in an ethical frame. Ethical practices are prescribed in the Buddhist teachings as they help to reduce the baseline of mental proliferation. Leading an ethical life means that the meditator experiences less guilt, doubt, worry etc. that can often be a source of mental proliferation.

This may not be enough, though, given my experience as a mindfulness trainer. Participants are either not aware of their own intentions, unless specifically asked to verbalise them, or they have unrealistic intentions which later serve to undermine their mindfulness practice (such as becoming completely peaceful or avoiding all experience of suffering).

Overview

The different models that focus on mechanisms of change provide useful insight into how mindfulness appears to support participants in changing their dysfunctional behaviour. They also give guidance to mindfulness facilitators in terms of how best to conduct training sessions and enquiry into people's experiences, based on which stage of the process they are able to experience. Shapiro et al do not claim a linear logical development with regard to the three axioms, but describe them as both a single cyclic process and occurring simultaneously. Grabovac et al (2011) show that a variety of causal factors lead to decreased mental proliferation, which results in increased well-being and symptom reduction. This provides a flexible approach, dependent on the habitual patterns of the participants. Some may be mindful, but have no understanding of the three characteristics that lead to suffering, whilst others may not be able to accept their experiences, or have weak concentration / attentional regulation.

Interestingly, though, recent research studies are proposing that, although mindfulness is an important foundational factor, it may actually be the quality of compassion that is the main mediator of change. These concepts and models will be explored in the following section.

2.4.2 Compassion Models

The construct, compassion, has a long history in Buddhist psychology, where it is directly linked with mindfulness and mind training, and is viewed as central to well-being (Davidson & Harrington, 2002). It is defined as being sensitive to the suffering of others, with the deep commitment to try to prevent and relieve it (Dalai Lama, 2001; Gilbert & Choden, 2013). Self-compassion as a construct is relatively new in Western psychological literature, yet is gaining prominence as an important mechanism for change in the field of psychology.

The two models explored below were developed by Neff (2003a) and Gilbert (2010). Neff's work on compassion originates from a social psychology and Buddhist psychology tradition, while Gilbert's is rooted in the evolutionary model of social mentality theory. Exactly how to integrate compassion practices into a mindfulness course has been much debated in the MBSR community. Kabat-Zinn (2003) noted that for pedagogical and practical reasons, he was reluctant to include such practices, as he felt they are implicit and embodied in all of the practices and teaching, and as they may confuse participants new to mindfulness practice by interjecting a sense of 'doing'. In MBSR, compassion is considered to be centripetal, co-created in the group, relying on the teacher's embodiment of the construct. Although directly teaching compassion is not part of the original mindfulness trainings (MBSR and MBCT), Kabat-Zinn has asserted that compassion emerges naturally from its practice as it, like mindfulness, is an innate quality of being human.

2.4.2.1 Emotion Regulating Systems

Gilbert's findings, while working with patients who exhibited high shame and self hatred, revealed that compassion training needed to be an integral part of mindfulness training, if people were to effect on-going change in their lives, and access sufficient acceptance of themselves. From this experience, Gilbert developed various compassion exercises, mainly using guided imagery, which assist practitioners in experiencing the sensations of compassion, in order to then focus on themselves during the times when they, through their enhanced mindfulness, are able to witness their negative habit patterns, which create conflict and suffering.

Gilbert (2010) describes the three major emotion-regulating systems in the 'old' brain: the threat and self-protection system; the incentive and resource-seeking system, and the soothing and contentment system. Well-being comes through accepting the evolutionary necessity of, and the balancing of, these three systems.

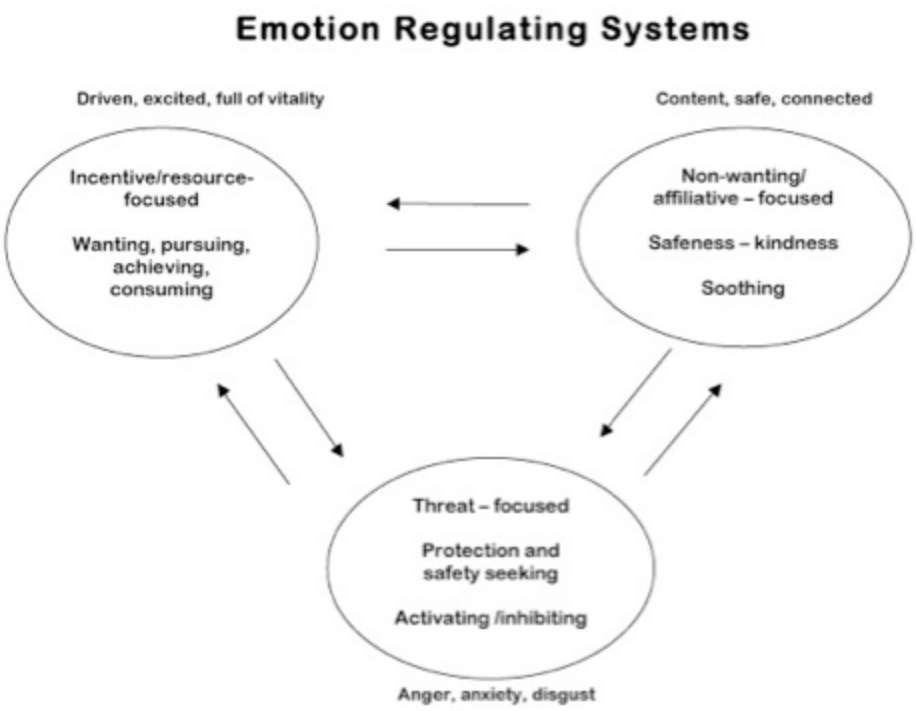


Figure 2-5: Emotion Regulating Systems, from the Compassionate Mind (Gilbert, 2010)

The function of the threat–focused system is to pick up on threats quickly, and give rise to bursts of feelings such as anxiety, anger or disgust. These emotions result in an action orientation, to self protect, such as fight, flight, freeze or submit. This system comes into play when we are threatened directly, or if those we care for are threatened. Threats trigger the amygdala, and release the stress hormone cortisol.

The incentive or drive system works to give us positive feelings that encourage us to seek out resources that we, and those we care for, need to survive and prosper. This system is activated by such events as falling in love, passing an exam or winning something, and the hormone dopamine is released. Feelings of excitement and passion are experienced when the system is in balance, releasing dopamine, but frustration and disappointment can be triggered when the system is over-stimulated.

The soothing and contentment system is focused on the human need for care and affection. It is generally agreed (Gilbert & Proctor, 2006) that one of the key evolutionary changes that emerged with the mammals was attachment (Bowlby, 1982) and care provision for infants. This soothing system allows for feelings of safety, inner calm, connectedness and contentment with the way things are and contrasts with the hyped-up, striving emotions of

the drive system. The system is linked to affection and kindness, and triggers the release of endorphins and the hormone oxytocin. This is the central focus of Gilbert's research around compassion.

For people who have not been able to develop appropriate secure attachment in childhood (Bowlby, 1982), Gilbert stresses how important it is for them "to be compassionate to the fact, that automatic reactions are not their fault, or easily controlled, but arise as a result of evolved defences, genes, learning and conditioning". It is attention – particularly compassionate attention – that is purported to be the key to one's healing process (Gilbert, 2010), and therefore could be considered the most significant mechanism of change.

Gilbert and Proctor's work has revealed that, "[c]ompassionate mind training may be a useful addition for some patients with chronic difficulties, especially those from traumatic backgrounds, who may lack a sense of inner warmth or abilities to be self-soothing" (2006:353). They have also witnessed how self-compassion can help reduce the sense of threat and create feelings of safeness, which are essential in a therapeutic relationship.

2.4.2.2 Self-Compassion Model

Self-compassion is directly related to the concept of compassion, but involves turning those feelings towards the self. Neff gives a detailed definition: "a self-compassionate person is touched by and open to their own suffering, does not avoid or disconnect from it, generates the desire to alleviate their suffering and to heal themselves with kindness. This also involves offering nonjudgmental understanding to their pain, inadequacies and failures, so that their experience is seen as part of the larger human experience" (Neff, 2003a).

In the context of mindfulness, self-compassion "involves being aware of one's painful experiences in a balanced way that neither ignores nor ruminates on disliked aspects of oneself or one's life" (Neff & Germer, 2013). To be aware of one's personal suffering, allows compassion to be turned towards the self without being carried away by the 'storyline' that underlies the suffering. Compassion, combined with mindfulness, allows an open, honest and balanced way of dealing with difficulties.

Neff's model of self-compassion identifies six constructs, subdivided into three pairings: i) Self-kindness – extending kindness and understanding to oneself rather than harsh

judgment and self-criticism; ii) Common humanity – seeing one's experiences as part of the larger human experience rather than seeing them as separating and isolating; and iii) Mindfulness – holding one's painful thoughts and feelings in balanced awareness rather than over-identifying with them. These aspects are conceptually distinct and experienced differently at the phenomenological level, yet they interact to enhance one another.

Although not represented graphically in Neff's work, I present a visual representation of her model below.

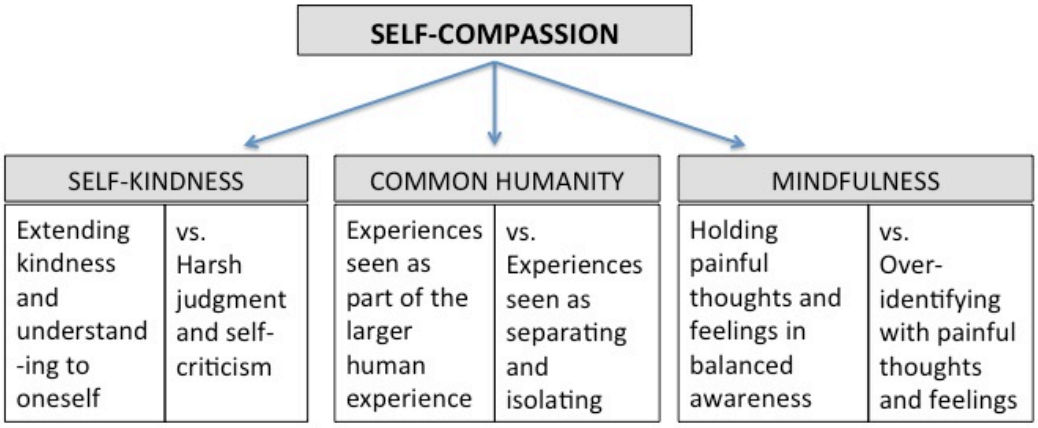


Figure 2-6: A Visual Representation of the Self-Compassion Model (Neff, 2003a)

Neff's findings revealed that self-compassion has a significant negative correlation with anxiety and depression, which suggests that self-compassion may be an adaptive process that increases psychological resiliency and well-being. Self-compassion also had a "negative correlation with neurotic perfectionism" (2003a:235), which is often found to be a personality characteristic that exacerbates stress.

Self-compassion can be understood from its dialectical position between self criticism and passivity in dealing with weaknesses observed in the self. Gilbert, McEwan, Matos, and Rivis (2011) have noted that one of the strongest barriers to self-compassion is the belief that self-compassion is self-indulgent or that it will undermine personal motivation. Paradoxically, it can be the lack of self-compassion that leads to passivity. When the self is harshly judged, "the protective functions of the ego will often act to screen inadequacies from self-awareness so that one's self-esteem is not threatened. Without self-awareness, these weaknesses will remain unchallenged. By giving compassion to oneself, however, one provides the emotional safety needed to see the self clearly without fear of self-

condemnation" (Neff, 2003b:87). Once again, this finding emphasises the way mindfulness and self-compassion work in tandem.

An area of interest expressed by Neff is whether or not self-compassion differs across sex, culture or age. Women are generally considered to have a more interdependent sense of self, and to be more empathetic than men, yet research evidence suggests that they tend to be more self-critical and have a ruminating coping-style compared to men, resulting in lower self-compassion scores. Neff's research also talks of collectivist cultures that are described as having a more interdependent sense of self, yet research evidence on Asian cultures has shown a higher level of self criticism.

In terms of age, Neff noted how low self-compassion is strongly linked to adolescence, where young people's cognitive advances result in increased introspection, meta-cognition, self-reflection, and social perspective taking abilities (Keating, 1990). "These newfound abilities mean that adolescents are continually evaluating themselves and comparing themselves to others as they attempt to establish their identity and place in the social hierarchy" (Neff & McGehee, 2010:95). In a study on adolescents and young adults, results revealed little difference between the two groups, suggesting that young adults are still going through challenging transitional stages in terms of developing their identity (Neff & McGehee, 2010).

In addition, the work of Neff, Hsieh and Dejitterat (2005) has focused on university students (undergraduates) and their achievement goals, and coping with academic failure. Self-compassion was found to be a construct of greater usefulness than self esteem, as it does not rely on comparison between self and others, or on congruence with an ideal standard, allowing performance evaluations to be separated from the egoic sense of self. To elaborate, "self-compassionate individuals are motivated to achieve, but this goal is not driven by the desire to bolster one's self image. Rather, it is driven by the compassionate desire to maximize one's potential and well-being" (Neff et al, 2005:265). This research speaks directly to the student teacher study, and provides a useful point of comparison.

2.4.3 The Mahayana Buddhist Framework

A fourth area of literature that has strongly influenced the mindfulness field is the Buddhist literature. Although not usually described as a 'model', Mahayana Buddhism does provide an overall framework for how we look at reality. Different schools of Buddhism emphasise

different practices and motivations for meditation. Mahamudra (from the Kagyu lineage) and Dzogchen (from the Nyingma lineage) emphasise three different styles of meditation, namely Focused Attention (also known as *shamatha* or *shinay*), Open Presence (associated with *vipassana*), and Non-Referential Compassion (a feeling of loving kindness towards all beings) (Lutz, Dunne & Davidson, 2008).

The Buddhist Psychological Model is based on Theravaden Buddhism, known in Buddhist philosophy as the 'First Turning of the Wheel', and provides clear direction to achieve enlightenment. Later Buddhist philosophy, known as Mahayana (including Tibetan and Zen Buddhism), has been referred to as the Second Turning of the Wheel, and focuses attention on the motivation behind the wish for enlightenment. Within this framework, intention and motivation are given central importance. Intention is to reach enlightenment, or liberation from ego-centric grasping, in order to benefit all beings. These aspirations provide strong direction and clear encouragement, particularly during periods of struggle with the ego-centric mind. This is known as the *bodhisattva* aspiration.

Meditation practices provide the opportunity to reveal the true nature of mind, experientially, alongside compassion, which is a fundamentally important concept in Second Turning Buddhism, and is considered:

> *an attitude, a motivation and a state of mind. It is one thing to want to alleviate the sufferings of other beings. To actually become capable of doing it [. . .] is an enormous and varied task, implying improving oneself, so as to be better equipped to help, while in the meantime devoting life to the service of others, however possible. This is compassion in action, involving vast areas of skills to be developed. Those skills, collectively are known as skilful means, are synonymous with compassion in its broadest sense. (Holmes, 2010)*

Three Tibetan Buddhist Practices

Focused Attention. *Shamatha*, or *shinay*, is a one-pointed concentration practice where a practitioner maintains focus on an object for a theoretically unlimited period of time, thus inducing a state of tranquillity, or quiescence:

> *In terms of the most relevant effects that are traditionally expected to arise from this practice, the main result of Focused Attention is a greater ability to concentrate and a concomitant decrease in susceptibility to being perturbed out of a concentrated state. The practice is also thought to increase not only the stability of one's concentration but also its intensity. At the higher levels of practice, this type of meditation is also said to reduce the need for sleep, and during the meditation it is thought to induce pleasurable sensations, including a lightness or pliancy of mind and body. (Lutz, Dunne & Davidson, 2008)*

By progressing in this practice, the practitioner develops a mental faculty, or trait, known as *smrti*, variably translated as remembering, awareness or mindfulness. In order to ascertain whether the mind is focused on the object, or has become lost, another faculty called *samprajanya*, is developed, which is a type of meta-awareness of the relation between the object and the awareness.

Shamatha practice leads to important trait changes, but not to all the changes that Buddhists seek, especially in terms of emotion regulation. It is therefore accompanied by another style of practice, *vipassana*.

Open Presence. *Vipassana*, in combination with the focus and stability of mind provided by *shamatha*, enables the practitioner to gain insight into habitual patterns, and assumptions about identity and emotions, such as the realisation of selflessness, or no-self:

> *The basic motivation for the practice is rooted in a Buddhist axiom mentioned earlier: Namely, that one's negative emotional habits and behaviors arise from a set of mental flaws that cause one to consistently misconstrue both one's identity and also the objects toward which those emotions and behaviors are directed. As noted above, those flaws are meant to be corrected by vipasyana meditation through which one cultivates an accurate understanding of the nature of one's identity and the nature of objects in the world. (Lutz, Dunne & Davidson, 2008)*

Different traditions utilise a variety of techniques to develop the meta-awareness that is the desired trait of *vipassana*. In terms of progressive development from novice to experienced meditator, the highest form of meditation integrates the qualities of *shamatha* and *vipassana* into a single practice, where both stability and clarity are balanced. For novice meditators, the two often seem to work at odds – greater stability results in less clarity or intensity. As the practitioner develops, the dialectical ability to hold both/and, rather than either/or is enhanced.

Loving kindness/compassion practices are the third widely practiced method in Mahayana Buddhism, with the aim of cultivating the emotional states of loving kindness and compassion toward all living beings, including the self.

When analysing these practices to ascertain commonalities of different Mahayana Buddhist meditation traditions, Lutz et al (2008) have laid out the following, in order to be able to use this as a model for empirical neuroscience research:

i) Each practice induces a predictable and distinctive state whose occurrence is clearly indicated by certain cognitive or physical features or events phenomenally observable to the practitioner.
ii) The state induced is said to have a predictable effect on both mind and body in such a way that, by inducing the state repeatedly, a practitioner can use it to enhance desirable traits and inhibit undesirable ones.
iii) The practices are gradual in that the ability to induce the intended state improves over time, such that an experienced practitioner meditates in a manner superior to a novice. This improvement is marked by two phenomenally reportable features: the acquisition of certain traits (cognitive, emotional, or physical) and/or the occurrence of certain events (cognitive, emotional or physical). As such, there is a distinction between the meditative state and the post-meditative state.
iv) The practice is learned from a meditation teacher who is experienced in the practice.

By laying out these processes systematically and clearly, the opportunity arises to explore them empirically. Their work aims to learn from these processes by basing them upon theoretical generalisations, which enable neuroscience researchers to anticipate new occurrences and to control, to some extent, the changes in the environment. Skilled meditation teachers are certainly able to observe changes in their students, and direct them towards the most beneficial type of practice for their own personality. This framework does not assume a stage model logic, but rather a flexible growth process, where each of the faculties support the others. This is not easy to evaluate, or observe. The following quotation makes clear reference to this challenge:

> *Many contemplative traditions speak of ascending stages through which the practitioner passes; a typical account speaks of nine levels of progressively higher degrees of concentration along with corresponding changes in the meditator's response to dullness and excitement (Thrangu & Johnson, 1984; Tsongkhapa, 2002; Wangchug Dorje, 1989) according to these schemas, a single practice may progress gradually through a number of meditative states, but some of those states might differ significantly from each other both phenomenally and in terms of the appropriate technique to be applied. Likewise, the mental and physical effects of a practice may build gradually; for example, as one's level of concentration improves, mental and physical well-being is also said to increase. But some effects occur only at some stages and do not progress further (Tsongkhapa, 2002). (Lutz et al, 2008)*

The Mahayana Buddhist framework provides long-established guidance on the reasons for, and the expected outcomes of, mindfulness and compassion practices. In recent years,

fundamental practices have been extracted from this framework for the use in secular mindfulness training. Knowledge of the traditions, however, provides additional guidance for mindfulness facilitators, as they are explicit about developmental stages and root the teachings in an ethical framework.

2.4.4 A Logic Model of Mindfulness

Roeser, Skinner, Beers and Jennings (2012) have constructed a logic model for teachers, based on the assumption that mindfulness training (MT) can "promote teachers' habits of mind and thereby their occupational health, well-being, and capacities to create and sustain both supportive relationships with students and classroom climates conducive to student engagement and learning" (2012:167). There is logical coherence in the structure, which revolves around virtuous cycles of positive relationships based on "teachers' and students' enjoyment, engagement, and satisfaction with teaching and learning together" (p170). They do not identify desirable habits of mind, which they equate with professional dispositions, but their paper includes i) tolerance for uncertainty, ii) attentional focus, iii) cognitive flexibility, iv) emotion regulation, and v) relationship management skills. To meet the needs of parsimony, the model would benefit from a definitive list of habits of mind/dispositions considered efficacious in the teaching context, which could then be evaluated in pre-post intervention research.

They propose the logic model (Fig 2-7 below), based on nascent empirical evidence, in order to lead to "tractable scientific research questions that require empirical scrutiny":

> *First and foremost, do MT programs designed for teachers actually lead to the kinds of habits of mind that we describe here? If so, do mindfulness and related habits of mind actually affect the teacher outcomes, classroom outcomes, and student outcomes specified downstream in the model? What kinds of methodologies and research designs are needed to assess the hypothesized chains of effect in this logic model? How can the field produce rigorous research evidence that speaks to the educational community's need for consumption and translation of research into practice? These kinds of questions are at the heart of an emerging research agenda focused on MT programs for teachers and their potential direct effects on teachers and indirect effects on classrooms and students. (2012: 170)*

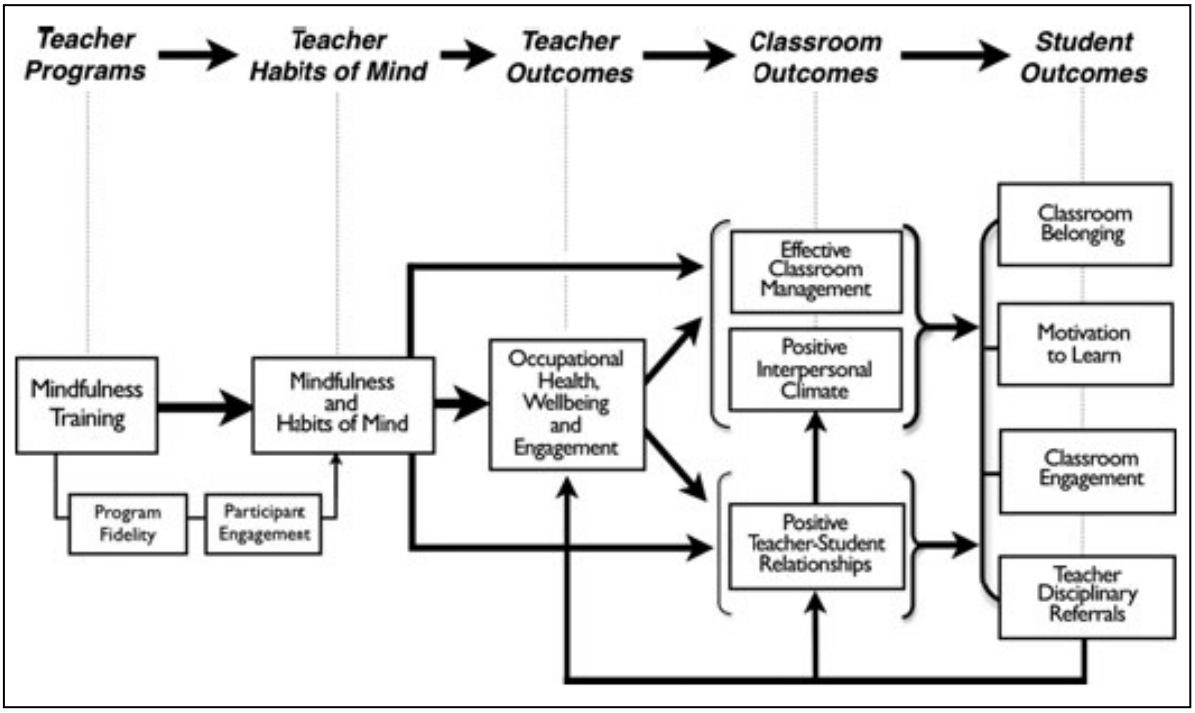


Figure 2-7: Logic Model of Hypothesised Mindfulness Training Effects on Teachers, Classroom environments, and Students (Roeser et al, 2012)

Roeser et al are clear that their model is not an end in itself, but a means by which to generate questions for empirical testing. The model provides a broad range of outcomes that could be observable in longitudinal studies, including measures of health (lower rates of absenteeism, occupational burnout, health care use and departure from the profession).

One interesting omission, given its nature as a model in the education context, is that the model refers to Fidelity of the Programme and Participant Engagement, but does not include the skill of the mindfulness facilitator. Maybe this is taken for granted in the world of education, but recent work by Crane et al (2011) point out how this is a crucial factor in the success of MBIs and may need to be stated explicitly.

2.5 Mindfulness and Education

My own impetus to move mindfulness into the world of education is supported by a small, but rapidly expanding, body of research. Several theorists have shown that teachers with high trait mindfulness perform more effectively in their classrooms, with beneficial impacts on their students' learning (Baumann, 2007; Langer, 1997). Other theorists have focused on interventions that are designed to enhance these innate qualities of mindfulness based on the premise that mindfulness can both reduce stress and improve teaching quality

(Singh et al, 2013; Roeser et al, 2012; MacDonald & Shirley, 2009; Jennings & Greenberg, 2009; Solloway, 1999). There is also research on using MBIs with college students (Shapiro et al, 2006; Shapiro et al, 1998), and studies focusing on teaching mindfulness to school children (Meikeljohn et al, 2012; Huppert & Johnson, 2010; Saltzman & Goldin, 2008). Very few have explored this work with student teachers (Soloway, 2011; Winzelberg & Luskin, 1999) but insights from other interventions within the education field have supported the focus of this research study.

2.5.1 Mindfulness as a Key Factor in Effective Teaching

Langer is the most cited scholar in the field of mindfulness and education, and her 1989 publication, *Mindfulness*, documents what she describes as the "double-edged concept of mindfulness and mindlessness. When we are mindless, we are like programmed automatons" (Langer, 1997:9). In contrast, when we are mindful, we develop a rich awareness of discriminatory detail and experience sideways learning which revolves around the following psychological states: openness to novelty; alertness to distinction; sensitivity to different contexts; implicit, if not explicit, awareness of multiple perspectives; and orientation in the present. Her studies appear to focus on teachers who have trait mindfulness, or 'withitness' (Kounin, 1970) in their classrooms; she does not give guidance for how to improve this innate ability.

Langer and Piper, focusing more on outcome than process, draw a distinct correlation between mindfulness and work performance. They discuss how "mindful teaching practices have a pronounced effect on student learning" (1987:4). In mindful classrooms, children's liking of the set tasks is enhanced, as well as their memory and their ability to transfer knowledge to different situations (Lieberman and Langer, 1997). Earlier, Blase (1986) emphasised how stress reduces work performance in teachers and these views, graphically represented by Roeser et al's (2012) model, provide a strong impetus to bring mindfulness into the education sector.

2.5.2 Mindfulness-Based Interventions with Teachers

Several research studies are based on the assumption that the faculty of mindfulness reduces stress and improves teaching, and have implemented interventions to assess these views. An early study by Anderson et al (1999) focused on the occupational stress of 91

teachers and the impact of a five-week standardised meditation (SM) course. Findings, using a pretest-posttest control group design showed significant reductions in stress.

The Cultivating Emotional Balance (CEB) study at the Santa Barbara Institute was carried out with teachers and health workers as their professions are stressful and require them to act compassionately. The teachers reported a reduction in negative mood that they believe resulted from an increase in their ability to maintain a calm quality even in the face of adversity. They also reported an increase in awareness of their emotions, their thoughts, and their reactions to others, which allowed them to respond in unique and constructive ways. Many participants reported an ability to interact with others in a more compassionate and forgiving way (Jennings & Greenburg, 2009).

A related study, Cultivating Emotional Balance in the Classroom (CEBC), was developed in order to test whether a professional development programme that combined secular mindfulness practices with information and techniques from emotion research – Ekman's Emotion Awareness Training (Ekman, 2004) – was able to improve teachers' abilities to deal with destructive emotions within themselves and in others and promote pro-social responses such as empathy and compassion, resulting in an improved classroom climate. The professional development programme totalled 42 hours, run over an eight-week course. Using a randomised, controlled study design, results revealed that "the training group reported reduced trait negative affect, rumination, depression, and anxiety, and increased trait positive affect and mindfulness compared to the control group" (Kemeny et al, 2012). In addition, in an experimental task, intervention teachers showed an increase in compassionate responding to suffering when compared with the control group teachers. It was also revealed in a subsample of 21 teachers, using two standardised observational measures of classroom climate, that the intervention group scored higher than the control group suggesting that psychological changes observed in the teachers translated into improved classroom climate (Jennings & Greenberg, 2009).

From May 2009, Jennings (Penn State University) started testing a professional development programme, Cultivating Awareness and Resilience in Education (CARE), coordinated through the Garrison Institute. CARE is a unique professional development program that helps teachers handle the stresses and rediscover the joys of teaching. Through learning tools such as mindful awareness practices, caring and emotion skills

training, CARE seeks to empower teachers to choose calm, effective responses to children's behaviour rather than unconscious reactions that are often ineffective. The methodology includes surveys and focus group discussions, followed in the second year by observation of the teachers. Full results from the study are yet to be released.

Roeser's 2012 overview identified the following courses currently being offered in the USA for teachers, shown in Table 2-1 below:

Program	**Program Focus**
Cultivating Awareness and Resilience in Education (CARE for Teachers) http://www.garrisoninstitute.org/care	4-day, 36-h program held over the course of 5-6 weeks with intersession coaching provided to participants by phone to support the application of CARE skills. It is also offered as a week-long retreat at the Garrison Institute. CARE utilizes three primary instructional components: (a) emotion skills instruction, (b) mindfulness and stress reduction practices, and (c) listening and compassion exercises. Program components are linked to specific strategies for improving classroom management, teacher-student relationships, and instructional strategies.
Stress Management and Relaxation Techniques (SMART-in-Education) http://www.smart-in-education.org/ http://margaretcullen.com/	8-week, 34.5-h program and 15-min daily home practice. Promotes skills sets (e.g. regulation of attention and emotion) and mind-sets (e.g. dispassionate curiosity, compassion and forgiveness for self and others) associated with mindfulness that are conducive to occupational health and well-being and teachers' capacities to become more effective teachers. This training includes group discussions, dyadic exercises, didactic presentations and practices such as breath awareness meditation, mindfulness meditation, loving-kindness and forgiveness meditations, a progressive "body scan," and mindful movement.
Inner Resilience http://www.innerresilience-tidescenter.org/	Promotes the skills of self-regulation and caring for others through residential retreats for school staff, professional development workshops, individual stress reduction sessions, and parent workshops at school sites.
Mindfulness, Courage, and Reflection for Educators http://umassmed.edu/cfm	A blend of mindfulness-based stress reduction (MBSR) programming and the Courage to Teach Program.
Mindful Schools http:// www.mindfulschools.org/	Online and live training for educators and administrators in the form of courses, curriculum trainings, and customized mindfulness workshops.
Passageworks Soul of Education Course for Teachers http://passageworks.org/	This 2.5-day program focuses on building heart, spirit, and community in the classroom. The program covers the theory of social and emotional learning, the integration of play, ritual, stillness, expressive arts and community building, developing reflection, and "teaching presence".

Table 2-1: Sampling of current mindfulness-based programmes for teachers (Roeser et al, 2012)

Recent studies are adding to this growing call to link mindfulness with education in order to support teachers. Singh et al's study (2013) revealed that mindfulness was able to both

reduce stress, and improve work performance, in the pre-school context. An interesting aspect of this study was that the increased mindfulness of the teachers was shown to produce a top-down effect on the pupils, who exhibited better behaviour than control groups. Abenavoli et al (2013) showed that mindfulness "had a strong protective effect against emotional exhaustion, depersonalisation, and low personal accomplishment, three widely-studied components of burnout" (2013:66).

No mindfulness-based initiatives, to date, are happening in the education sector in South Africa.

2.5.3 Mindfulness-Based Interventions with College Students

Oman et al (2008) identified a paucity of studies on college student stress-management interventions, despite the worrying statistics coming out of US universities, where stress was identified as the most common impediment to academic performance. They noted that stress often leads to unproductive rumination and undermines resilience factors such as hope and the capacity to forgive. They evaluated the effects of two meditation-based programmes on stress and well being (MBSR and EPP – Eight Point Program), both of which are secular and have a track record of success with different populations. Results from their randomised controlled design included a follow-up assessment two months after post-test, which revealed that the benefits did not significantly diminish: "Findings of increased forgiveness and reduced rumination are encouraging and suggest that meditation training might foster positive relationships at a time of crucial developmental changes" (Oman et al, 2008:575).

Participants learned practices for regulating attention throughout the day, which helped them to manage the time pressures that college students increasingly experience. Meditative practices were also linked to measures of effective functioning and participants were also able to appraise potentially stressful situations and view them as inconvenient, rather than threatening or stressful.

Shapiro, Brown and Astin's meta-study (2008) drew on four decades of research, consolidating the evidence for the positive benefits of meditation. These were grouped in three key areas: cognitive and academic performance, mental health and psychological well-being, and development of the whole person.

Cognitive And Academic Performance. In terms of cognitive and academic performance, there are findings to indicate that mindfulness meditation improves the ability to maintain preparedness and orient attention; improves the ability to process information quickly and accurately; and concentration-based meditation, practiced over a long-term, may have a positive impact on academic achievement.

Mental Health And Psychological Well-Being. In the area of mental health and psychological well-being, mindfulness meditation may decrease stress, anxiety and depression, as well as support better regulation of emotional reactions and the cultivation of positive psychological states. Cohen and Miller (2009) conducted a pilot study with 21 psychology graduate students with the purpose of evaluating whether an adaptation of an MBSR course could mediate against the risk of occupational stress and burnout. The six-week interpersonal mindfulness training (IMT) was shown to have positive effects on mindfulness, perceived stress, social connectedness, emotional intelligence and anxiety. The researchers' conclusion was that the IMT course could successfully be taught within a graduate psychology curriculum.

Development Of The Whole Person. When studying the development of the whole person in college students, findings reveal that meditation can support the development of creativity, enhance the development of skills needed for interpersonal relationships, and increase empathy and self-compassion.

These findings were used for introducing the mindfulness intervention to students at the Wits School of Education, and provided useful evidence for potential benefits of taking part in the study.

2.5.4 Mindfulness-Based Interventions with Student Teachers

There are only two studies that I have found, so far, addressing the use of meditation or mindfulness with student teachers specifically. Winzelberg and Luskin (1999) recruited research participants from a US university teaching credential programme and assigned them either to a simple meditation training, or to a control group. The meditation group were trained in concentration practices and the research tells us that:

> *The meditation group subjects were found to significantly reduce their stress symptoms in the post-test measurements when compared to the control group in the*

> *domains of emotional manifestations, gastronomic distress and behavioural manifestations. (1999:69)*

Although this study revealed significant data, through quantitative analysis, it was not able to investigate the reasons behind these changes, explore the students' experiences in any depth, or apply the skills to the classroom context.

A recent study by Soloway (2011) utilised a qualitative action research method to explore the value of the Mindfulness-Based Wellness Education (MBWE) programme on the teacher education curriculum. The MBWE programme had been developed specifically for a teacher elective course on stress and burnout, and incorporated both concentration and insight practices. Positive feedback from students at the Ontario Institute for Studies in Education (OISE) inspired the research study. One student teacher reported the following:

> *I honestly think that the stress and burnout class should be a requirement for every student at OISE because there are so many things that I learned about how to deal with the challenges in the classroom that I never learned from the other classes. It was all about developing myself as a teacher, as a person first, and then teaching second. That is so important because it really affects how you teach and it affects the classroom environment. (2011:2)*

Soloway's findings revealed positive outcomes in student teacher development in areas of identity, reflexivity, the understanding of constructivist learning, competence and engagement with the teacher education programme. He concludes his study with a call for the literacy of mindfulness. He argues that our current approach to education conditions automatic ways of being in the world, where we are limited by our pre-conceived perceptions, and states that mindfulness practices, in contrast, allow us to "process information cognitively, emotionally and socially – foundational practices for being successful in the classroom and in society" (2011:185).

2.6 Considerations for MBI Implementation

Despite the positive findings within academic research, particularly in the education sector, regarding the effectiveness of MBIs, there are still many considerations that need to be taken into account when taking mindfulness interventions into new contexts. The following factors are considered in terms of how they may affect the use of MBIs, but it is as yet unclear in the research literature what the most significant factors are:

2.6.1 Type of Programme and Target Population
2.6.2 The Secular Approach
2.6.3 Length of Course
2.6.4 Daily Practice Commitment
2.6.5 Facilitator Training
2.6.6 The Group Setting
2.6.7 Intentions or Goals

2.6.1 Type of Programme and Target Population

Mindfulness programmes have recently been classified into three main types (Chiesa et al, 2013):

i) Modern clinical MBIs (such as MBSR and MBCT) which have been specifically developed to integrate the essential aspects of Buddhist practices with Western psychological practices, and have been the focus of most clinical research.
ii) Traditional intensive mindfulness practices such as Vipassana, Zen or Tibetan Buddhist meditation training, which are usually taught in a retreat context.
iii) Brief mindfulness inductions (often experimental manipulations), where mindfulness practices are taught in one or more short sessions.

In 1998, Salmon, Santorelli and Kabat-Zinn documented 240 programmes using mindfulness-based interventions (Lau et al, 2006). No doubt this number has increased considerably since then. The most cited in the academic literature include MBSR (mindfulness based stress reduction), MBCT (mindfulness based cognitive therapy), MBRE (Mindfulness based relationship enhancement), MB-EAT (mindfulness based eating awareness training), MBAT (mindfulness based art therapy), as well as interventions with a strong mindfulness component, such as ACT (Acceptance and Commitment Therapy) and DBT (Dialectical Behaviour Therapy). Teasdale et al (2002) developed the Mindfulness Based Cognitive Therapy (MBCT) programme, which brings together Kabat-Zinn's work on MBSR, with the Cognitive Behavioural Therapy of Beck et al (1979). The MBLC (mindfulness based living course) has been developed through Samye Ling and the University of Aberdeen (Nairn, 2009), with a triple focus on mindfulness, compassion and insight, while more recently, the Mindful Self-Compassion course (Neff & Germer, 2013), puts greater emphasis on compassion than mindfulness.

The clinical courses, such as MBSR and MBCT, were originally offered to people on a referral basis from their medical practitioners, but have more recently become popular with non-clinical populations. In contrast, MBLC was developed, using many of the MBSR and MBCT practices, as well as compassion practices, for anyone wishing to explore the workings of their own mind, on a self-referral basis. While offered as a secular course, it is based on the Buddhist theoretical understanding that humans do not suffer from specific pathologies, but rather from an inability to understand the nature of the human condition. The difficulties that human beings experience are taken to be the result of grasping, aversion and ignorance. Kabat-Zinn refers to these theoretical underpinnings as "universal dharma" (MCown et al, 2011). Other traditional intensive Buddhist programmes, such as *vipassana*, are usually taught in a retreat context. This allows for the crucible effect, where difficulties in the mind are able to surface, and then be transformed, within a controlled environment and under the guidance of an experienced teacher.

Baer's 2003 review focused on the clinical use of mindfulness training, suggesting its benefits across a wide range of disorders. However, Teasdale et al (2003) remain cautious about attempts to apply mindfulness training indiscriminately, as if it were a simple, general-purpose therapeutic technology (Finucane & Mercer, 2006). There is evidence that mindfulness approaches do not work significantly for particular groups, within the therapeutic context. Ma and Teasdale (2004) identified the effectiveness of MBCT for patients suffering from three or more episodes of depressive relapse, with the reduction of relapse from 78% to 36% in 55 patients. The results, however, were not as significant for patients with only two recent episodes. It appears that these groups are significantly different; the first group reported adverse childhood experiences, early onset of depression and three or more depressive episodes. The second group reported normal childhood, later onset of depression, with relapse often linked to a major life event. Further research is needed to explain these findings, but it shows that Teasdale et al (2003) are right to remain cautious about the use of generic mindfulness programmes for all population groups. They advise that mindfulness training is best conducted by practitioners who have experience with the specific issues that may arise in the target community. Facilitators need the skills to adapt mindfulness concepts to the group they are working with.

2.6.2 The Secular Approach

The history of MBIs [2.3.2] outlined the development of secular mindfulness from its Buddhist roots, which has allowed courses to be run for multi-faith and multicultural groups, particularly in clinical settings. This has been a great advantage in terms of accessibility, but has also created some tensions. A primary school in Ohio shut down its mindfulness programme when some parents complained that their children were being exposed to Eastern religions (Gregoire, 2013).

The school example highlights the commonly-held confusion between the definitions of spirituality and religion, clarified below by Tanyi:

> *[. . .] spirituality involves an individual's search for meaning in life, wholeness, peace, individuality, and harmony (Burkhardt 1989, Fitzgerald 1997, Tloczynski et al. 1997, Walsh 1999, O'Leary 2000), and is a biological, and integral component of being human (Heyse-Moore 1996, Narayanasamy 1999a, Wright 2000). Spirituality is also described as a way of being (Macquarrie 1972, Ellison 1983); an energizing force that propels individuals to reach their optimal potential (Goddard 1995, 2000); a meaningful and extensive way of knowing the world (Dawson 1997); and is expressed through several personal mechanisms such as meditation and music appreciation (Stoll 1989, Aldridge 1998). (Tanyi, 2002:5002)*

Religions offer particular systems for achieving this universal capacity for growth, but personal/spiritual growth is still possible outside a religious framework. Mindfulness has drawn from the contemplative traditions, particularly those of the East, but is not exclusive to them, and therefore makes a valid claim to secularity.

In contrast, some researchers and Buddhists worry that important elements are lost in extracting the teachings from their spiritual (religious) underpinnings, particularly in regard to the attitude and motivation brought to the practices. Dimidjian and Linehan (2002) have noted that:

> *Although the secularization of mindfulness has undoubtedly been pragmatic in an effort to make the treatment models accessible to as many clients as possible, it is also possible that something is lost in the separation of mindfulness from its spiritual roots. (2002:167)*

Their specific concern revolves around the training of therapist facilitators [2.6.5].

Lama Yeshe Rinpoche and Ken Holmes from the Samye Ling Buddhist Centre in Scotland have also expressed concern about mindfulness being extracted from its Buddhist roots (pers com 2012). They are worried that people become mindful, i.e. aware of the present moment, but are not always mindful of their impact on the people around them. Within

Mahayana Buddhism, the definition of mindfulness has an ethical component, with a commitment to do no harm and perform wholesome actions in order to alleviate the suffering of others. Mindfulness in the secular context makes no such demands on its practitioners. This was debated at the Mind and Life conference, in the context of the 'mindful sniper', who uses his mindfulness skills of focus and attention to kill. Matthieu Ricard, a Buddhist monk, noted the importance of correct motivation, within the Buddhist context.

In a Mahayana Buddhist meditation practice, the opening session involves setting the intention to reach enlightenment in order to benefit all beings, and finding the motivation to keep doing so, even during times of difficulty. After the meditation session, the benefit of the practice (merit) is dedicated to all sentient beings. This highlights the importance of both setting an intention, and the ethical wish to benefit others, rather than meditation purely for one's own sake. Some of these aspects have been lost in secular mindfulness.

Compassion practices are also integrated within the Buddhist teachings, yet they have not been taught explicitly in most secular mindfulness interventions (particularly MBSR). Gilbert (2010) has noted how this is often to the detriment of western students, particularly those in therapeutic settings, who experience strong feelings of self hatred, and find it hard to access self-compassion, or indeed compassion towards others. This aspect was explored more in the earlier section on compassion [2.4.2].

Despite the reservations from specific religious groups, researchers and Buddhists, the secularisation of mindfulness has made the practices available to all, and they are gaining momentum as ways of alleviating stress, improving concentration, and assisting people from all backgrounds to bring greater levels of awareness to their daily lives. The evidence-based research stands as a testament to this.

2.6.3 Length of Course

There is debate in the literature regarding the appropriate length of time for an MBI. Benefits have been reported for courses as short as a single session although most courses follow the Kabat-Zinn MBSR protocol of eight sessions of two hours each, plus a day of retreat.

In terms of the education sector, Roeser et al have explored the benefits of different length courses:

> *Another important issue concerns a determination of dose–response relations, or how much mindfulness training is feasible and efficacious to produce effects on teachers, classrooms, and students. MT programs often require a significant time commitment from teachers who already have hectic work lives. Some evidence suggests that shorter programs can still engender significant effects for adults (e.g., Klatt, Buckworth, & Malarkey, 2009). What is the optimal feasible amount of training that is effective? In our own work (SMART and CARE)*[. . .] *we have been experimenting with programs of various durations (length in hours) delivered over various periods of time (5 vs. 8 weeks). Using similar measures to compare programs of different lengths is one way to address the dose–response relation in these programs. (Roeser et al, 2012:171)*

Decisions are often based on pragmatism, balancing how long participants need to develop new practices against how much time they have available. Most practitioners agree that mindfulness is a lifelong commitment, so the decision remains with the trainer regarding how long they feel is necessary to bring key concepts across in an experiential way. Tloczynski & Tantriella (1998) provided only one session of Zen breath meditation and noted decreases in anxiety and depression, while Zeidan et al (2010) offered four sessions of twenty minutes each and this still revealed significant, if short-term, changes in cognition. The aim of longer programmes is to assist participants with developing new, more functional, coping strategies and habitual tendencies. Programmes intended to aid relaxation or promote concentration appear to be effective as shorter courses.

Grossman et al (2004) conducted a meta-analysis and raised the concern that benefits may be restricted to the immediate effects post intervention, particularly if a course is short. A few studies point to long-term benefits of mindfulness training (Miller, Fletcher and Kabat-Zinn et al, 1995), but additional research is needed to confirm the findings. In addition, Grossman et al noted methodological deficiencies, such as insufficient information given on dropout rate, other concurrent interventions, therapist adherence to the MBI, therapist training and competence, description of interventions and the statistical significance, or clinical relevance of the results (2004:40).

2.6.4 Daily Practice Commitment

Alongside the debate regarding the length of an MBI, are questions on how long participants are recommended to practice each day, as "previous studies on mindfulness-

related interventions have reported mixed results regarding the relation between the amount of home practice and outcome" (Nyklicek & Kuijpers, 2008).

Carmody and Baer's study (2007) produced strong links between formal daily practice (particularly mindful yoga, body scan and sitting practice) and improvements in the five facets of mindfulness. No links, however, were found between informal daily life practices and improved facets of mindfulness. In contrast, Nyklicek and Kuijpers' study concluded that "no associations were found between the amount of weekly practice and the outcome variables" (2008:337), but they did conclude that studies with smaller sample sizes (n<59) may be less able to detect effects of modest magnitude.

This is clearly an area to be considered as the Buddhist literature draws strong links between daily practice and improvements in psychological well-being, but, like Carmody and Baer's study, associates greater benefits with formal practice than informal.

2.6.5 Facilitator Training

With the rapidly increasing demand for mindfulness training worldwide, concerns about training processes, standards and competence have started to emerge. Facilitators are expected to have multiple skills: organisation of the curriculum; relational skills; embodiment of mindfulness; guiding practices; conducting enquires that reveal underlying mechanisms of the practices; management of the group learning environment; and providing information on specific issues, usually related to the group.

Mindfulness has a distinct pedagogy in contrast to most other adult education courses. As an educational model it has absorbed four powerful influences: "education for liberation (Freire, 2000), transformative education (Mezirow & Associates, 2000), the inner landscape of the teacher (Palmer, 2010), and Winnicott's concept of the holding environment (1971)" (McCown & Reibel, 2009). These not only dictate the style of facilitation utilised in MBIs, but also contain an assumption on the desirable role and disposition of the mindfulness facilitator. The learning theory underlying MBIs draws on Vygotsky's zone of proximal development (ZPD) and ideas of constructivism. The facilitator takes the role of an empathic instructor, embodying the qualities of both mindfulness and compassion.

At present, there is limited published literature on mindfulness facilitation. The most comprehensive texts to date are *Teaching Mindfulness: A Practical Guide for Clinicians and Educators* (McCown et al, 2011) and *Mindfulness-based Cognitive Therapy for Depression* (Segal et al, 2002). Books can provide theory and examples of good training. Training courses can provide practical experience, and can give assurance that participants have been well-trained. However, neither books nor training courses can ensure that all facilitators will go on to train well.

Crane et al (2011) have taken steps to address these issues, through the development of Good Practice Guidelines and Competencies in Teaching Mindfulness (Crane et al, 2012). They identified a worrying chasm identified between the published standards for mindfulness facilitators (Crane et al, 2010) and the reality of the training undertaken by facilitators. 36% of those surveyed had received no formal training. This goes entirely against the recommendations that facilitators must have their own established mindfulness practice and experiential training, to ensure that they embody the taught practices.

Dimidjian and Linehan (2002) also drew attention to the training of therapists who lead mindfulness courses. The ancient contemplative traditions work on a teacher-disciple relationship where the students are only given permission to teach others once they have developed their own mindfulness skills sufficiently. Spiritual teachers may not have "operationalized their strategies for determining when their students are sufficiently prepared to take students of their own" (Dimidjian & Linehan, 2002:167), but clear methods and criteria exist in most traditions, even if implicitly. Only once a student has developed a strong capacity for mindfulness, and has an ethical orientation towards helping other people, would the spiritual teacher give them permission to teach others. Even at that stage, the senior teacher will still take on responsibility for their student, and ensure that they are teaching within specific parameters. This is the benefit, within Buddhism, of 'lineage'.

Debates about whether mindfulness facilitators can effectively present mindfulness practices without having their own daily formal practice have been on-going in the medical field. Some protocols dispute this necessity, such as ACT (Hayes et al, 1999) and DBT (Linehan, 1993), who claim that as long as facilitators understand the underlying theoretical model, then facilitators do not need to be practitioners themselves. A panel

discussion at the Association for Advancement of Behaviour Therapy highlighted the debate, with Segal representing the common view of MBCT and MBSR that therapists must have their own formal practice. Epstein, on the other hand, and DBT therapists in general, do not require a formal practice, but rather require mindfulness in daily life (Dimidjian & Linehan, 2003:170). Buddhist practitioners would argue that mindfulness in daily life will stay superficial if there is no daily practice with which to build the faculty, or 'muscle of mindfulness' (Nairn, pers com).

Within the Buddhist tradition, embodying mindfulness is considered of critical importance to facilitation, as there is an understanding that practices are 'transmitted' from trainer to student as much as they are taught. Crane et al explain this as follows:

> *Through the process of inner contemplative exploration, the teacher comes naturally to embody the qualities that are inherent with the exploration itself (e.g. intentional focus of attention, engaged curiosity, equanimity, compassion). Embodiment communicates the essence of the potential which mindfulness offers on a level beyond the conceptual* [. . .] *In our personal experience, our capacity to embody the essence of mindfulness teachings depends on a continuing 'alive' connection with our own practice and with teachings from the wisdom traditions which gave rise to mindfulness. (2011:5)*

Psychologists who have studied the content of the course, without being mindfulness practitioners themselves, have been shown to be less effective than first or second generation trainers who embody the traits of mindfulness and compassion (Crane et al, 2011; Grossman, 2010; Williams & Kabat-Zinn, 2011). The MBLC course, for example, is taught by practitioners who have a minimum of five years daily practice, of forty-five minutes per day, for the reasons below:

> *The rationale is that practitioner commitment and example is vital to patient participation, and also that a person is unlikely to properly understand or teach the practice without having substantially experienced it themselves.* (MAMIG, 2006:291)

Williams (pers comm, 2011) spoke of running a course where a practitioner arrived late. He looked up from conducting the practice, acknowledged the latecomer, and then continued. His colleagues watching the video recording of the session, pointed out how this transmitted the concepts of acknowledging (thoughts, feelings, events), without judgment, and coming straight back to the present moment. A facilitator without a daily practice may not have absorbed these traits, and become unsettled by, or judgmental about, the late arrival of the participant.

2.6.6 The Group Setting

Most mindfulness programmes adopt an adult education, group approach for a number of reasons: learning from other's insights; increased motivation to practice through peer support; assistance with the isolation common with many illnesses, and cost-effectiveness (MAMIG, 2006:291).

Within a spiritual tradition, group training sessions take place, but private interviews are also granted. In these individual sessions, it is possible for the teacher to identify not what the student *wants* to practice, but what the student most *needs*. This allows for continual growth and private discussions about meditation difficulties. The lack of one-on-one sessions was identified as a weakness in an MBCT course by one participant in Finucane and Mercer's study (2006:7), however, their study on patients in primary care settings revealed that the group approach to mindfulness training is generally perceived as an effective treatment method.

The group approach may provide a number of benefits over both individual sessions and group psychotherapy (McCown et al, 2011). Apart from addressing the needs of a greater number of participants, the mindfulness meditation may appeal to participants who find discussion of their personal challenges too intimidating in a group therapy scenario. By focusing on the development of mindfulness skills, rather than therapy-style discussions on the student teachers' experiences of stress, mindfulness training is viewed as an adult education course, rather than a mental health intervention, thus helping to de-stigmatise stress-related experiences. Having said that, the group approach, even if not presented as group therapy, has been shown to have therapeutic benefits, as people learn from hearing the experiences of others, and by feeling less isolated when they realise that all human beings suffer (Allen et al, 2009; Finucane & Mercer, 2006; Yalom & Leszcz, 2005).

The group setting has also been shown to be beneficial in terms of bringing across significant concepts, such as the Three Marks of Existence, shared by all sentient beings (Grabovac et al, 2011): impermanence (*anicca*), dissatisfaction / suffering (*dukkha*) and non-self (*anatta*). For example, participants notice how their own, and other's issues, change from week to week (impermanence), how everyone experiences internal and external stressors, no matter what their socio-economic background (dissatisfaction) and

the understanding that most external stressors are 'not about me' helps to shift participant's perspectives around the issues with which they identify (non-self).

2.6.7 Intentions or Goals

There is interesting discussion in the field regarding the benefits and disadvantages of goal orientation versus intention setting. Goal orientation has an end focus, while setting an intention is more like following a compass direction, which creates the conditions for insights to arise. Segal, Williams and Teasdale (2013) warn of the danger of goal-oriented mode in the instruction of mindfulness, as it may be counterproductive to the very essence of mindfulness. However, Shapiro (1992) revealed that the experience of practitioners is inevitably limited – or indeed enhanced – by their intentions, as intention and volition provide a stronger commitment to action than desire alone. For example, the intention for attending an MBI often determines the amount of time given to practice. Long-term meditators, in Shapiro's study, revealed a development in their intention from self regulation, to self exploration, to self liberation. However, many people who attend eight-week MBIs, particularly in a clinical setting, are primarily motivated by self regulation, and do not necessarily progress to later stages, or develop a long-term mindfulness commitment. Maybe for these populations, a specific goal orientation (e.g. regulation of anger) is beneficial.

In Finucane and Mercer's study, they note the importance of the conative (goal setting) element in therapeutic interventions, and recognise that this was missing in the MBCT programme that they researched. Their recommendation was that MBCT form one component of a larger treatment programme, or that it could be extended in length for severely depressed and/or anxious patients. This would allow for a specific component on goal setting, which is known to be effective in the treatment of affective disorders (Finucane & Mercer, 2006:12). This view aligns with Wallace & Shapiro's (2006) mental balance model, which is set in motion by conation.

Maybe the issue at stake is linked to the different stages of a mindfulness practitioner. The danger of many books on mindfulness is that they jump to focusing on the positive secondary effects (such as tranquility or wisdom) and take them as the goal. This can set practitioners up for disappointment and waning motivation when they start to experience the emotional intensity associated with early insights into habit patterns of suppression.

Williams et al's (2011) study with a group suffering from severe health anxiety noted that one participant with a very specific goal and high expectations of the training struggled when she found that she was not experiencing as many changes as she had hoped for.

Whilst in academic circles a great deal of time has been spent defining the construct of mindfulness – as a state, a trait or a technique – Chogyam Trungpa cuts through this differentiation with characteristic clarity, by asserting that mindfulness is both the technique and the goal (Trungpa, 2000). Simply being present, and bringing ourselves back to the moment again and again, with compassionate acceptance, is the goal of mindfulness. Anything that we experience or are able to accomplish once we are in the present is an associated, yet secondary benefit.

2.7 Gaps in the Literature

The role of any literature review is to establish the relevance and value of the proposed research questions in the context of current academic thinking. This literature review has provided a context to the study, by identifying areas of recent research related to student teacher development, stress, and mindfulness as a stress management intervention. Founded on the contemporary literature, the thesis seeks to explore whether mindfulness training can serve as a therapeutic tool for student teachers, alleviating stress, improving well-being and enhancing development. This study also aims to make a critical evaluation of whether it is beneficial to take a generic mindfulness programme (MBLC) and utilise it with a new population (student teachers).

The research on teacher stress has exploded in the last two decades, as schools struggle to retain staff, and doctors find that most modern illnesses are linked in some way to stress. Similarly, the literature on mindfulness has expanded enormously, and is seen by many as a potential cure for the stress we experience in our frantic modern world. Kyriacou has been focusing on stress within the education sector since the 1970s and has been cited in an ever-expanding body of global academic literature. In 2001, Kyriacou emphasised five directions for future research on teacher stress. These were: monitoring the extent to which particular educational reforms are generating high levels of teacher stress; exploring why some teachers are able to successfully negotiate periods of career reappraisal and retain a positive commitment to the work, whilst others are not; clarifying the nature of the stress process in terms of two types of triggers, one based on excessive demands and the other

based on a concern with self-image; assessing the effectiveness of particular intervention strategies to reduce teacher stress; and exploring the impact of teacher-pupil interaction and classroom climate on teacher stress (2001:7). Clearly, *assessing the effectiveness of particular intervention strategies*, is at the core of this study.

Since 2001, though, very little research has been published in the area of intervention strategies and significant gaps have been identified, both in the areas of theory and practice. There is a gap in the literature regarding student teachers and their experiences of stress, yet the importance of stress management for all teachers has been highlighted both in global research, and in South African studies. There is also a call for teacher education institutions to be aware of the support that students need emotionally, as well as academically. Many research studies have focused on the causes and consequences of stress, but few have offered ways to alleviate it, and are unclear about appropriate learning strategies required to develop the necessary skills and dispositions, often with the escape clause that coping strategies are as unique as each person. Although mindfulness is being used extensively in clinical contexts as a way of supporting people who have experienced both physical and mental ramifications of stress and burnout, there is a mere handful of studies using mindfulness to alleviate teacher stress or to prevent the debilitating ramifications of stress.

These gaps can be summarised into four main areas:

1. There is a gap in the analysis of causes and consequences of student teacher stress in South Africa's teacher education system.
2. There is a gap in research on stress management techniques in South Africa, especially relating to student teachers or teacher training institutions.
3. Worldwide, there is a gap in the research on mindfulness in teacher education, and no evidence of work being done in this field in South Africa.
4. The current methods used for mindfulness research are predominantly quantitative, yet in such a new field, there is the need to explore factors in more depth, using qualitative methods.

Collaboration between educators, scientists, and mindfulness practitioners could bring us closer to new understandings of how best to educate a new generation of teachers, with a potential for a knock-on effect on their pupils.

2.8 Aims of the Study

The literature review has provided the overall context for the research endeavour. Teaching is known worldwide to be a stressful profession, and the on-going transformation of South Africa's education system has added an extra burden. Student teachers are also known to go through stress and struggle as they learn the knowledge, skills and dispositions required for this complex profession. Mindfulness has been shown to support people's growth in a wide number of arenas, from medical, to business, to education. One aim, therefore, of this study is to explore these three elements through the lives of individual student teachers at Wits University in Gauteng, South Africa.

Through their experiences, the research study aims to evaluate the impact of the mindfulness-based intervention. As shown in the literature review, MBIs have been widely used, to significant effect, in medical and psychological fields, and are being trialed in the USA and Europe with teachers and pupils. However, student teachers, who experience the stress associated with their life stage as young adults, higher education demands, and teaching for the first time in the classroom, have not been a significant focal point until recently.

A further aim is to fill the literature gaps enumerated above and to design a step-by-step process, which will address the underpinning research question, namely whether training in mindfulness can support student teachers in their challenging transition. Most studies on mindfulness in different fields have used quantitative research techniques, resulting in a great deal of numerical evidence of the benefits of mindfulness practice, but little explanation of how and why these benefits occur. This study is primarily qualitative and inherently interdisciplinary – familiar terrain for educators – and incorporates a number of perspectives: psychology (both Western and Buddhist), and education, particularly adult development and teacher education.

The data collection will, therefore, be informed by a mixed methods approach, including in-depth interviews and questionnaires, in order to explore a range of themes and possible explanatory mechanisms, related to the meaning that student teachers construct around their experiences of the mindfulness training. These themes and mechanisms of change will be contrasted with those identified in therapeutic fields, in order to develop new theory, from which to take mindfulness research in education still further.

CHAPTER THREE: RESEARCH DESIGN

The research problem is clearly the driving force behind any research endeavour and the means by which the most appropriate design is selected (Goetz & LeCompte, 1984; Fetterman, 1998; Cohen et al, 2000). However, every piece of research also embodies the researcher's assumptions about reality, knowledge and values, and these guide the methodology, both consciously and unconsciously.

This study on mindfulness, with student teachers, draws together the fields of education and psychology, and is consequently influenced by their respective contemporary research approaches. Medical researchers, including psychologists, have tended to lean more towards quantitative designs, while education has a tradition of incorporating qualitative and mixed methods approaches as well. Consideration of these influences, underpinned by my epistemological beliefs, resulted in the decision to utilise a mixed methods approach.

This chapter first sets out a guiding framework for the research design (Fig 3-1), followed by a justification of the chosen methods. Later, information on the intervention and the participants is given, followed by an explanation of the data collection instruments and process of data analysis.

3.1 A Guiding Framework

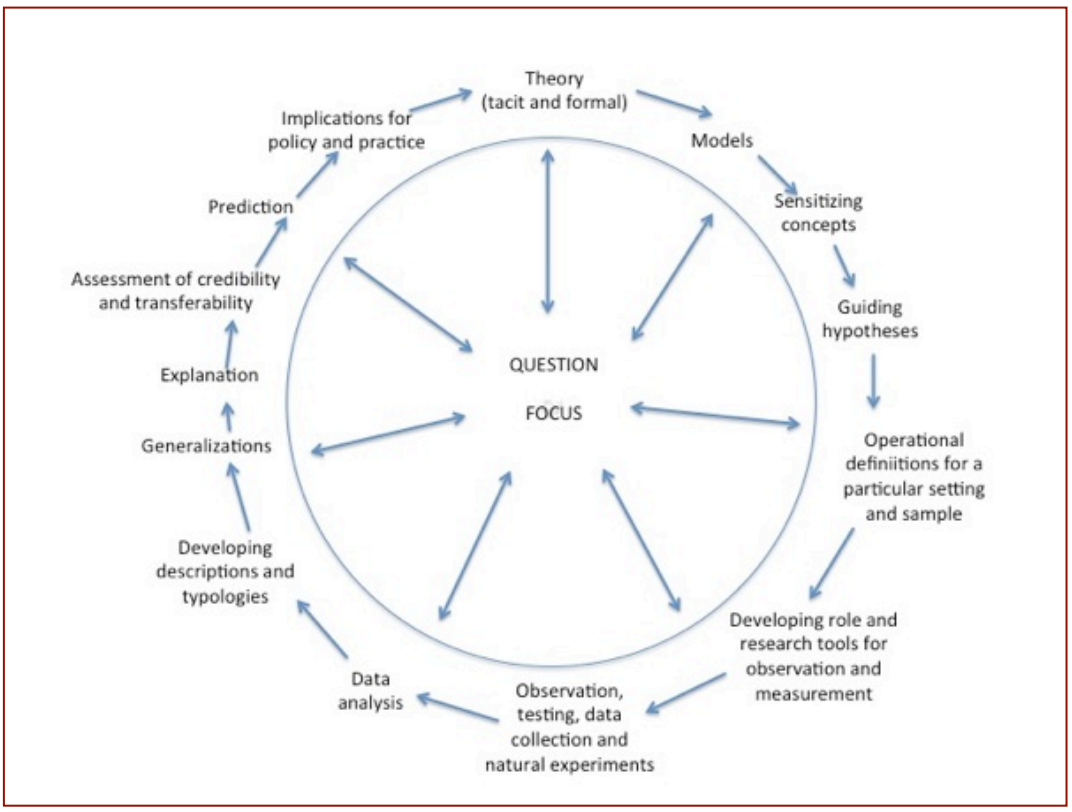


Figure 3-1: The Cycle of Inquiry (Marshall & Rossman, 1999)

Central to the Cycle of Inquiry is the general topic (focus) and the research problem (question), which conceptualise and frame the study. Tacit theory often initiates interest in a study, while the formal theoretical underpinning explored during a literature review allows the researcher to provide clear links from the literature to the research goals and questions; inform the research design; provide reference points for discussion of literature, methodology and analysis of data; and contribute to the trustworthiness of the study.

The research project may begin at any point on the cycle and the focus and questions are refined and adapted as data emerge. The cycle continues, with more refined questions and proposed theories and models each time around, informing future research. Appropriate operational definitions and research instruments are constructed and data is collected, categorised and analysed. From the data, descriptions, explorations and possible explanations can be documented. These findings provide the soil from which new theories can grow, and the conclusions may be significant for advising policy and practice.

3.2 Focus and Research Question

The central focus of this research study is student teacher professional development, encompassing the process of change in the lives of student teachers that result in expanded and enhanced capabilities. But focusing on the professional does not negate the personal. As Hamachek writes: "Consciously we teach what we know; unconsciously we teach who we are" (1999:209).

This research study explores whether, how, and to what degree, mindfulness can alleviate the distress and possibly build the strengths of student teachers. Many researchers stress the importance of an holistic approach to teacher education, where developing a clear understanding of the self as part of teacher development is implicit (Miller, 2014; Palmer, 2010; Korthagen, 2004). Mindfulness could provide the foundation from which to take both a psychological focus on easing challenging periods of transition, and on developing positive signature strengths.

The following overarching research question for this study intends to serve as a boundary around the study, without unduly constraining it: *"What is the potential for mindfulness to alleviate the stress associated with the transition from student teacher to teacher?"*

The research question sets out a general theme, based on the existing literature and the gaps identified within it, and focuses on the main concepts to be developed during the research process. The discussion and analysis of the data is also structured around the guiding research questions, which are subdivided into three sections:

Supporting Transition: Stress and Coping Strategies of Student Teachers
What stages of development are common to student teachers?
Which stages and areas of concern particularly give rise to stress, anxiety or depression amongst student teachers?
What is the experience of stress amongst student teachers?
What coping strategies do student teachers use to alleviate stress?
The Impact of a Mindfulness Based Intervention (MBI)
What changes through the mindfulness training do student teachers experience, if any?
Is there evidence that an MBI is efficacious in helping student teachers manage stress better?
Implications for Teacher Education
To what extent can mindfulness training, and practice, be recommended to student teachers in teacher education contexts?

Table 3-1: Research Questions

3.3 Research Assumptions

Researchers naturally make ontological, epistemological, axiological and methodological assumptions, which influence their chosen research approach. However, the research process must be rigorous enough to ensure that the researcher's personal assumptions and interests are consciously evaluated in an embodied, reflective way, so that there is awareness about any potential bias to the study.

Ontological Assumptions. Positivist theories claim an objective reality, explored through empiricism, sometimes called 'truth-seeking', while post-modern theories, sometimes known as 'perspective-seeking', subjectivise reality and claim that knowledge is relative and the existence of an external truth is denied (Price, 2007). For this research study, my overriding ontological assumption, based both on qualified realism and Buddhist philosophy, is that our minds and the world are not separate: universalistic thinking (absolute Truth) and relativistic thinking (contextual and multiple truths) can both be seen to exist and are always evolving. From this perspective, I have been strongly influenced by the work of Varela, Thompson and Rosch (1991). Their book, *The Embodied Mind*, explores a bringing together of Western scientific method, with Eastern philosophical tradition and argues for the application of a new, embodied rigour to the methodology utilised in the cognitive sciences.

Epistemological Assumptions. An examination of epistemology considers what constitutes knowledge, and how it is acquired. For this study, the essence of which is to explore the workings of the mind, Varela et al's work is significant. They were influenced by Merleau-Ponty's phenomenological perspective, where researchers are attempting to understand the mind, to shift the nature of reflection from an abstract, disembodied activity to an embodied (mindful), open-ended reflection. There is a fundamental circularity that requires us to expand our understanding of science "to include the broader panorama of human, lived experience in a disciplined, transformative analysis" (Varela et al, 1991:14).

Within the social sciences in general, epistemological decisions are based on the particular view of social theory:

> *If we see the world in terms of correlations between social facts [. . .] we are most likely to consider gathering statistics. If we think in terms of social meaning and perceptions, we may prefer to gather information through interviews. (Silverman, 2004)*

The existing body of mindfulness research illustrates the broad epistemological debates underway in the social sciences between quantitative nomothetic research and qualitative idiographic research. Having been influenced by the epistemologies of both psychology and education, I therefore selected a mixed methods approach, which allows for an iterative investigation into new areas of study, while building on existing theory.

Axiological Assumptions. The quantitative paradigm claims that values are excluded from the research process as they are considered confounding variables or phenomena that cloud our view of reality. However, it can be useful to look at the research process as consisting of three stages: what goes in, what comes out, and what happens in between (Hollis, 1994). The choice of what is worth investigating is the result of a researcher's values; people generally choose to investigate what they personally find interesting. This is clearly the case with this study, where I have a professional interest in teacher education and my beliefs about the efficacy of MBIs are based on personal experience. The significance that the research is held to have, and how it is used, also depends on a judgment of value (either by the researcher, or someone accessing the research), but the actual process of investigation can, and should, be as value-free as possible.

It is important for me that the research design displays rigour and is protected from confirmation bias, and that the conclusions could be replicated through other research, by other researchers. Methodological rigour allows me to reveal unexpected findings, as well as simply to confirm any predicted hypotheses. Indeed, it is often the unexpected findings that provide the real treasure of research, shifting the field forward. The embodied, open-ended reflection process also allows me to develop my own practice and teaching, as well as research skills.

Methodological Assumptions. The current predominance of quantitative research, particularly correlational and experimental methodologies, appears to reflect the preferred paradigm in the fields of medicine and psychology. However, when discussing directions for future research, the literature is calling for more qualitative research, as described

below, particularly when exploring the underlying mechanisms of mindfulness and evaluating people's experience of mindfulness and compassion:

> *Research on the effects of MT on teachers, classrooms, and students should take advantage of a variety of methodologies, including case studies, longitudinal studies, and randomized controlled trials (RCTs). Because the field is so new, "phenomena finding" investigations that use rich ethnographic descriptions, case studies of exemplars, and other forms of qualitative assessment of mindfulness and MT in education seem particularly important. (Roeser et al, 2012:170)*

Qualitative methods can be used to better understand any phenomena about which little is yet known; to gain new perspectives in areas where much is already known; or to gain more in-depth information on topics that are difficult to convey using quantitative results (Strauss & Corbin, 1998). The published qualitative research studies in the mindfulness field have shown themselves to be particularly useful in that they "can elucidate particular explanatory processes assumed to be important on theoretical grounds. Most important, qualitative process can capture the quality of people's lived experience" (Allen et al, 2009:414).

When investigating new areas of knowledge, it is increasingly accepted that flexible designs are just as capable of suggesting causal explanations and theories of human behaviour and are even more suitable for seeking meaning than quantitative methodologies (Turner & Roth, 2003; Robson, 2002; Potter, 2000; Hollis, 1994). Randomised control trials have been used in mindfulness research, but do not provide the opportunity of moving the locus of causal inference from the group to the single case, where each practitioner's change process can be explored and understood. They may reveal whether an intervention works, but cannot give information on how it works. Combining both quantitative and qualitative methods provides the potential for exploring mindfulness in teacher education in this nascent field.

Theoretical Assumptions. For this specific research study, my assumptions regarding the well-being of student teachers are: (1) The target group are young, healthy students, experiencing elevated levels of stress associated with the 'struggle for survival' stage, particularly during their teaching practicum (Kyriacou, 2007; Maynard & Furlong, 1995); (2) stress undermines their sense of well-being, their enjoyment of their new profession and the quality of their teaching; (3) enhancing student teachers' feelings of well-being would make them more resilient to stress, and more sustainable in the

profession; (4) student teachers use a variety of coping strategies, some that improve their well-being in both the short and long-term, and some that are counterproductive in the long term; (5) mindfulness is an intervention that can alleviate stress and consequently improve student teachers' well-being, in both the short and the long term (Shapiro, Brown & Astin, 2008).

My assumptions about mindfulness-based interventions, drawn from Grossman et al (2004) are that: (1) People are ordinarily largely unaware of their moment-to-moment experience, often operating in 'automatic pilot' mode; (2) they are capable of developing the ability to sustain attention to mental content – to enhance their faculty of mindfulness; (3) development of this faculty is gradual, progressive and requires regular practice; (4) moment-to-moment awareness of experience will provide a richer and more vital sense of life, in as much as experience becomes more vivid, and proactive mindful participation replaces unconscious reflexivity; (5) such persistent, non-evaluative, observation of mental content will gradually give rise to greater veridicality of perceptions; and (6) because more accurate perception of one's own mental responses to external and internal stimuli is achieved, additional information is gathered that will enhance effective action in the world, and lead to a greater sense of control, well-being and the alleviation of negative stress.

A variety of models was presented in the literature review, in order to provide a framework for evaluating these theoretical assumptions (Goetz and LeCompte, 1984). Of course, no single theory can hope to explain the multi-dimensionality of human experience. All theories have limitations, but they do provide a framework around which to explore empirical data, through the appropriate methodological approach.

3.4 Methodological Approach

Choosing methods and data collection instruments requires a consideration of the research population, type of data to be collected, and the triangulation methods by which to ascertain the data's trustworthiness. Based on my ontological, epistemological and axiological beliefs elaborated earlier, and the gap in the current literature, I chose to use a mixed methods approach, combining IPA (interpretative phenomenological analysis) with self report questionnaires.

The two major positions of mixed methods advocates – the pragmatic (e.g. Tashakkori & Teddlie, 1998; Johnson & Onwuegbuzie, 2004) and the dialectic (e.g. Greene and Caracelli, 1997) – are described by Rocco et al (2003). From the perspective of classical pragmatism, "the bottom line is that research approaches should be mixed in ways that offer the best opportunities for answering important research questions" (Johnson and Onwuegbuzie, 2004:16). The essential criteria, in this case, is fitness for purpose. This position certainly influenced the choice of mixed methods for this study, but more importantly, I anticipated that a dialectical philosophical underpinning could allow for the tension that exists in the juxtaposition of opposites to create a new analytic space:

> *This new space can encourage creative and imaginative mixed-method conversations, filled with multiple ways of knowing and acting - conversations that are generative and transformative in their potential insights and import. In this troubled era, with social problems of ever-increasing complexity and intractability, multiple ways of knowing and acting are surely needed. (Greene & Caracelli, 1997:15)*

Research is stronger when a fuller understanding of human phenomena is gained, and ethically allows for a plurality of interests, voices and perspectives: "The dialectic position calls for explicitly seeking a synergistic benefit from integrating both the post-positivist and constructivist paradigms" (Rocco et al, 2003:21). In the last 20 years, this 'third research movement' has become increasingly popular within educational and psychological research as it:

> *[. . .] embraces the complementarity not only between research methods but also between epistemological systems. This allows researchers to draw on the strengths of each approach with respect to furnishing evidence relevant to a range of concerns and questions while the limitations of any single approach with respect to distortions or omissions are modulated or corrected by evidence from the complementary approach. (Dattilio, Edwards & Fishman, 2010)*

Interpretative Phenomenological Analysis. IPA allows for the exploration of the meaning of a group of individuals into their lived experience of a concept or a phenomenon. IPA is based on a phenomenological methodology, which is an approach that concentrates on the study of consciousness and the objects of direct experience.

Varela et al (1993) have taken the phenomenological work of Merleau-Ponty into their research in the cognitive sciences. They view our bodies both as physical structures and as lived, experiential structures – in short, as both 'outer' and 'inner', biological and

phenomenological, and between these two, we circulate back and forth. They talk of the 'embodied mind' and see reflection as both a process and a form of experience. Thus, reflections on the mindfulness-based intervention, by both participant and researcher, can be performed with mindfulness. The mind is able to become an instrument for knowing itself, as described below:

> *Mindfulness techniques are designed to lead the mind back from its theories and preoccupations, back from the abstract attitude, to the situation of one's experience itself. Furthermore, and equally of interest in the modern context, the descriptions and commentaries on mind that grew out of this tradition never became divorced from living pragmatics: they were intended to inform an individual as to how to handle his mind in personal and interpersonal situations, and they both informed and became embodied in the structure of communities. (Varela et al, 1993:22)*

IPA "aims to explore in detail participants' personal lived experience and how participants make sense of that personal experience" (Smith, 2004) and is useful for bringing deeper issues to the surface, exposing taken-for-granted assumptions, as well as taking an insider's perspective (Brocki and Wearden, 2006; Conrad, 1987). In IPA, a double hermeneutic is involved: "the participants are trying to make sense of their world; the researcher is trying to make sense of the participants trying to make sense of their world" (Smith, 2007:53). It is phenomenological in its focus on an individual's personal experience and perception of an event. At the same time, though, it recognises the necessity for the researcher's interpretation to make sense of the participant's personal world. Therefore the term 'interpretative phenomenological' is used to describe the two aspects of this research approach.

IPA (Smith, Flowers & Larkin, 2009; Smith, Jarman & Osborn, 1999) was selected for this research study for four primary reasons. Firstly, it is a field of research about which there is little currently known and therefore requires open-ended reflection. Secondly, the purpose of the research is to undertake an in depth study of a phenomenon (people's experiences of an MBI), which can be heterogeneous and subjective. Thirdly, the aim is to explore the intervention from the perspective of the individuals, thus a qualitative approach is appropriate. Fourthly, I considered it important to reflect both on the data and on the methodology, and this is allowed for through the reflective circularity. I chose IPA in contrast to grounded theory, as the use of MBIs is based on theory from a number of established disciplines.

As with many qualitative research approaches, it is acknowledged that the interpretations are bounded by the participant's abilities to articulate their thoughts and experiences adequately, and by the researcher's ability to interview effectively and to reflect on and analyse the text. Therefore, "rather than excellence in research being conceptualized in terms of the methods used, we will advocate [. . .] that excellent qualitative research is marked by good craftsmanship" (Kvale & Brinkmann, 2009:60). Increasing levels of mindfulness and awareness enhance the quality of interviews, as well as the skill of open-ended reflection (Varela et al, 1993) both from the perspective of the participants in the MBI, and the researcher.

Kvale provides a detailed exploration of the epistemological concerns around interviewing. To differentiate between the positions of knowledge collection opposed to knowledge construction, Kvale uses the metaphor of an interviewer as a miner or a traveller. The mining metaphor assumes that knowledge is present in the interviewee, and needs to be dug out, while the traveller metaphor assumes that the interviewer gleans new knowledge on a journey away from home, and may also change through the experience. The latter metaphor is more in line with this chosen research methodology, as it acknowledges the roles of both the interviewer and interviewee in constructing meaning, focuses on the narrative to be told to the reader, and embodies the fundamental circularity of this approach.

Some IPA studies have been criticised for being superficial and descriptive, depending on the craft of the interviewer-researcher. This can be the case where the researcher is not comfortable with the two components of combining empathetic with questioning hermeneutics. For a mindfulness practitioner, the interview process is a natural setting to allow empathy to be experienced by the interviewee, as a mindfulness practitioner is comfortable with non-evaluative, present moment awareness. As a researcher, the questioning hermeneutic is a comfortable place from which to explore the lived experience of the participant, in a way that illuminates insights. An awareness of the potential pitfalls, however, can ensure the effectiveness of the IPA approach.

The focus of IPA is on perception, and a concern with complexity, process and novelty. It is the analysis of individual cases that gives IPA its strength. IPA is idiographic, in that it starts with a focus on an individual case. It is inductive as unanticipated themes can

emerge from the findings, and interrogative, when the results are discussed with reference to the literature. IPA allows for theoretical generalisability, where findings are cross-referenced against pre-existing theories, and may serve to confirm, develop or refute them.

3.5 Designing the Programme: The Mindfulness-Based Living Course

One of the intentions of this research study was to provide a contextual analysis within teacher education in South Africa. The need certainly seems to be great when looking at stress statistics, but a consideration of which practices can bring most benefit to student teachers needed to be evaluated.

The secular mindfulness training programme that was utilised and analysed in this thesis was the Mindfulness Based Living Course (MBLC) developed by Rob Nairn and the UK's Mindfulness Association. It is the foundational training for Aberdeen University's MSc in Mindfulness. I chose the MBLC for pragmatic and conceptual reasons; it is the one with which I am the most familiar, and has had a significant effect in terms of enhanced well-being in my own life. The MBLC programme is based on a Mahayana Buddhist framework, and it combines the three areas of Shapiro's Reperceiving Model – Intention, Attention and Attitude, or to use the terminology of Nairn – Intention/Motivation, Mindfulness and Compassion. It has a particular focus on compassion as an integral element for progressing in mindfulness. This is based on Neff's work around self-compassion, and Gilbert, who, after working with Westerners in a therapeutic capacity, realised that self-hatred was hindering their progress towards well-being. Other programmes, such as MBSR in its early years, made the assumption that compassion would be embodied in the mindfulness trainer, and therefore be transmitted to participants. This has not been the experience for all participants, depending on their presenting conditions and level of development.

The original course covers eight topics, one per week. These are: 1) Introduction and Start Where We Are; 2) The Body as a Place to Stay Present; 3) Introducing Mindfulness Support; 4) Working with Distraction; 5) Exploring the Undercurrent; 6) Attitude of the Observer; 7) Self-Acceptance; and 8) A Mindfulness-Based Life.

Each topic is presented theoretically, and then exercises and activities provide an experiential understanding of how these aspects impact practitioners. Participants are then provided with homework assignments (using a CD) to focus their practice during the week between sessions. Each session takes 90-120 minutes, in a group of 15 or less.

The intervention for students was reduced to a six-week programme, for pragmatic and conceptual reasons (Table 3-2). It had to fit into the time between the two teaching experience periods, and needed to feel accessible to students who were already overwhelmed by the demands of the PGCE course. Weeks 3 to 6 of the course took place during the university holidays. This had both advantages and disadvantages. It was beneficial in that the students were more relaxed and able to explore the practices, but it also meant that students who lived far from campus were not able to attend some sessions of the course.

Modifications were incorporated to meet the needs of student teachers, particularly those who had never practiced mindfulness meditation before. Some of the insight components that were considered too conceptual for beginners were omitted (the Undercurrent and Observer) to make it accessible, and to reduce the course by two weeks.

Training Sessions	Topics/Practices Covered
Week 1: Introduction	Background and aims, definitions, aspects, settling the mind
Week 2: The Body as a Place to Stay Present	The body scan, body awareness, mindfulness in daily life, the felt sense of kindness
Week 3: Mindfulness Support	Full mindfulness practice, non-striving, 3-min breathing space, pleasant and unpleasant events, reflection
Week 4: Working with Distraction	Mindful movement, walking meditation, distraction, breath awareness
Week 5: Self Acceptance	Gilbert's 3 circles model, developing kindness to ourselves, Neff's self-compassion break
Week 6: A Mindfulness Based Life	Revisiting the mindfulness support, letting go, mindfulness skills in times of difficulty, a mindful life

Table 3-2: Training Sessions of the modified MBLC

Type of meditation. The MBLC was structured as outlined below in Table 3-3, with a focus on the practices from the Mahayana Buddhist framework. Nairn includes clearly defined steps for entering a mindfulness practice: settling, grounding, resting and using a support, which gives practitioners a structured approach to the underlying preconditions for mindfulness, and presents both concentration (focused attention) and open presence practices in a logical way.

Key Focus	Specific Practices
Focused Attention (Calming)/ Open Awareness	Settling (regulated breathing) Grounding Body Scan Walking meditation Mindful movement
Insight	RAIN Reflection Daily life practices
Compassion	Felt sense of kindness Self-compassion Break
Combined	Sitting Practices (Settling, Grounding, Resting and Support of Sound or Breath) 3-minute Breathing Space

Table 3-3: Specific Practices of the MBLC

Pedagogy. The style of delivery of MBIs is experiential and based on the pedagogical approach summarised in section 2.7.5. The teaching techniques make use of practical experiences (i.e. mindfulness practices), enquiry, lecture method and detailed notes so that participants explore the concepts for themselves both cognitively, but more importantly, experientially.

Daily practice commitment. Students were encouraged to develop a formal practice as much as possible (up to a maximum of 40 minutes per day) and also to focus on informal practices. No specific commitment was demanded of them in an attempt to allow the training to fit into their busy lives. However, they were advised that they would benefit more, depending on the amount they were able to practice.

Facilitator training. The trainers (Vanessa Sayers and myself, Lucy Draper-Clarke) both met Mindfulness Africa's criteria, i.e. that we embody mindfulness and have effective presentation and organisational skills, according to MBI-TAC criteria (Crane et al, 2011). With one of the groups, Vanessa conducted the training, while I remained as the researcher throughout the training process, conducting interviews and attending training sessions as a participant observer. With the other group, I acted as both trainer and researcher. Soloway referred to the combined trainer-researcher role in his research as 'the elephant in the research' (2011), but the use of two groups and two trainers made provision for the concerns expressed by Soloway.

3.6 Participants, Procedure and Ethical Considerations

Participants. The Teaching Experience Coordinator recommended that this study be carried out with PGCE students as they already have an academic underpinning, have proficiency in the English language, and often experience the 'struggle for survival' stage as their transition from student to teacher takes place in less than a year (Maynard & Furlong, 1995), in contrast to BEd students who have a longer period in which to gain confidence. The research study was carried out with self-selected student teachers at the Witwatersrand University's School of Education between the ages of 22 and 29.

Procedure. I attended a compulsory Education lecture, a week before the student teachers went on their first Teaching Experience (TE), in order to present an introductory talk about stress and mindfulness interventions. As it was a compulsory lecture, it was anticipated that the whole PGCE cohort of 99 students would be in attendance. This, however, was not the case. Only 69 students were present. The student teachers revealed that their colleagues were stressed and many had missed the lecture in order to complete overdue assignments before TE.

The introductory lecture focused on the stress-relieving benefits of mindfulness activities, and the potential benefits for enhanced learning and work performance, based on work by Shapiro, Astin and Brown (2008), as well as the benefits of creating mindful classrooms. Thirty (30) out of the sixty-nine (69) students expressed interest in being part of the research.

Following the initial sign-up, a first interview was held which incorporated a screening session to fulfil the ethical requirements of the study, followed by a semi-structured interview, focusing on their pre-existing experiences of stress. Ironically, those who did not attend the interview or participate in the MBI said that it was for reasons of time pressure and stress, as they felt they could not take on another course. The intervention was positioned as an opportunity to develop inner resources for growth and change (Carson et al, 2004) and a way to address the stress levels experienced by student teachers, but participants were also informed that the intervention's effectiveness would be dependent on their ability to attend all sessions and complete their practice assignments. In the end, seventeen (17) came for the first interview. Fourteen (14) students finally participated in

the MBI. Two students withdrew as they felt too stressed, while the other had chosen to see a psychotherapist and wanted to focus on one therapeutic intervention at a time.

The Guiding Framework central to this flexible research design revealed its usefulness during the early stage of the research. After reviewing the literature, my initial thinking was to focus on an in-depth qualitative analysis of student teachers' experience of the mindfulness course, using interviews only. This was based on the belief that, as a voluntary additional course, in an already tightly packed curriculum, few students (e.g. 8) would sign up for the course. My assumption was that only after the first course was given would there be an increased interest (in the same way as I have experienced with adult groups), therefore providing the opportunity for a subsequent, larger-scale, study.

However, with this unanticipated interest, it was now possible to plan for the training of two separate groups, with two trainers, something that would improve data trustworthiness. I briefly considered an experimental, quantitative design, using one of the groups as control, but decided it would be more beneficial for the discovery of new knowledge, and for the students' well-being, to offer the MBI to all interested students. This is when I chose to use a mixed methods approach, including self report questionnaires as well as interviews. The mindfulness and education field is in a stage where exploration of underlying mechanisms could be more useful than the replication of other control group studies that have taken place in the medical field. Also, the students are PGCE students due to leave the university at the end of the year, and would probably not have another opportunity to participate in the course, which posed an ethical issue.

The group was divided into two training groups, and participated in a six-week mindfulness training, given by the researcher and another member of the Mindfulness Africa organisation. This took place between the first and second teaching experiences, and they were asked to report, through regular interviews, on their experiences of stress, their ability to cope and whether mindfulness was making an impact on their lives.

Ethical Considerations. Fulfilling the ethical requirements of the study involved holding the screening session with each student teacher as part of their first interview. They were given an information sheet about the study (Appendix A), which they were asked to read, and ask questions, before completing the consent forms for participation and for audio recording (Appendix B). They were reassured about the following points: that

participation is voluntary; that they could discontinue at any time; that they would be referred to a university counselor should the need arise; that the data from the recorded interviews would be stored safely, and destroyed after 5 years; and that they would be given pseudonyms. This covered the three critical factors: informed consent, confidentiality assurance, and disclosure risks.

In order to ascertain whether students were suitable for the MBI, both from their perspective and that of the researcher, they were asked whether or not they had previous experience of mindfulness, why they wanted to participate in the study, and whether they were currently receiving clinical support, such as from a psychologist or a medical doctor. This provided an opportunity for the researcher to exclude any participants who might be too vulnerable to participate. Based on the recommendations of other MBIs, it was determined that students would be excluded from the study in the following circumstances: those with active addiction or who have been in recovery less than a year; patients with suicidality, psychosis (refractory to medication), post-traumatic stress disorder, depression or other major psychiatric disorders, and social anxiety that makes a group environment difficult (McCown et al, 2011). It was also decided that participants currently receiving mental health care would only be accepted for the course with written permission from their psychotherapist.

Issues of privacy, confidentiality and informed consent are present in all psychological research, and this research study was no exception. Once participants have agreed to take part in a research study, they often have a desire to appear consistent and cooperative, even if the questions actually make them feel uncomfortable. Interviews and group discussions allow for the collection of extremely sensitive and personal information. In order to adhere to privacy agreements, questions regarding third parties were not asked. Interviews focused entirely on the self, and students were not pushed to reveal any information where they felt uncomfortable.

There is a risk that during a Mindfulness Training course, participants remember repressed experiences, which may cause psychological trauma. Although the mindfulness facilitation process is designed to allow for this situation, there is a concern that participants may view the trainer and/or researcher as a clinician and therefore provide sensitive information, such as suicidal ideation, which the trainer and/or researcher is not qualified to deal with. If

such a situation had occurred, the trainers were prepared to refer the participant for clinical support at the Counselling and Career Development Unit (CCDU), and this provision was made in the invitation letter (Appendix C).

A final ethical procedure was followed – that of gaining permission from the Teaching Experience Coordinator (Appendix D). This ensured that the Wits School of Education were fully aware that the research study was taking place with the PGCE cohort.

3.7 Data Collection

3.7.1 Individual Research Interviews

Each participant was interviewed on three occasions. Interviews lasted from 40 - 90 minutes and were voice recorded. They were based on the research question, "*What is the potential for mindfulness to alleviate the stress associated with the transition from student to teacher?*" and its three subdivisions (the nature of stress and coping strategies, mindfulness training and implications). The interviews were semi-structured, allowing the researcher to respond to the situation at hand, the emerging worldview of the respondent, new ideas on the topic (Merriam, 1998) and to the students' unique experiences of stress. They were designed in accordance with epistemological considerations for interviews, where:

> *The researcher is pivotal […] not only in shaping the research agenda, but in constructing the interview questions, selecting respondents, the conduct of the interview, the analysis of it as text and the production of the larger research report based in part at least upon this analysis […] Researcher identity, then is critical to the production of knowledge about the complexities of the social world […] The researcher's interest and position, although informed by theoretical disciplinary or professional knowledge, mediates the link between the methodology and the substantive concerns. (Dunne, Pryor & Yates, 2005:29).*

The broad iterative and reflective principles of this methodology influenced the design of the interview schedules, which were refined in response to preliminary analysis of early interviews. In addition, the findings from the self report questionnaires (described below) were used to inform the design of the interview schedule for the third interview, and the interviews were used to make interpretations of the questionnaire results.

It was intended that the sequential nature of the interviews would allow a relationship to develop between the researcher and the interviewee, which is particularly valuable when exploring psychological issues where a significant level of trust must be developed.

Interview 1: Interview 1 included both the screening of students and the initial enquiry into their understanding of stress. This interview was held between April and June 2012 to accomplish a number of aims, including the fulfillment of the ethical requirements of the study.

The interview also served to build rapport and trust between the participant and the researcher; Kvale (1996) and Smith and Osborn (2003) emphasise the importance of putting respondents at their ease so that they feel comfortable with talking to the interviewer before any substantive areas of the interview schedule are introduced. They were asked to talk about themselves, and prompted to include personal demographic information, including name, age and academic background.

The interview served to gather baseline data on the nature of stress that student teachers were experiencing and the coping strategies they used. Stress was self-defined and students were asked to discuss a recent experience of stress, and a particularly stressful event in their life. They explored the cause of the event, how they coped with it, and how they coped with the emotions they experienced. They were then asked to describe their habitual coping strategies. Finally, they were asked to consider the impact of their stress on the people around them.

The schedule is summarised in Table 3-4 below:

Interview 1. Summary of topics covered in the interview schedule on **stress, coping strategies and impact**, and example questions used		
	Topic	Example question used
(1)	Establishing a relationship and trust building	Please can you tell me about yourself? (age, education etc.)
(2)	Subjectively evaluating stress based on a conscious appreciation of current stress levels	How would you describe yourself, in terms of your personality? How would you describe your current work, home and health situation? How would you describe yourself, in terms of your emotional responses to difficult situations?
(3)	Exploring a current stressor	Can you give an example of a recent time you felt stressed?
(4)	Describing a specific coping strategy	Can you describe how you coped with the event and the emotions that you experienced?
(5)	Recalling stressful events in life	Can you recall a particularly stressful event in your life?
(6)	Assessing the impact of stress	What would you say is the impact of your stress on the people around you?
(7)	Assessing interest in, and suitability for, the MBI	What was it that encouraged you to participate in this research study? Are you having any psychological support at present?

Table 3-4: Summary of Schedule for Interview 1

Interview 2: This was conducted at the end of the course and before the second teaching experience. Based on IPA methodology, the schedule focused on student teachers' experience of the MBI course and is summarised in Table 3-5 below:

Interview 2. Summary of topics covered in the interview schedule on **the mindfulness-based intervention**, and example questions used shortly after the mindfulness training		
	Topic	Example question used
(1)	Usefulness of the intervention	Has the training programme been useful to you? If yes, in what ways has it been useful? (repeated)
(2)	Problems with the intervention	Has the training programme caused you any difficulties or problems? If yes, in what ways? (repeated)
(3)	Engagement with the programme	How much did you feel you engaged with the programme?
(4)	Specific aspects of the training	Which of the techniques have you used in your daily life?
(5)	Experience of stress in general	Have you noticed any changes in your experience of stress?
(6)	Coping strategies	What coping strategies do you now use to alleviate stressful situations?

Table 3-5: Summary of Schedule for Interview 2

Interview 3: The final interview was conducted after the second teaching experience, in the month of October. This explored whether student teachers were able to maintain their meditation practice and find any different ways to manage their levels of stress. It also drew on Elliott's (2002) principles for qualitative evaluation of the effectiveness of interventions.

A summary of the schedule is presented in Table 3-6 below:

Interview 3. Summary of topics covered in the interview schedule on **the mindfulness-based intervention**, and example questions used **two months** after the mindfulness training		
	Topic	Example question used
(1)	Contrasting your experiences of teaching practice	Please reflect on how your recent teaching practice differed from the last one you did, in terms of personal stress?
(2)	Personal growth and change	Do you feel you have changed or grown in any way?
(3)	Impact of mindfulness	Did the mindfulness training contribute to your change or growth?
(4)	Other factors	What other factors contributed to your change or growth?
(5)	Specific factors	What specific factors (within the training and outside) do you feel are responsible for your growth?
(6)	Coping strategies	What coping strategies do you now use to alleviate stressful situations?
(7)	On-going mindfulness practice	Which, if any, of the mindfulness techniques have you continued to use since the end of the training?

Table 3-6: Summary of Schedule for Interview 3

3.7.2 Group Discussions

As an integral part of the MBI, group feedback and discussion sessions were held during every training session. These typically lasted for 90 minutes and were voice recorded. They provided rich information about students' experience during the training sessions and about their response to the three different meditation practices – focused attention, open presence and compassion.

3.7.3 Self Report Questionnaires

Participants also completed three self report scales:

The Five Facet Mindfulness Questionnaire (FFMQ), developed by Baer et al (2006), is a 39-item questionnaire incorporating five subscales that tap the following factors: observing, describing, acting with awareness, non-judging of inner experience (8 items each) and non-reactivity to inner experience (7 items). Each item is rated on a scale from 1 to 5, so that there is a maximum score of 40 for the first 4 subscales, and of 35 for the last.

The FFMQ was constructed based on a factor analytic study of five independently developed mindfulness questionnaires: KIMS, MAAS, FMI, CAMS and MQ. These were trialled with undergraduate students in their early 20s, in the USA. The FFMQ has good internal consistency and concurrent validity in that the subscales exhibited appropriate correlations with several other variables.

Neff's (2003) Self-Compassion Scale assesses six constructs related to self-compassion, subdivided into three pairings: i) self-kindness – extending kindness and understanding to oneself rather than harsh judgment and self-criticism; ii) common humanity – seeing one's experiences as part of the larger human experience rather than seeing them as separating and isolating; and iii) mindfulness – holding one's painful thoughts and feelings in balanced awareness rather than over-identifying with them. These aspects are conceptually distinct and experienced differently at the phenomenological level, yet they interact to enhance one another.

The SCS has been shown to be a psychometrically sound and theoretically valid measure of self-compassion. It has demonstrated good internal and test-retest reliability, and has been shown to differentiate between groups in a theoretically consistent manner (Neff, 2003b). In addition, much initial testing of the SCS was carried out on university students, and therefore comparable to the student teacher population group.

The Depression, Anxiety and Stress Scale (DASS-21) (Lovibond & Lovibond, 1995) is a set of three self report scales designed to measure the negative emotional states of depression, anxiety and stress. The 21-item version was used as this has been shown to be as reliable and valid as the 42-item version.

Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The Depression items tap dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. The Anxiety items tap autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The Stress items are sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Scores for Depression, Anxiety and Stress are calculated by summing the scores for the relevant items.

The DASS-21 is based on a dimensional rather than a categorical conception of psychological disorder. The assumption on which the DASS-21's development was based, which has been confirmed by research data, is that the differences between the depression, the anxiety, and the stress experienced by normal subjects and the clinically disturbed, are essentially differences of degree (Crawford & Henry, 2003). The intention in this study is not to make a clinical diagnosis, but to evaluate the severity of symptoms.

The directions for using the DASS-21 warn that the questionnaire should not be used to replace an interview. This gives added weight to the use of mixed methods, where a questionnaire is utilised as an indicator of certain conditions, yet the manifestations of these conditions are best explored face-to-face.

Lovibond and Lovibond's original cut-off scores for conventional severity labels are shown in Table 3-7, although Nieuwenhuijsen et al's (2003) recommendations varied slightly. After evaluating the DASS's psychometric properties and examining the ability to detect cases with anxiety disorder and depression (not generalised stress) of a population of employees absent from work, they suggested cut off scores of 5 for anxiety, and 12 for depression.

	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	37+

Table 3-7: Cut-off scores for the DASS-21 doubled

When utilising self report questionnaires in a multi-lingual South African context, it must be kept in mind that they may not be written in the respondent's first language. This issue needs to be accounted for, particularly the first time that the questionnaires are completed.

3.8 Data Analysis

3.8.1 Portraits

The three interviews, as well as material from the group discussions, were subjected to a series of single case IPA analyses, as delineated by Smith and Osborn (Smith, 2007). This began with an initial chronological development of themes from a single case study. These were then clustered and checked against the transcript to ensure the connections linked to the primary source material. Having evaluated the first case study, an additional six portraits were drawn up around the categories that had been anticipated from the interview schedules, and emerged from the actual interviews: Life Context, Predisposing Factors, Specific Current Stressors, Experience of the MBI, Application of Mindfulness Practices, Self Report Scales and the Evaluation of the Impact. These were then presented using verbatim language, in order to allow the students' voices to speak for themselves initially.

3.8.2 Hermeneutic Readings

In order to draw out further meanings from the transcripts, a process of hermeneutic analysis was then carried out across all the case studies, in order to elicit a more in-depth understanding of the issues and meanings expressed by the student teachers. This allowed for a subsequent process to take place. Firstly, a particular person, in a particular context makes sense of the phenomena they experience, such as stress, or the effect of the MBI. Secondly, the claims of the participant are weighed against the interpretation of the researcher, based on the researcher's understanding of the phenomena, drawn from their own experience and the current literature.

From the hermeneutic readings, a table of themes was developed, and analysed against other cases in order to discern repeating patterns, and to look for new issues. Once each transcript had been analysed through the interpretative process, a final set of superordinate themes was constructed, which required a challenging process of prioritisation and reduction of the data. The final stage was to produce an unfolding narrative, clearly distinguishing between the respondent's voices and the researcher's interpretation. In this study, the initial narrative took the form of student teacher portraits, followed by generalised findings and discussion. The emerging themes were then linked to the existing literature.

3.8.3 Descriptive Statistics

The self report questionnaires are presented as descriptive statistics and tabulated, in order to identify trends and anomalies. The overall scores, the changes over time, and the sub-scores, are then analysed for the group as a whole, as well as for the individual case study participants.

Later, the descriptive statistics and IPA themes were combined to allow an integrated data analysis "[. . .] in order to obtain new ideas, insights, hypotheses and understandings" (Caracelli & Greene, 1993:199) and to contribute to mindfulness theory. Note that there were several analyses: looking at the trajectory within cases and linking to the qualitative data, and comparing the group means before and after, and with normative data from elsewhere.

3.8.4 Developing Conclusions and Recommendations

Early tests of theories and models tend to focus on establishing the empirical validity of a theory's core propositions, while subsequent theory testing can be used to explore the mediators that explain these core relationships, or the moderators that reflect the theory's boundary conditions. Through the process of this research study, I anticipated that it would be possible to build new theory in one of a number of ways: introducing a new construct; examining a previously unexplored relationship or process; introducing a new mediator or moderator of an existing relationship or process (Colquitt & Zapata-Phelan, 2007). True theory goes beyond models and diagrams (Sutton & Staw, 1995) by delving into the underlying processes that explain relationships, touching on neighbouring concepts or broader social phenomena, and describing convincing and logically interconnected arguments. In such a new field of work, the findings from the mixed methods data collection provided the opportunity for exploring multiple experiences of student teachers associated with the mindfulness intervention.

3.9 Trustworthiness

Issues of trustworthiness were considered in choosing the research methods for this study, in order to ensure that the research academy, the mindfulness community and the student teacher participants felt confident in the believability of the research findings (Harrison, MacGibbon & Morton, 2001). The term 'trustworthiness' is used to encompass the following terms, as classified by Guba (Shenton, 2004): i) credibility (in preference to internal validity); ii) transferability (in preference to external validity/generalisability); iii) dependability (in preference to reliability); and, iv) confirmability (in preference to objectivity).

In addressing credibility, qualitative researchers attempt to demonstrate that a true picture of the phenomenon under scrutiny is being presented. To allow transferability, researchers provide sufficient detail of the context of the fieldwork for a reader to be able to decide whether the prevailing environment is similar to another situation with which he or she is familiar and whether the findings can justifiably be applied to the other setting. The meeting of the dependability criterion is difficult in qualitative work, although researchers strive to enable a future investigator to repeat the study. Finally, to achieve confirmability, researchers take steps to demonstrate that findings emerge from the data and not their own

predispositions (Shenton, 2004:63).

These factors were taken into consideration in designing the research, both in terms of data collection and analysis. McMillan and Schumacher (2006) outline ten strategies to enhance trustworthiness in qualitative designs: i) prolonged or persistent field work, ii) multi-method strategies, iii) participant verbatim language, iv) low-inference description, v) multiple researchers, vi) mechanically recorded data, vii) participant researcher, viii) member checking, ix) participant review and x) negative data.

The fieldwork for this study took place over the course of six months, which cannot be considered 'prolonged'. However, the time between interviews was intended to allow for interim data analysis, particularly the emergence of themes and the descriptive statistics, which could then be explored more deeply in later interviews. The multi-method design, combining self report questionnaires with interviews and group discussions, was designed to allow triangulation of results, especially for individual participants. The planned use of voice recorders and transcription would allow for verbatim accounts to be used in the results section of the research, and also for member checking and participant review, carried out before final submission of the thesis. Acknowledging negative data can often become the source of new insights.

The issue of being both facilitator and researcher, which Soloway (2011) refers to in his own study as the 'elephant in the research' was mediated in this study by working with two groups, one where I was facilitator-participant-observer, and one where another facilitator was asked to lead the training. This use of multiple trainers meant that the results of the training programme could be evaluated without concern that the outcomes were simply the result of a trainer's individual personality.

I remained as the researcher throughout the training process, conducting interviews and attending training sessions as a participant observer with one of the groups, and acted as both trainer and researcher for the other group. In addition, the researcher, the trainer and the supervisor all evaluated a transcript and drew out themes in order to reveal different interpretations during the data analysis phase.

FINDINGS AND DISCUSSION

Chapter 4 presents IPA case studies to reveal how students utilised the MBI in order to deal with their stressors and includes the quantitative data from the self report questionnaires. The narrative stays faithful to the voices of participants, allowing them to describe rather than explain the emerging themes.

Chapter 5 focuses on the nature of student teachers' stress. The stress scales are presented first, giving a sense of the severity of the issue, and then investigated both by the students and the researcher. The results are evaluated against Kyriacou and Sutcliffe's model. This includes the experiences and impacts of stress that student teachers described, as well as their personality characteristics and coping strategies.

Chapter 6 explores the experience of the mindfulness-based intervention, including the outcomes, effectiveness and insights into the change process. The FFMQ and SCQ scores reveal predicted changes pre- and post-intervention for most students, while the outlying results are explored by the students, and interpreted by the researcher.

Chapter 7 presents the development of a tentative theory – a Developmental Model of Mindfulness. This serves as a call to the academic mindfulness community to research the graduated stages of mindfulness development.

The findings lead to opportunities for discussion, making interpretations and linkages, relating to theory from the literature review, and personal observations. The key findings are then identified in the conclusions and recommendations, which reveal the contribution of this study to the current literature on mindfulness in teacher education.

CHAPTER FOUR: CASE STUDY PORTRAITS

The preliminary interviews for the majority of the students were conducted in late April, before they left the university to go on teaching experience (TE). Some students did not come at this time as they felt under pressure to complete assignments, so they attended the interview in late May and early June, at the beginning of the mindfulness training. Subsequent interviews took place in July (at the end of the MBI), and in October or November, after TE. Three students, Karen, Aaron and Abigail, attended the preliminary interviews and completed the consent forms. However, Aaron later decided not to attend the training as he was having psychotherapy and wanted to focus on one therapeutic intervention at a time. Karen and Abigail felt too pressurised by the demands of the PGCE to add an additional course to their curriculum.

The self report questionnaires evaluating depression, anxiety and stress (DASS-21), and the five facets of mindfulness (FFMQ) were administered on five occasions – before, twice during, and at the end of the intervention, as well as during the final interview. This interview took place a month or two after the end of the MBI (depending on student availability). The questionnaire to score self compassion (SCQ) was only administered four times (in the second week of the MBI, and at the same time as the other questionnaires thereafter) as I realised that it would be useful to evaluate whether the MBLC had significant effects, given its dual focus on compassion as well as mindfulness.

The biographical information of the students who began the MBI is summarised in Table 4-1 below. Those with an asterisk are discussed in detail in the portraits section that follows.

Pseudonym	Age	Sex	Race	Own Schooling
Atandwa*	29	F	Black	Township
Bonolo*	27	M	Black	Township
Charles	31	M	Black	Rural
Emelda	29	F	Black	Township
Georgia*	22	F	White	Suburban
Hannah*	24	F	White	Suburban
Imogen*	23	F	White	Suburban
Kim	22	F	Chinese	Suburban
Luthuli*	26	M	Black	Rural
Mary*	22	F	White	Suburban
Nicholas	24	M	Black	Rural
Ophelia	23	F	White	Suburban
Rupert	26	M	White	Suburban
Sipho	24	M	Black	Township

Table 4-1: Biographical Information of Student Teacher Participants

Eight (8) of the participants were women, and six (6) were men. Seven (7) were black South Africans, six (6) were white, and one (1) was Chinese South African. No Indian or Coloured students participated in the study. The average age of participants was 25 years, with the youngest being 22 and the oldest, 31 years. Four (4) students attended township schools, three (3) attended rural schools, while the remainder (7) attended suburban, usually well-resourced, schools.

The seven individual student portraits that make up Chapter 4 combine the qualitative data from the interviews, with the quantitative data from the self report questionnaires. Each portrait includes the life context of the student, their predisposing factors that made them vulnerable to stress, the specific current stressors that they were dealing with, their experience of the intervention and their application of the mindfulness practices in their daily life. The quantitative data results are then summarized and contrasted with the qualitative data, providing an overall description of the impact of the MBI. The seven students were chosen to contrast distinct responses to the MBI and to reveal emerging themes.

4.1 Portrait of Hannah

Hannah's portrait is given first as she produced such extreme scores on the three self report scales. Her story provides a dramatic example of a student teacher's experience of stress and the benefit she felt she experienced from the mindfulness training.

Life Context

Hannah is a 24 year old, middle-class, white South African, educated at a highly competitive private girls' school in suburban Johannesburg. She studied Drama at the University of Cape Town, and then spent a year in London pursuing her chosen career as an actress. She found it challenging to be so far from home, and made the difficult decision to come back to South Africa, where she enrolled for the PGCE. She chose Drama and English as her main subjects, but also opted to take two additional courses (Maths and Social Science), as "*I think this country needs Maths teachers[…] there aren't enough good Maths teachers*".

She comes from a very supportive family who have "*always encouraged me to do anything that I've had a passion for*", and she also has a long-term boyfriend who has an optimistic disposition, and never puts any "*pressure on me to do anything that I didn't want to do*".

Predisposing Factors

She is a perfectionist, very driven, competitive and idealistic, with a strong desire of "*not wanting to end up being ordinary*". Despite acknowledging that she has few external stressors, Hannah is aware of her own personality characteristics which cause her to put pressure on herself: "*It's just me going, I've got to do well in this, I've got to do this*".

Her financial situation is secure, as she was awarded a scholarship, but this meant she felt an added responsibility to finish the course. It also created feelings of guilt as she felt that "*my problems are so trivial*" compared to the other students whose bursaries had not come through. This served to increase the pressure she puts on herself.

She believed that she had internalised these characteristics from her competitive high school: "*this course* [PGCE] *is bringing up a lot of emotions from my schooling experience which is very traumatic for me*." She describes herself as "*very explosive*", and tends to react instinctively, which she feels is exaggerated by her dramatic art degree where "*they*

teach you how to get into the emotion, but not how to get out at the end. You are left struggling for yourself."

She is sometimes unaware of the impact that her stress has on other people, but reflects that it must be huge. She finds she is "*so unaccepting, not tolerable of other people, snapping, just grumpy* [. . .] *a horrible person to be around and get irritated very easily. I am increasingly bitter and angry and that makes me more bitter and angry and I hate that*". She also lives with a constant feeling of guilt if she is not working, resulting in a lack of self-care and self-compassion: "*I struggle with taking time off*".

Specific Current Stressors

At the beginning of the MBI, she described her current experience of stress as overwhelming. She stated on two occasions: "*I will end up killing myself by the age of 30 by the amount of stress I'm putting on myself*". She reported poor sleeping patterns, fear of dying in her sleep, and regular migraine headaches.

The PGCE course had been academically arduous for her as she had taken on two extra courses and the additional workload involved. She also noted frustrations with the course that exacerbated the stress in terms of the structure of the curriculum. One strong motivation to take the MBI was her sense that "*the last two months have been stressful. The past two weeks have been disastrous. I'm not going to get through the year if I don't do something about it*."

Hannah uses few coping strategies to deal with her stress. She "*hates*" physical exercise: "*I'm not one of those people who finds solace in those things*." She used to dance but "*started to hate it due to the pressure associated with that*". She does enjoy reading, but feels "*guilty when I'm meant to be doing academic work*". She has experienced the Alexander technique and found it beneficial, but "*I'm so desperate for things to be right now, go, go, go, instant gratification, that I struggle to spend time over it*." She had seen a child psychologist in junior school, but "*thought it was a load of rubbish*", used alcohol "*excessively*" during her first degree and has been on repeat prescriptions of anti-depressant medication since that time, without any medical or psychological check-ups.

Experience of the MBI

Hannah acknowledged in the first practice session that the concept of a mindfulness practice is very challenging for her: "*sitting down for an hour and doing this practice, that*

is going to be hard for me, because I then start to feel guilty about not doing something. It almost feels like time wasted, which it shouldn't because it's time for me. I want instant gratification and we live in a society where we want results now."

When asked to set her intention for the course, she initially wrote down the following: "*I cannot keep going the way I am. I am a horrible person to be around and get irritated very easily – I am increasingly bitter and angry and that makes me more bitter and angry and I HATE THAT!!!!!*". After discussing with her how an intention is a compass to guide the way we would like to see change taking place, Hannah rewrote her intention as follows: "*I want to be happy. I want to live in the present. I want to be satisfied and content with my life. I want to be accepting and tolerant of people. I want to be fulfilled. I want to be kind to myself. I want to be accepting of myself.*" This served to shift her critical self-talk, to focus on more positive traits, and thus reinforced within her mind that change was possible.

During Week 2 of the training, Hannah had a breakthrough during the Body Scan practice, where she was able to experience that a guided focus to parts of her body allowed her to soften around her constantly judging mind and thoughts: "*That was so delicious. That was so nice* [. . .] *it was almost like I was on some sort of trip, everything was super-sensitive. Weird. Flippin' cool, man. I got distracted quite a bit but kept coming back* [. . .] *Very cool*." She also commented on how doing the practice close to the floor gave her the sense of being grounded. She then maintained the Body Scan as her primary practice, using it three or four times a week, "*as often as possible before I go to sleep, because that one really resonated with me, out of all of them*".

By getting more in touch with her physical sensations throughout the training, particularly by using the Body Scan, Hannah was able to start observing her changing experiences and describing them more accurately, rather than becoming overwhelmed by the constellation of feelings. She then seemed more able to apply this technique to thoughts and emotions, realising that they arose, and then passed away, as long as she did not engage with them.

Application of Mindfulness Practices

Hannah noticed clearly how she was able to regulate her emotions more effectively as a result of the MBI. She found a sense of perspective and did not identify so strongly with each emotion. She noticed that, "*all the emotions are ones that I've come across before,*

it's just about handling them differently, just trying not to react immediately, which I tend to do quite a bit". She became aware of ruminating, and how it prolonged and worsened her experiences of suffering. She also developed a sense of choice that she has over whether or not to ruminate: "*Sometimes I just get really angry and frustrated and I say, 'Bugger this, I just want to be angry and frustrated and sad, or whatever' but I'm still realising that that's what I'm wanting to do. Whereas before, it was like, 'I'm sad, and I'm sad about being sad', you know, it sort of has a domino effect and you end up in this hole. I don't know how to get out of it. And having things to fall back on, like the body scan, you go ok this is an active tool I can use, which I know will help in some way.*"

However, Hannah did also notice that the practices are not deeply ingrained enough for her to use them whenever she needs them: "*Yesterday I had a really horrible day and I thought to myself, doing the body scan will really help and I just couldn't face it because I am still working towards that point where, when I am in that situation, to be able to use one of the practices. I was feeling particularly anxious last week, and I did the body scan, and it really helps, especially when it becomes so familiar to you, with your voice on the track, and you know when the birds are going to cheep, and someone's going to cough, that kind of thing! It gives a sense of stability that you keep coming back to it."*

For such a highly motivated, self-critical personality, the compassion component of the mindfulness training seems to have been a crucial mechanism of change: "*It's been about me trying to change my mind set, and start not being so hard on myself*." Once Hannah learnt about the three emotion regulating systems of Gilbert, she was able to acknowledge the importance of the soothing system, and give herself permission to take time off. She realised how strong her drive system was in always wanting to compete and to perform at her best.

For someone as academic and head-focused as Hannah, an emphasis on the body-based practices was hugely beneficial, and allowed her a sense of being grounded in the moment, rather than being taken away by her thoughts and feelings. These body-based practices emphasise the experiential, rather than analytical approach to stress management and seem highly effective for academically-oriented participants.

Hannah also pointed out the advantage of the group training style in reducing feelings of isolation and enhancing human connection: "*So to sit there, and have that shared experience was really great, because I got to make new friends as it were, and it did show*

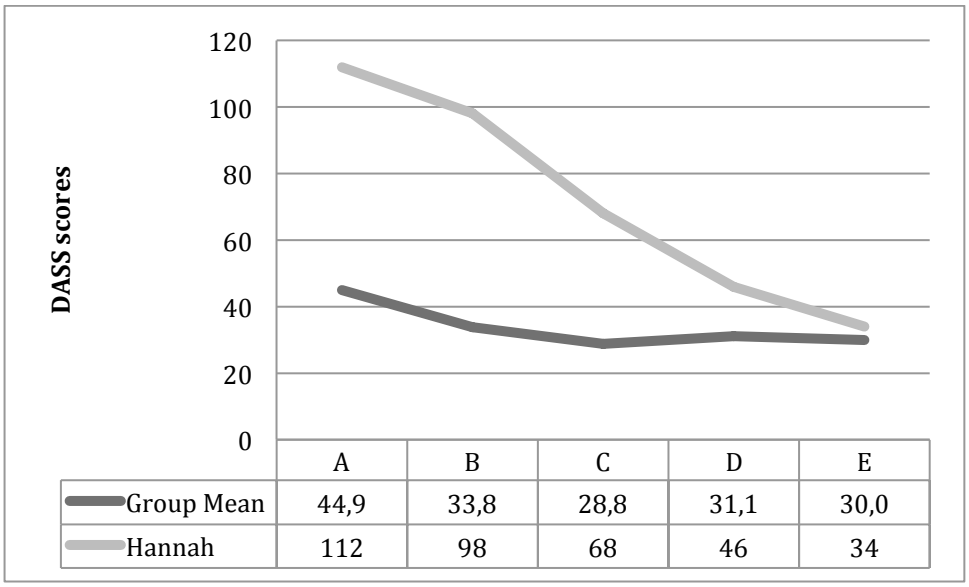
me that I'm not the only one. Everyone has their own set of issues or circumstances that affects them because you do tend to feel really alone. Why is this happening to me? It's always me. And then you start to realise that, hang on, it's not like that at all, actually."

This benefit of a group setting has also been described by Allen et al (2009). It clearly helped counteract her tendency to feel isolated, believing that no-one else could understand how she felt. By emphasising how all emotions are part of the human condition, she was able to shift from an ego-centric focus, to a sense of common humanity.

Self Report Scores

I began the portraits with the specific case study of Hannah, because of her extreme scores in the three scales. The vertical axis scale on Hannah's graphs differs from the rest of the student portraits below, in order to represent her scores effectively. The vertical axis on the DASS rises to 120 (instead of 70 for the other portraits); the axis for the FFMQ spans 80-170, instead of 100-170; and the axis for the SCQ drops to 7 (instead of 13) for the other students' scores, in order to take her extreme scores into account.

Fig 4.1 below gives a vivid representation of Hannah's scores in relation to the group mean, where her stress, anxiety and depression levels were well above the rest of the group, right through until the final administration of the questionnaire, after the end of teaching experience.



	A	B	C	D	E
Group Mean	44,9	33,8	28,8	31,1	30,0
Hannah	112	98	68	46	34

Figure 4-1: Hannah's combined DASS scores against the group mean

Table 4.2 reveals the classification of her scores according to the DASS cut-off categories, putting her at a level, throughout most of the intervention, which would normally be recommended for clinical care. It is only her anxiety levels that finally dropped to a normal level, but she was still experiencing elevated levels of depression and stress throughout.

Date	Depression	Anxiety	Stress	Total
4/6/2012	**40 Xtr Severe**	**30 Xtr Severe**	**42 Xtr Severe**	112
18/6/2012	40 Xtr Severe	16 Severe	42 Xtr Severe	98
2/7/2012	28 Xtr Severe	14 Moderate	26 Severe	68
14/8/2012	14 Moderate	6 Normal	26 Severe	46
6/11/2012	16 Moderate	0 Normal	18 Mild	34

Table 4-2: Hannah's DASS Scores

During the first training session Hannah scored in the Extremely Severe range for each of depression (40), anxiety (30) and stress (42), giving her the highest total of the participants. When she first completed the DASS Scale, I was concerned that she required a clinical intervention rather than mindfulness training and might benefit more from one-on-one psychotherapy. However, after consultation with my supervisor, and a phone call with Hannah, we decided that she could continue as planned, with a possible recommendation for therapy held off until the end of the training. The intention of the study was, after all, to explore the effectiveness of the mindfulness training, while the follow-up phone call reassured me that the ethical guidelines were being adhered to. It was reassuring when her DASS scores decreased significantly at the second administration of the DASS-21: depression (28), anxiety (14) and stress (26), although they were still high compared to others in the group. This reflected the time when she had experienced the break through with the Body Scan practice. By the end of the training, her scores showed a dramatic and consistent decrease, bringing her more in line with the group mean, although still higher than populations in other countries that meet the classification of 'normal'.

Fig 4-2 provides the score comparison for Hannah in terms of the five facets of mindfulness against the mean for the group. The initial decrease in her score has been noted in other research studies (Baer et al, 2008) and attributed to a deeper understanding of the questionnaire items with mindfulness practice. It is evident that, although she did improve in her mindfulness scores, she was still well below the mean.

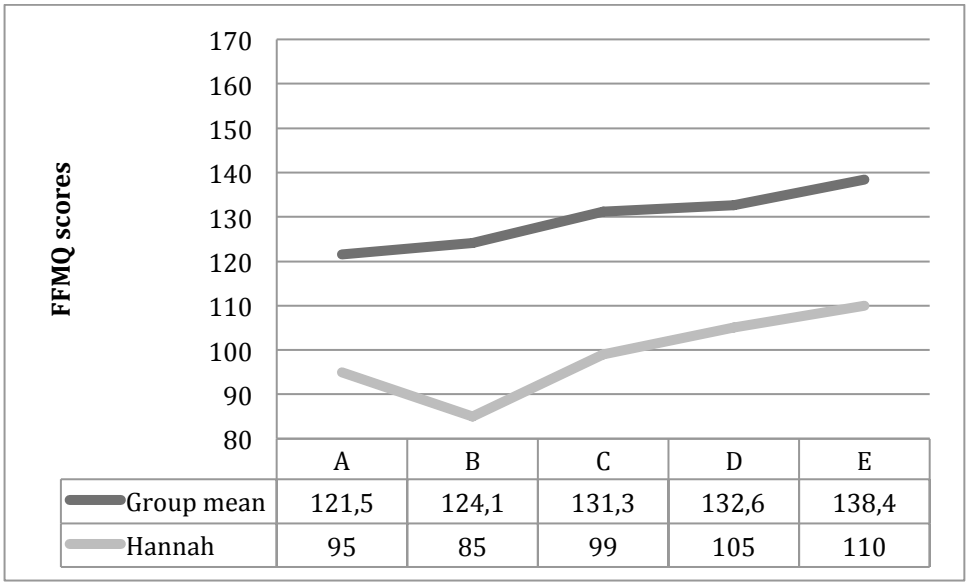


Figure 4-2: Hannah's combined FFMQ scores against the group mean

Hannah's mean score, however, masks significant insights, which are revealed in Table 4-3. Hannah appeared to be very self-aware, with clear insight into her inner environment, yet without the techniques necessary for addressing what she saw. This attribute revealed itself in her relatively high scores for the observe and describe facets, which changed very little over the course of the intervention. However, her tendency towards self-judgment and self-devaluative thinking brought down her mean score in the areas of non-judging and non-reactivity.

Date	Observe	Describe	Act w A	Nonjudge	Nonreact	Total /195
4/6/2012	22	29	23	10	11	95
18/06/2012	22	32	13	8	10	85
2/07/2012	25	32	22	10	10	99
14/8/2012	19	35	25	14	12	105
6/11/2012	22	34	24	16	14	110

Table 4-3: Hannah's FFMQ Sub-Scores

The improvements in her non-judgment and non-reaction scores could be linked to her improving self-compassion scores, as illustrated in Fig 4-3, although even by the end of the MBI, her self-compassion scores were still well below the group mean.

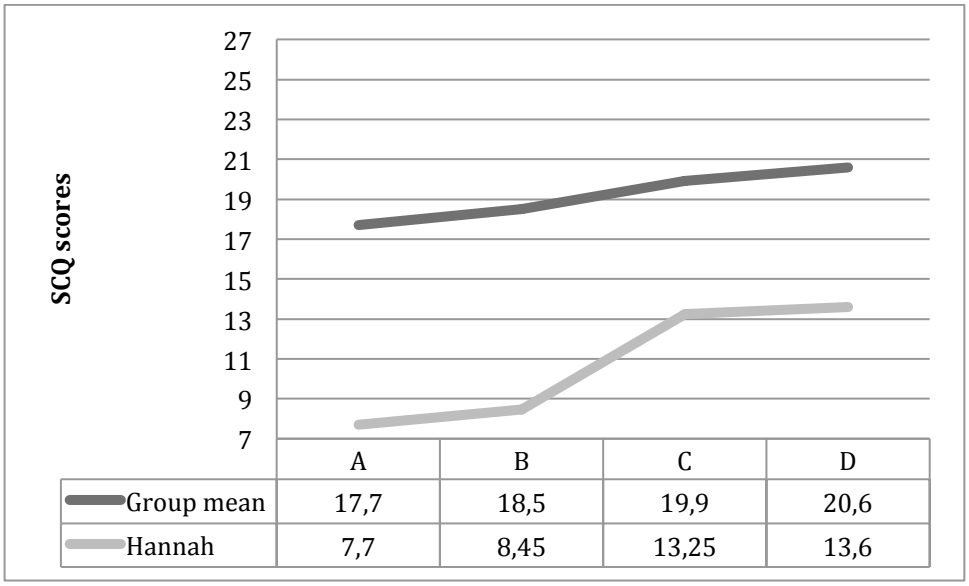


Figure 4-3: Hannah's combined SCQ scores against the group mean

Date	Self-Kindness	Self-Judgmt	Com Hum	Isolation	Mindful-ness	Over-ident	Total
18/6/2012	1.2	1.0	1.25	1.0	2.3	1.0	7.70
2/7/2012	1.2	1.0	1.25	1.5	1.5	2.0	8.45
14/8/2012	2.0	2.0	2.25	2.3	2.8	2.0	13.25
6/11/2012	2.0	2.6	2.5	2.5	2.0	2.0	13.60

Table 4-4: Hannah's SCQ Scores

The most significant growth areas for Hannah were related to the self-compassion component of the training. Hannah's self-compassion scores doubled, which she commented on in the interviews. She felt much more able to treat herself well and to prioritise self-care. Her ability not to judge improved from 10 to 16 over the course of the training, and similarly, she found herself less reactive, with a score improving from 11 to 14. She still remained the lowest scoring student throughout the training, but this might also be attributable to her inability to recognise areas where she is doing well. Her habit pattern is one of constant self-criticism, in order to continually improve her performance. It is possible that her response to the questionnaires is affected by this habit pattern. Hannah's self-compassion scores all showed increase, except, maybe surprisingly, the mindfulness component. Recent findings seem to suggest that self-compassion is a greater mediator of change than mindfulness on its own, and Hannah's case adds weight to this claim (Neff and Germer, 2013; Van Dam et al, 2011).

Evaluation of Impact

In the second interview, a month after the end of the training, Hannah reported that "*it's been very useful because it's offered me a different perspective in looking at things*". She has felt able to approach and acknowledge her feelings openly, and respond accordingly, rather than reacting, denying or judging them. Instead of saying, "*That's bad, that's bad*", she says, "*Ok, this is happening, so how do I move forward?*" She also noticed a far greater willingness to be compassionate to herself, giving herself permission to go on holiday without any academic work and simply be present and appreciate the things around her.

She has noticed a growing ability to be realistic about how much she can do, and prioritise how she spends her time, based on what is most important to her, and without as much guilt: "*The second semester has definitely been a lot easier* [. . .] *I think it is a combination of being kind to myself, and going, right, if you can't make that lecture because you've got to do this, then that's ok* [. . .] *Not to say start slacking, but the two extra courses that I'm doing, it's not compulsory that I go to those*."

A factor independent of the mindfulness training that helped to alleviate her stress was that she secured a teaching post for the next year, before completing her PGCE: "*It's also helped in taking quite a weight off my shoulders*." In her third interview, she explained how she had been offered two different jobs, one at a prestigious, competitive boys' school, and the other at a church school for girls. She found it stressful to decide between the two as she was initially drawn to the prestige of the elite boys' school, as it was more in the league of the school she had attended herself. However, by acknowledging her own needs and values, she was able to come to a clear decision to choose the girls' school, that she was very happy with: "*It is a private school, but it isn't one of those really competitive schools* [. . .] *So there is going to be space to grow and learn, and I really think I need that as a person.*" Her choice provided a clear example of the need for student teachers to select a school that is aligned to personal values so that they feel they can bring their authentic selves to the classroom situation.

Hannah's willingness to take responsibility for stressors, rather than externalising the problems by blaming others, may be one key to her having benefitted from the mindfulness training. For her, mindfulness was a restorative practice, giving her the ability to come back to a place of calmer presence, from her excessively emotional reactivity.

Although Hannah does not claim to have achieved trait mindfulness and compassion, she was able to witness state mindfulness and compassion, and therefore acknowledged that it is possible, and that things can change: "*I mean, I still have days when I have a bit of an existential crisis when I think, 'What is it all for?', but they are fewer, definitely fewer, and there are more moments when I can go, 'Right now, I'm happy', and that's good as I don't think I had those before, or I couldn't identify them as saying this is the moment. Again, it's the awareness. I think it's still a long way to go, sort of keeping that idea of being kind to yourself, nurturing yourself, growing, learning.*"

It is also worth noting the significant external pressures that are unique to the South African context. Being given a post, as a beginning teacher, to start up a Drama department would be very rare in a developed nation, but in South Africa, where qualified teachers are in short supply, young people have heavy responsibility put on their inexperienced shoulders. Hannah recognised this with self-compassion: "*It will be a large amount of responsibility and I'm going to need to be able to go, 'It's unchartered territory, it's ok if you make a mistake, they realise who they've hired, they've chosen you, it's going to be ok'. I'm going to need it* [mindfulness] *quite a lot in terms of being a teacher next year, definitely.*"

Conclusion

Hannah provided a prime example of the need to include some stress management initiatives within teacher education. As a highly academic student, she put a great deal of pressure on herself. Within a results-oriented school environment, an acceptance of what is possible to accomplish as a single teacher is important to mitigate impacts of stress. The MBI supported her ability to regulate her emotions, clarify her values and commit to greater levels of self care, to improve her own sustainability. She also used some of the simple practices with her pupils, as part of the Drama lessons.

The case study approach has allowed Hannah to reveal in her own words why her scores were so extreme. It also provided the opportunity to reveal key themes and categories, which will later be compared and contrasted with the wider group. Student teachers not only need to learn how to be innovative and hard-working, but also require the skills of sustainability, by understanding when they can focus more on self-care. This could reduce departure from the profession, and the high drop-out rate in higher education institutions.

4.2 Portrait of Bonolo

Bonolo was one of the highest scoring students on the FFMQ and SCQ, and one of the lowest on the DASS, so his case study provides an interesting contrast to that of Hannah's.

Life Context

Bonolo is a 27 year old, black male student, who describes growing up in the "*township lifestyle*". He had a chequered history of education and work, but now has a clear vision with regard to becoming a teacher: "*During the last year of BA I was appointed as a student tutor. I was uncomfortable and thought I can't handle the job, but discovered I could do the job* [. . .] *I felt fulfilled and realised that I am good in teaching* [. . .] *I fell in love with teaching from that moment.*"

His own school career was disrupted when he was expelled: "*I had bad company at school. It was easy to convince me to do things I didn't want to do. I used to gamble, smoke, organise bunking parties* [. . .] *We were also caught with weed and went to a disciplinary hearing. We were busy gambling in class and stole money from a student* [. . .] *Sometimes you do things you regret.*" The experience of being expelled was deeply stressful for him. For six months he did not attend a school, which initially he enjoyed, saying to his mother that "*school is boring anyway*". However, as "*the year went on, I realised that I miss school. There's something missing in your life* [. . .] *like one ear is missing* [. . .] *I wanted to cry, I was so emotional* [. . .] *When you sit at home doing nothing, you feel useless. It stressed me a lot*." He moved to Cape Town and was enrolled in a school where Xhosa was the language of instruction: "*I know how to speak Xhosa, I know how to speak my language, it's just that it is very difficult to do on paper, even people who grew up there, they struggle to pass it*." He was concerned that he would not pass his Matric.

When his mother offered to send him back to Pretoria to study, he was very happy: "*This time I won't disappoint you. Trust me. I almost cried. I realised that the education I received was very important. My failure was to recognise its importance. I realised that teachers were trying to add value to my life, and what did I do with it? I threw it back at them, and now I'm paying. These are the consequences. Thank God, I have a second chance* [. . .] *I don't want to lie to you, ma'am, I almost gave up on my life. I thought I would never amount to anything in my life, not realising that those experiences were there to build the thoughts, until I finally realised that I need to put them in to action*."

Predisposing Factors

Bonolo's challenging school career had strengthened his resolve to be a teacher, and he was idealistic and motivated by the role he felt he could play. He used the word 'inspirational' on several occasions when talking about his impact on his school students: "*Most people in townships don't believe in education, they believe in making money from stealing cars, or doing a business or getting a job or something. With me, they realised I can do something with my life. Where I am coming from does not determine where I am going. I felt I helped them think differently about where they are going and what shapes behaviour.*"

Over the course of interviews, maybe due to the development of trust, Bonolo started to reveal his experiences of significant traumatic events in his life. He first remembers an accident on the road, where the tyre burst on a Toyota combi. He remembers his physical reactions to the incident: "*I recovered after many hours* [. . .] *I was nervous, I was shaking until I reached home and on the way I kept looking at those cars that were overtaking us. I looked at the tyres* [. . .] *that was extreme shock I suffered back then*."

In 2007, he was having his hair cut in the township and a friend of the barber came in, saying how he had been fighting with a man, and ended up killing him. He had wiped away his fingerprints at the crime scene, and the barber now advised him to run away to Natal or Cape Town: "*You won't believe the shock I experienced* [. . .] *I recovered from that shock, I think, after a week or so. I will never forget that. It was the first time I came across such heavy and cruel conversation and I was very shocked. From that day, that's where I saw that Johannesburg is a place where nasty things happen*."

It happened again in June 2012: "*I overheard conversation between two guys* [. . .] *this guy was beaten until he died* [. . .] *Imagine, I was there in the toilet and people are having this conversation. They don't even wait for me to go out! It's very serious, but at least I've realised that I've moved to another level in terms of how I deal with shocking things that I come across*." It was not clear whether 'moving to another level' meant he is now becoming more resilient, or actually suppressing the body sensations and feelings that arose during the traumatic events.

Specific Current Stressors

In Bonolo's first interview, he talked of financial stress: "*I applied for the Funza bursary and I didn't get it and that stressed me a lot* [. . .]" as it put strain on his family to support him. "*I don't like to be a stress or a burden on someone's shoulders. I like doing things for myself.*" What worsened his stress was the frustration about bursary allocation: "*the government keeps telling us there is a shortage of teachers, we have these funds, we provide bursaries* [. . .] *I get the feeling that there are people employed in certain positions who don't deserve to be there because they can't think* [. . .] *I don't understand how they cannot give it to specific education students when there is a shortage. It doesn't make sense*."

When asked about his coping strategies to deal with stress, Bonolo noted physical exercise, particularly jogging and soccer, as well as a tendency to shift his focus to happier things. He was surprised that the breathing technique taught during the introductory lecture (before the MBI began) had worked: "*Let me be honest, I never thought* [. . .] *closing your eyes, concentrating on your breathing, would relieve your stress, would make you feel better*[. . .] *The only way to relieve stress for me is beer, socialising with people, try to get into funny conversations, maybe talking about someone, about love, talk about things that are funny and comic, maybe looking at Zapiro cartoons, laugh, because laughing is healthy, and it makes you relax*." At the same time, he acknowledged the maladaptive nature of some of these coping mechanisms. He recalled how during his time away from school, he did not get relief through drinking. He would "*just go and buy two beers and think that maybe this will just take the stress away, but in the morning, I would wake up with a hangover, with the same thought again, coming back to my mind*".

He has also developed a spiritual/philosophical way of dealing with challenges: "*My response to difficulties is, I always employ a simple approach. I come up with the mentality that this happens for a reason and you know some other things in life that are negative, they are not there to pull you down, they are there to uplift you, to polish you, to strengthen you* [. . .] *anything that causes stress, I always regard it as a stepping stone, that's how I deal with stress*." Time and again he noted how he solves his problems in an analytical way: "[. . .] *you solve your problems through your thinking, in your mind.*"

When discussing stress around Teaching Experience, Bonolo noted his anxiety before the first TE: "I *wonder how these learners are going to treat me? Will the supervising teacher*

be supportive? Will they give us material on time?" However, in contrast to many of the students, Bonolo experienced little stress from the pupils during his Teaching Experience, but was very anxious about being observed by his supervising lecturer. He had few issues with discipline due to his height and presence, body language and serious demeanour. The only time he reported a slight loss of control with his Grade 8 (13-14 year olds) was when he laughed at something they said, and they all started laughing too and clowning around.

Experience of the MBI

For Bonolo, possibly due to the number of traumatic events in his life, his intention for doing mindfulness practices appeared to be more to do with the relaxation that can come with a deepening of the breath and an activation of the parasympathetic nervous system. He talked of calming down his body after such incidents, rather than accepting the sensations as they arose. His dominant coping strategy contradicted the mindfulness approach of opening to and accepting stressors in an experiential way. He preferred to use an analytical approach to deal with problems, thinking them through and reminding himself that he has solved other challenges in the past, or even trying to focus on the potential positive outcome, rather than accepting all physical sensations, emotions and thoughts as they arose. In fact, his interpretation of the RAIN practice, which is about welcoming all emotional 'guests' into the guesthouse, was directly in contrast to the intention of the practice. He felt he could tell certain guests not to come in, even if they knocked louder and louder. When reminded of the actual focus of the practice, he laughed, saying, "*You can teach someone to drive a car, but they will drive the way they want to!*" Bonolo revealed clearly how deeply entrenched habit patterns take longer than a six-week course to shift.

Application of Mindfulness Practices

After the mindfulness training, Bonolo noticed a difference in the way he was able to handle traumatic events in that his more mindful presence allowed him to take stock of events as they were happening, rather than being taken completely by surprise. This appeared to improve his recovery time and increase his resilience. While walking to the taxi rank, he passed a group of gamblers. The plain clothes patrollers "*quickly ran into those people with sjamboks and started beating them and I was 15 metres away* [. . .] *And my reaction was, I wasn't thinking of running away, I thought someone was going to get shot or maybe killed or maybe stabbed. And my reaction was, I stood there, I saw them*

running to different directions, then all of a sudden I started feeling a very fast heartbeat [. . .] *and I was nervous. I was trying to calm myself* [. . .] *I think it is also natural for the body to react in that way, but I hate such feelings*". He was aware of his body sensations and the feeling of rejecting them at the same time. However, he commented that he tried to relax, and was calm after 500 metres. He referred on several occasions to the information from developmental psychology (Gilbert, 2010) about the different functions of parts of the brain. He started to be able to watch his 'fight or flight' response in action, and could decide how to respond to those instinctive urges.

He recalled another recent incident: "*I remember five weeks ago, I was buying one beer from this other bar. Then these other two guys started fighting. Even then my body reacted differently to that situation* [. . .] *The way I reacted to that fight was different than before. Before I would have left that beer and left because I don't want trouble coming near me* [. . .] *but I was like, you know what, it's ok, they will sort themselves out. I'm fine. It is distant*." Bonolo was able to experience the witnessing quality at work, and make decisions accordingly regarding the actual severity of danger. There is a sense about him that he is now able to be aware and realistic about the potential threat, yet less afraid: "*I never thought one day I would come across a situation that would actually help me to deal with these strange things that are happening, but mindfulness, I can say, contributed to my boldness in terms of facing such things, because they happen a lot, especially where I stay here in Jo'burg*."

In commenting about these traumatic incidents, he revealed another aspect of his personality, which appeared to have consequences for his high levels of stress: "*I think mindfulness has actually made me aware that you have to be prepared for such things because they may happen any time*." This sense of always needing to be prepared provided evidence for his experience of severe anxiety, and he reported on several occasions how he was nervous about events that may happen in the future.

Bonolo's fear of supervision by a university lecturer is a commonly identified stressor for student teachers. It was useful to observe that he used mindfulness to keep him present during his lesson, rather than to succumb to the anxiety of 'the crit'. This may have been particularly challenging for him, as his identity was built around being an inspiration to his students. He also exemplified how academically-oriented students often struggle with the

pressure of assignments and exams due to the high expectations they put on themselves, often leading to a feeling of overwhelm.

Self Report Scores

Bonolo's DASS scores reveal a noteworthy contrast to the rest of the group, as depicted in Fig 4-2. Initially his overall depression, anxiety and stress scales were low but they then started to rise and continued to do so, to clinically severe levels. During Bonolo's third interview, we looked at his questionnaire scores together, in order to get a deeper understanding of his experience. Initially his scores and his narrative did not seem to fit together, as he felt he dealt with his stress effectively in a variety of ways.

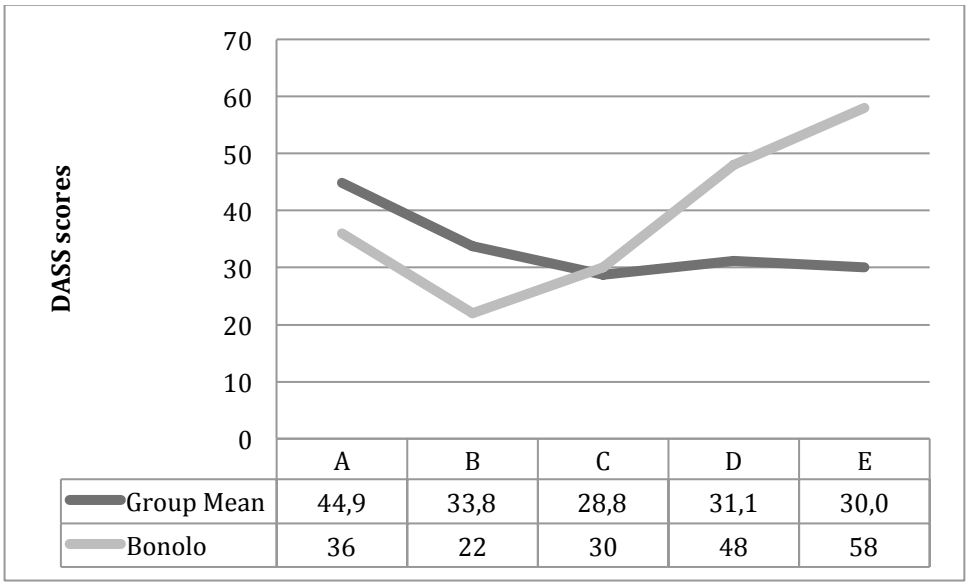


Figure 4-4: Bonolo's combined DASS scores against the group mean

At the start of the course, Bonolo's mean score came in the middle of the other participants, only showing up as severe in the anxiety category, as shown in Table 4-5.

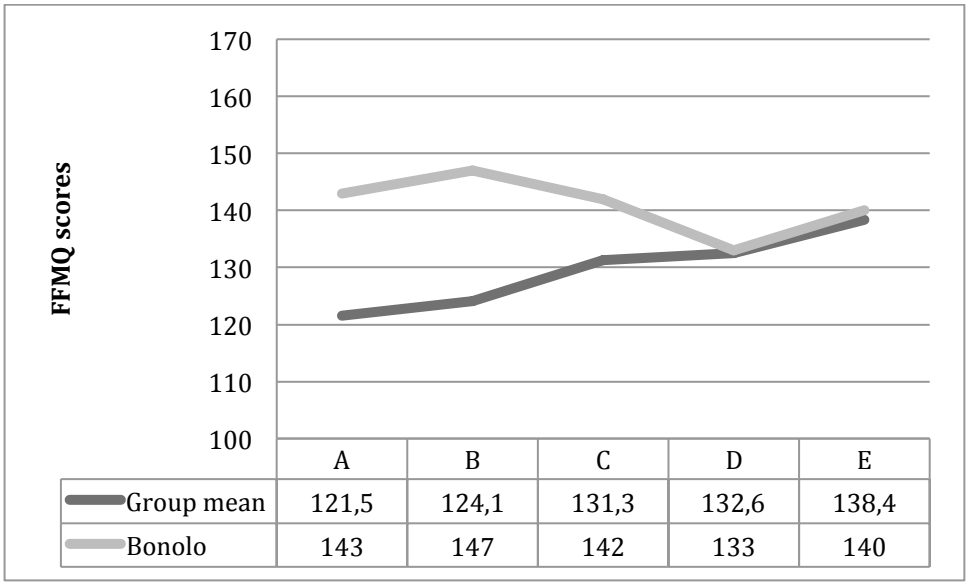
Date	Depression	Anxiety	Stress	Total
4/6/2012	10 Mild	18 Severe	8 Normal	36
18/6/2012	2 Normal	8 Mild	12 Normal	22
28/6/2012	10 Mild	14 Moderate	6 Normal	30
12/8/2012	18 Moderate	20 Xtr Severe	10 Normal	48
24/10/2012	24 Severe	22 Xtr Severe	12 Normal	58

Table 4-5: Bonolo's DASS Scores

During the course, his depression and anxiety levels decreased, but as he was preparing for TE, and then after returning to college and preparing for exams, these scores peaked,

giving him the highest score of the entire group. On asking him about the increase in his DASS scores, he talked about the tension he felt around academic work, and revealed that he did not apply the mindfulness techniques to this context. He only experienced the benefits of mindfulness during traumatic events, and did not use the practices for daily life stability of mind. For Bonolo, it became clear that he experienced future-focused anxiety when anticipating potentially stressful situations, such as preparing for TE, and later for exams. The sub-scale scores for anxiety depicted this clearly and put him in the category of patients who would ordinarily be referred for clinical care, if he had taken the DASS as part of a visit to a medical doctor.

Bonolo's FFMQ scores, as shown in Fig 4-5, were also interesting. He began the course in the highest cluster of students, seeming quite self-aware and observant. After an initial increase in scores, he then dropped, ending on a lower mindfulness score than at the start. This contrasted with most of the other participants.



	A	B	C	D	E
Group mean	121,5	124,1	131,3	132,6	138,4
Bonolo	143	147	142	133	140

Figure 4-5: Bonolo's combined FFMQ scores against the group mean

The sub-scales for Bonolo's FFMQ, in Table 4-6, tell a mixed story, and may reflect the findings of Baer et al (2008). It is common with beginning mindfulness practitioners that they suddenly realise just how much is going on in their minds, and feel not so able to describe it, thus finding that their scores initially decrease before rising again. As Bonolo did not develop any daily practice, it may not be surprising that his scores did not return to their initial level.

Date	Observe	Describe	Act w A	Nonjudge	Nonreact	Total /195
4/6/2012	26	34	31	33	19	143
18/6/2012	28	30	33	33	23	147
28/6/2012	30	24	35	31	22	142
12/8/2012	28	26	30	29	20	133
24/10/2012	31	24	25	35	25	140

Table 4-6: Bonolo's FFMQ Scores

His ability to observe body sensations, emotions and thoughts did improve slightly, as did his ability to be less reactive to external situations (which he described extensively). When asked about these scores, he seemed surprised as he felt he had benefitted from the training, but it was clear on further interviewing, that he had maintained an analytical approach throughout, trying to control and fix his thoughts, rather than an experiential approach, where he could have learnt not to identify with them. The word 'think' comes through in his interviews on numerous occasions, in contrast to 'feel' or 'experience'.

Once more, Bonolo's scores provided a contrast to the rest of the group, as shown in Fig 4-6, illustrating his self-compassion scores. He talked at length about how important showing kindness is for him, as it represents the cultural value of *Ubuntu.* He gave several examples of kind acts that he did as part of his daily life, and enjoyed the practices associated with developing kindness and compassion.

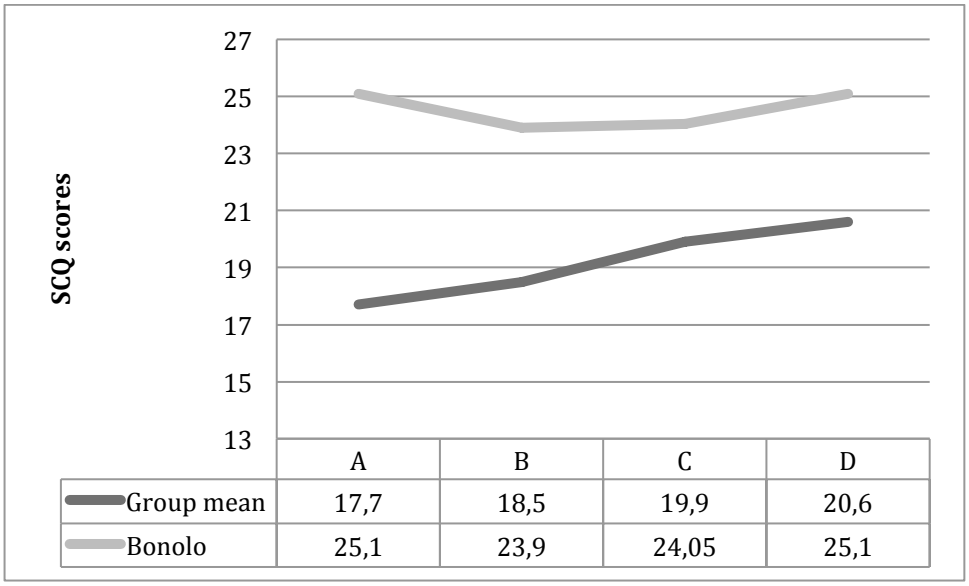


Figure 4-6: Bonolo's combined SCQ scores against the group mean

His mean score started and ended the same, the highest of all the students, and significantly higher than Neff's mean scores for American students. However, three of the sub-scores stand out and seem to contradict the findings from the FFMQ and from his interviews, as revealed in Table 4-7.

Date	Self-Kindness	Self-Judgment	Com Hum	Isolation	Mindful-ness	Over-ident	Total
18/6/2012	3.6	5.0	4	4.25	3.75	4.5	25.1
28/6/2012	3.6	4.8	3.5	4	4	4	23.9
12/8/2012	3.8	5.0	3.25	4	3.75	4.25	24.05
24/10/2012	3.8	4.8	2.5	4	5	5	25.1

Table 4-7: Bonolo's SCQ Scores

Using the SCQ revealed a reduction in his sense of common humanity, an increase in his mindfulness score, and an improvement in his ability to handle over-identification. This contrasted with the other data collection instruments and his interview answers. He spoke at length during the interview about his increasing sense of common humanity, and how he was able to make new friends from different socio-cultural backgrounds after the course. In fact, he was surprised at how safe he felt in the group and noticed that, "*I remember sometimes when I entered that room, I would tell myself that I won't share all my problems, especially my deepest problems, but I found myself sharing those problems! I don't know how the words slipped through my tongue!*" His mindfulness score has been discussed above, and maybe this difference simply represents the different questions asked,

and the ceiling effect associated with his high mindfulness score in contrast to other students.

Evaluation of Impact

The discussion with Bonolo around his escalating stress scores was interesting as he had found mindfulness useful in certain situations, particularly during TE, but had not used the practices at all to help him alleviate academic stress. This possibly reveals his analytical approach to challenges. He still had the impression that he must think his way through problems, rather than allowing his body to experience them, and not identify with the sensations, emotions and thoughts that were arising and come back to the present moment. In contrast, when he experienced physical responses to trauma, such as a loud heartbeat, he was able to come back into the moment, using the body, and noticed how soon the physical manifestations were able to ease with mindful attention.

He had not developed a daily practice, and had not continued the practices since finishing the course, and so at times of academic stress, unconsciously resorted back to his old habit patterns of avoidance or analysis, resulting in a feeling of overwhelm.

Bonolo's stated intention at the beginning of the course became very revealing, in retrospect, after analysing his interviews: "*Mindfulness is useful although I found it unnecessary in the beginning. I am saying this because one may not stop thinking about things I do or must do but I found it useful for my consciousness and relaxation. I don't struggle to relax myself even when I am under pressure and with mindfulness, I will have new ways of relaxing myself.*" He did not often access the 'Being' or 'Sensing' mode, where he could experience body sensations, feelings or thoughts without rejecting them, pushing them away, or analysing them. This could have allowed him to stop thinking and processing experiences analytically. He also focused on the relaxation aspect of some of the practices, which is not the dominant focus, but more of a bi-product of body awareness.

As has been noted in Shapiro's study, the intention of mindfulness practitioners determines the depth to which they can access an understanding of the process. For Bonolo, he seemed unconsciously to restrict himself to the 'self regulation' aspect, rather than allowing a growth to self exploration.

For someone with so many experiences of trauma, it is possible that he benefitted as much as he was ready to, by finding ways to calm his mind and increase his resilience. Maybe

this was an appropriate pace of growth, without the additional support of a psychotherapist. He would need a longer period of mindfulness practice in order to start integrating some of his traumatic experiences and trusting that the physical manifestations of trauma in the body can be released once they are accepted and fully experienced.

The kindness/compassion exercises seemed particularly significant for Bonolo, as he was able to discuss a family issue in the group context, without any fear of judgment. He noted how he had benefitted from the group setting and was able to make friends across cultural groups. This was significant feedback, particularly in a country such as South Africa, which has had such a segregated past. The ability to recognise common humanity is a profoundly healing process.

When asked whether the mindfulness training could be useful during a PGCE programme, Bonolo was adamant: "*people need it because people endure lots of stress at PGCE. Some of them you can see stress is written all over their faces, without asking them, so even before TE you find especially those small, skinny, short-looking ladies, they are worried because in high school you come across those tall big guys, so you can see that they are so anxious about it. They are having this anxiety. It is very dominant in their thinking*." He felt that the training might have helped some people remain on the course: "*By the time you came we were already sinking deep in assignments and all these other things we have to do. You would have saved drop outs, because we had quite a number of drop outs, and even now they are still continuing because people are not sure about PGCE, and trust me, this is where people actually need therapy and mindfulness*." He was clear about the benefit of personal growth work – "*You have to deal with yourself before you deal with what you are facing*" – even if he had not put it into practice himself.

Bonolo's engagement with the course seemed to reveal that 6-weeks was not long enough for him to experience significant changes in his coping style. His beliefs that focused breathing could not help stress (despite having experienced and acknowledged it on one occasion) could not be reversed in the short course, particularly since he did not practise out of session time. This meant he only utilised the techniques at times of extreme difficulty, and not for daily life anxieties. At times of stress or overwhelm, people still revert to the coping strategies that they have previously found beneficial.

A great deal of insight into Bonolo's situation occurred during the interviews, which is not generally an aspect of MBIs. He needed to develop trust with an individual before

discussing certain traumatic experiences in his life. This is one of the areas where secular mindfulness training differs from spiritual training. With the latter, a practitioner works with a teacher, one-on-one, who can then advise on practices suitable to the new meditator's type of mind. Without this one-on-one aspect of most MBIs, it means that the enquiry component of the course is critical to see if people, especially in varying cultural contexts, have understood the nature of the practices. It also appears that the one-on-one interviews, although not part of a regular MBI, do provide a means by which to explore what might be slowing progress in the development of mindfulness. Bonolo's case bears a resemblance to Charles's comment [5.2.4] about men being unwilling to admit that they are experiencing difficulties, within the African context. When habit patterns are strong, or deeply ingrained by social values, it is hard to challenge them.

4.3 Portrait of Imogen

Life Context

Imogen is a 23 year old English and Life Orientation student, having completed a BA in Psychology and English at Wits. After her BA, she travelled to Korea to teach English, and returned to get a formal qualification from Wits. She comes from a stable, white middle-class background, living in the same area of Johannesburg her whole life. However, she was going through a significant change process, as "*my home life has recently changed. My parents got divorced when I was overseas. It was quite a big shock as they had been married for 30 years.*"

Predisposing Factors

She described herself as "c*onfident, bubbly, adventurous, friendly, hard-working, with a new-found passion in teaching*". She is a very idealistic young teacher and has high expectations of herself, particularly in her combined pastoral and academic roles as both classroom teacher and school counsellor.

Imogen was already aware of, and open to, mindfulness as a practice: "*I'm really interested in everything you spoke about. It resonated with me especially because of my experiences in the past, and how I was brought up. I truly believe in the power of mindfulness meditation.*" She has had previous experience of meditation, and understood

its uses both for relaxation and for improved concentration: "*I did meditate, I think it was mostly first and second year, through guided meditations and Buddhist chants. I need to get back into that. I often play meditative music, just to create a nice peaceful atmosphere to have a bath, or study.*"

Specific Current Stressors

When describing her experiences of stress in her first interview, she pointed out that "*With stress in general, I cope ok – I see other people panicking and going crazy*". Having said that, she was finding the course "*harder than any year I've gone to in terms of my studies. I'm finding this course crazy. They are trying to prepare you for when you are a teacher. I'm finding it a bit harder now, so many more deadlines, which I'm not used to*." During the interview she noted that "*I'm sick at the moment and missed two days. I think it's the weather and stress – a whole bunch of factors. I think everybody is feeling very, very stressed now, and anxious. Especially PGCE students, we've never taught in a school before*".

In terms of coping with stress, Imogen describes her good support structure of family and friends who she talks to openly, and her enjoyment of physical activities (squash, hockey, yoga and pilates), which ease her physical tension. As an asthma sufferer, she has been taught proper breathing techniques, which "*definitely help*" her relax. She also described the influence of her mother, who she describes as spiritual "*and has encouraged me to see the good in every bad*".

Experience of the MBI

Imogen engaged extensively with the practices, listening to the CD 3 or 4 times a week, for 20-30 minutes. She also combined it with her yoga practice, mindful eating and walking. "*And then of course, trying my best to be present when I'm with people, I think that actually stands out the most. I seem to remember that a lot, it actually comes to me and I can do it a bit more.*" She also expressed an intention to continue the practice after the end of the course: "*I think that I do want to keep doing meditations and listening to the CDs because I feel like, I still will feel the stress, but it won't be as long lasting and it won't be as intense* [. . .] *For me, the future is always something that I worry about, which also*

relates to my asthma. But if I can use it more and more and more, it will get better, doing the mindfulness."

After the mindfulness training, Imogen said that the course "*definitely has been useful in numerous ways* [. . .] *in terms of body awareness as well as emotional awareness, and as a de-stressing tool* [. . .] *I've definitely become more aware of things like my posture and while you are eating, and if you have an emotional reaction to be aware of that, and therefore have a bit more control over those emotions and have a bit more awareness over where its coming from and what you'd rather do instead*".

Application of Mindfulness Practices

She predicted in an early interview, and confirmed later on, how being present could improve both her classroom teaching, and her counselling. Within the counselling room, mindfulness could "*definitely enable you to connect more with whoever you are dealing with. And then obviously within the classroom, I think your teaching will just be enhanced. You can pick up on a lot more things, be more connected to the children, and also maybe the sense of worry and stress of other duties, assignments and other classes can sort of be swept away a lot easier, especially if you deal with difficult classes, and you are a bit stressed out if its rowdy, just getting back into a state of being calm so that by the end of the day, you are not a screaming dragon.*"

During Imogen's teaching experience, she noticed many of these anticipated benefits happening in the classroom: "*Controlling the class, I was very aware of what they were doing. I had eyes everywhere, that's how I felt, I would notice someone doing something there, and I was able to address it, and I was still looking* [. . .] *I had quite a good overall awareness, I didn't sort of zoom in. I think that helped a lot, being able to be present with all of them. I also picked up on some girls that really could not grasp what I was saying, and I paid a little bit more attention to them. And obviously it's all the girls that sit in the back row that don't know what's going on. But shame, one girl she really wasn't fluent in English at all, so I tried to help her. I think it helps you to become aware of different learners' needs, who needs more and others need less, not categorising them at the same level, understanding that they need different things, if you can give it to them, of course.*"

Her sense of presence made her clear and boundaried, and confident to enforce discipline: "*For some reason they think teachers are stupid, I don't know why. They don't realise that you can see when they are eating and can hear when they are talking. They think you are*

this alien thing that doesn't know what is happening. I think I was quite sharp with that stuff. I didn't allow eating in the classroom, otherwise they would have a picnic, give them one little thing and they take everything. Girls also will just walk out the class. 'Where are you going?' 'I'm just going to the bathroom.' 'Well you should let me know when you are going.' They will just leave and then you are missing 3 girls, you don't know where they are gone, and they are bunking. So I think mindfulness can help teachers have a better awareness of class dynamics and what's actually going on. The learners need discipline, all of that stuff."

In addition to the benefits of the practice, Imogen become aware of the potential challenges of developing trait mindfulness: "*I think there is more awareness of the ugly things in life* [. . .] *you just need an acceptance of it, I guess.*" She gave the particular example of seeing the suffering of people begging at the traffic lights in Johannesburg, and a sense of being unable to help such a vast number of people.

She also realised how previously suppressed emotions may start to re-emerge during mindfulness practices: "*Another thing that just popped into my mind, when I was speaking how being more mindful has allowed me to think about things that I hadn't previously thought about, or that you don't usually pay much attention, which might make you feel a bit more stressed. So although it is trying to combat that stress, maybe initially it will bring out the stressors that you haven't dealt with before, and over time it would fizzle down a bit. Especially people who would suppress things, mindfulness would bring that out and you have to deal with that, and then you might feel more anxious or saddened by it. I think that is definitely something I did experience, not with huge issues, but with small little things that you sort of think about a bit more and deal with, and move on* [. . .] *I'm thinking just in terms of defense mechanisms, mindfulness definitely makes you more aware of the defense mechanisms you have, like suppression and maybe withdrawing a bit. In terms of that, I've thought about that a bit more. I don't know if there's been* [. . .] *maybe they've become more subtle, but there's an awareness of them, definitely is.*"

Imogen's care-giving personality and counselling role also meant that she noticed an inner tension with wanting to share the techniques, but realised that not everyone would be open to them: "*It could be challenging if you are wanting to encourage that* [awareness] *and being able to take a step back and accept that that is not where they are at in their lives.*" With her increased awareness of the body-mind connection, she wanted to help a relative:

"*I want her to be more aware and mindful of what your body is telling you, how are you feeling, what can you do about it, those sort of things,*" but realised that people have to be open to taking personal responsibility, and until they are, mindfulness will probably not help them.

She spoke of using mindfulness for enhancing her interpersonal relationships and becoming aware of her own responsibility within them: "*I became a lot more reflective of what was going on* [. . .] *now I can be more insightful and act on it in a better way. I sort of have a desire to be ok with her, accepting who she is, and I can't change her, I must just accept her and the way I'm feeling is my own stuff that I'm carrying and that is something that I must deal with and I can only change myself."*

Imogen made a strong recommendation for expanding the mindfulness intervention within the teacher education context: "*The fact that teaching can be one of the most stressful jobs on the planet* [. . .] *You know, as any career that deals with trauma, like a paramedic might have counseling or stress management courses* [. . .] *then why not for teachers. Not that we are going to be experiencing trauma, but stress can become really overwhelming and take away the fun of what you wanted to do in the first place. I think if you can highlight the importance of that, I think it can help.*"

Her description of teaching experience was a vivid representation of the external stressors that teachers are having to deal with in some urban schools, and a clear example of when student teachers experience the 'struggle for survival' stage: "*I think because of the nature of the school it was extremely difficult to actually implement the mindfulness. The first three weeks were a huge culture shock for me, only after that did I start becoming more aware of the mindfulness. I also usually exercise a lot, but the first three weeks I did nothing, absolutely nothing, I was put so off track and I was so busy. I was just completely overwhelmed with teaching. The girls are coming from such a terrible background, really huge issues, not just dealing with the divorce of parents, but with rape and HIV/AIDS and abductions. These guys from Nigeria are trying to take some of the girls for human trafficking. Huge issues that it was just* [. . .] *It affects the learning, it affects the teaching* [. . .] *the girls are like 3 years behind, just coming and teaching Grade 8 stuff that I taught at Glen Vista, none of them knew, I had to start right from the bottom. The discipline was a huge problem, a huge, huge problem, girls threatening me, girls nearly hitting me with this huge stick. That was just overwhelming. I've never had to deal with girls that are just that*

threatening, where they are right in your face threatening you, and you don't know what to do, just take a step back [. . .] *I felt the flight and fight emotions coming up but I controlled them* [. . .] *I think I was quite calm, but I was still overwhelmed with those emotions, but I didn't let them know* [. . .] *About 15 girls per grade fall pregnant, and that's a lot, so many girls that are pregnant there. There are 45 in a class, 1200 girls in the school. She* [the Principal] *said that more than half have abortions so you don't see the results of that. Many of them don't realise that they have fallen pregnant, and then there's the trauma of dealing with the abortion and everything. These girls are dealing with huge issues, which also affects the way they learn and everything. It was a real eye-opener. I think that's why it was a bit hard to always be as mindful as I wanted to be* [. . .] *There were two girls who got expelled because they'd stolen a teacher's cellphone. They told us from the beginning, do not leave your bag anywhere because the girls will steal your stuff, so you had to be very vigilant on that. It was a real eye opener, eh!*"

This extreme situation emphasised a point which emerged in other interviews, how during times of overwhelm, students were not able to use any of their coping strategies, or experiment with new ones such as mindfulness: "*I don't know if I would be able to use mindfulness as often if I was feeling overwhelmed as it takes over you, but I think it can counteract that and ease it a bit more. It might be harder to be more mindful when you are very overwhelmed and stressed, but that is when you need it the most, I guess.*"

After the initial three weeks of overwhelm, Imogen started to remember her mindfulness practice, particularly when she felt the 'touchstone' that had been given to students at the end of the training: "*All of the drama was over, most of it, and I got a better feel for everything. Then I was able to start, actually it would just pop into my mind, I don't know, it would just happen. It would be in the morning and I would think, 'Oh, I need to be mindful,' that's sort of how it would come to me, and I would try to hold onto that as long as I could throughout the day. Especially feeling my body, feeling the sun and the wind, I was trying a lot to do that when I was walking. I would have that moment and continue for* [. . .] *I don't know how long it would last, but then it would come again, just pop into my mind. That's how I experienced it, like a little reminder, and then the stone, I had it in my coat, and I remember feeling it and immediately the association to be mindful came up, and that would help. It worked quite nicely.*"

When asked about self-care and compassion, Imogen revealed, "*I think I did neglect myself in that sense, a bit, but I wasn't too hard on myself either. I don't think I was too critical in the sense of 'Ah, you could have done this, you could have done better.' I think I was quite confident in what I was doing and how I was teaching, just because I was going to a school that really needed good teachers. I don't think I was too critical, but I don't think I made enough time for myself as I should have*".

In a later interview with Imogen (March 2013), once she had started a full-time teaching and counseling job, she revealed how she often uses the mindful breathing techniques with students who come in for counseling in a flustered state. She has found it beneficial, and is keen to attend a facilitator training, so that she can offer mindfulness at a deeper level within her school. She has continued to maintain a practice, using spam emails as a mindfulness trigger, allowing her to remember to be mindful, rather than succumbing to anger.

Self Report Scores

Initially Imogen's DASS scores were some of the lowest in the participating group as illustrated in Fig 4-7, which she attributed to her good support network and her range of coping strategies. Her scores altered considerably when the questionnaires were distributed. She was not surprised at this finding, as she had just been through a bereavement, where her boyfriend's close friend had committed suicide. The mean score continued to rise during her very challenging TE, at a school with severe discipline issues. By the final interview, at the end of TE, her scores had dropped to a normal level again, considerably lower than the group mean.

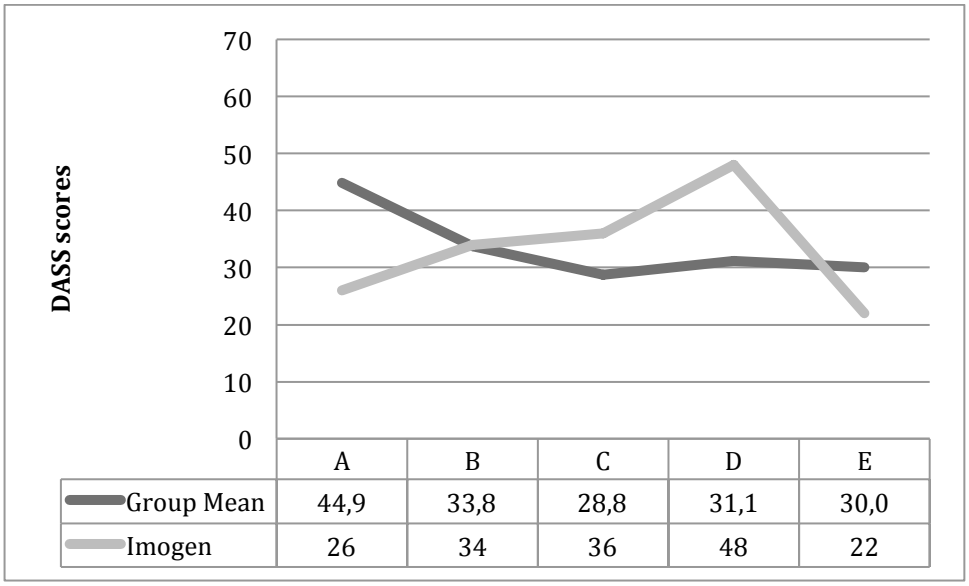


Figure 4-7: Imogen's combined DASS scores against the group mean

The sub-scales in Table 4-8 give a further breakdown of Imogen's experience of stress. By the time of the final interview, her scores had returned to the normal range for depression and stress, and were moderate for anxiety. She mentioned how her worries tend to be future-focused – "*For me, the future is always something that I worry about* [. . .]" – which was borne out by the higher scores on the anxiety sub-scale.

Date	Depression	Anxiety	Stress	Total
05/06/2012	4 Normal	12 Moderate	10 Normal	26
26/06/2012	8 Normal	12 Moderate	14 Normal	34
03/07/2012	10 Mild	8 Mild	18 Mild	36
15/08/2012	10 Mild	16 Severe	22 Moderate	48
08/10/2012	2 Normal	10 Moderate	10 Normal	22

Table 4-8: Imogen's DASS Scores

Imogen's FFMQ scores were in the upper range from beginning to end, although with a marked drop at the questionnaire's second administration, as illustrated in Fig 4-8. In addition to the bereavement, she was also aware of her changing understanding of the full meaning of the mindfulness concept and how this might have skewed her initial score: "*I think there are so many dimensions with the eating, the body scan, the walking, so many different things and by doing the mindfulness training, I became more aware of different areas of my life where I wasn't being mindful, in that sense*."

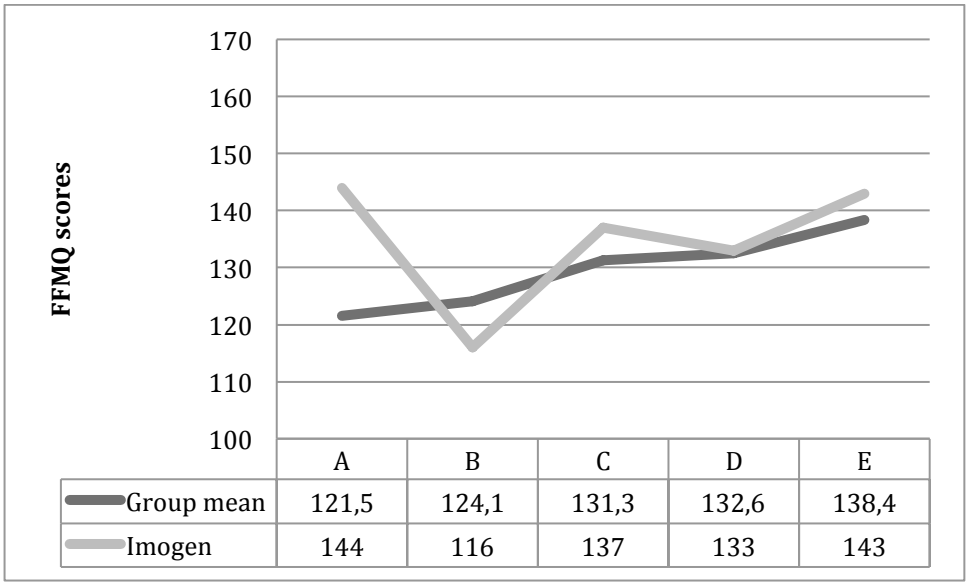


Figure 4-8: Imogen's combined FFMQ scores against the group mean

Imogen's scores for the FFMQ may also be representative of the ceiling effect of starting at such a high level in contrast to the rest of the group, and in contrast to normative studies in other countries. For example, her beginning score of 144 is higher than Baer et al's (2008) findings for students (123.3), community members (116.9), highly educated participants (137.3), and only just lower than the group of regular meditators (150) in the United States.

Date	Observe	Describe	Act w A	Nonjudge	Nonreact	Total /195
05/06/2012	29	29	30	33	23	144
19/06/2012	23	28	22	24	19	116
03/07/2012	28	30	29	27	23	137
15/08/2012	31	32	29	20	21	133
08/10/2012	32	32	28	25	26	143

Table 4-9: Imogen's FFMQ Scores

Her sub-scores for the five facets are consistently high across the range of facets, as illustrated in Table 4-9.

Imogen's SCQ scores, in Fig 4-9, did not change much in the pre-post score analysis, but did drop during the challenging teaching experience. She reported trying to maintain a self-compassionate approach during the time in the school, but found the situation overwhelming. She also became aware of how the item – common humanity – connected her with the suffering of others, as well as providing a supportive sense of connectedness to her friends, family, colleagues and students. Her sub-scores are shown in Table 4-10.

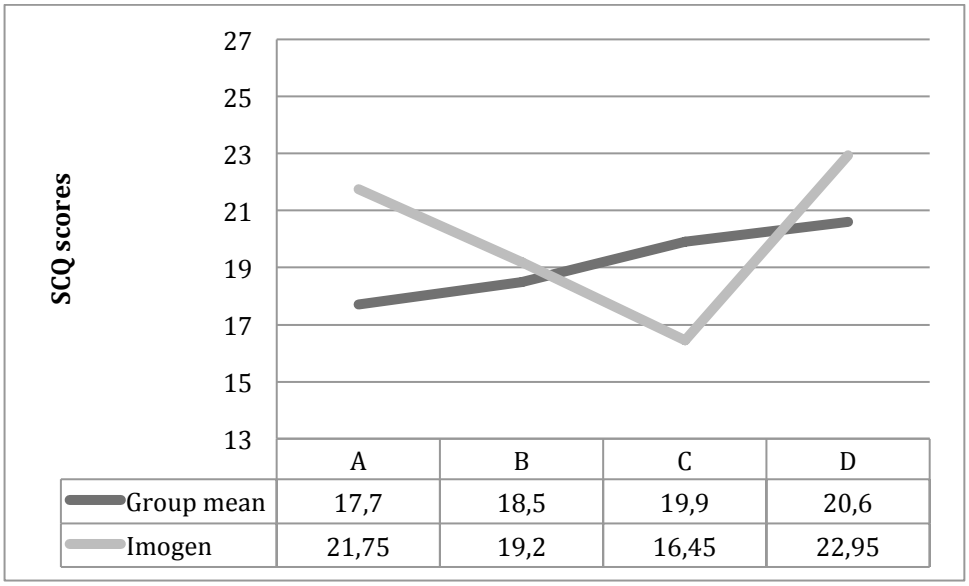


Figure 4-9: Imogen's combined SCQ scores against the group mean

Date	Self-Kindness	Self-Judgment	Com Hum	Isolation	Mindful-ness	Over-ident	Total
26/06/2012	3	4	3.75	4	3	4	21.75
03/07/2012	2.8	3.4	2.75	3.5	3.5	3.25	19.2
15/08/2012	2.6	2.6	2.5	2.5	3.5	2.75	16.45
08/10/2012	3.4	3.8	3.25	4.25	4	4.25	22.95

Table 4-10: Imogen's SCQ Scores

Evaluation of Impact

Despite her wide range of traditional coping mechanisms (social support, exercise, breathing techniques), Imogen was still experiencing stress during her first interview. This suggests that specific SMIs, including mindfulness, for student teachers might be beneficial at these particularly intense times of transition. In addition, Imogen's discoveries into the ways in which mindfulness and compassion were able to support her classroom management, reflection and sustainability provide a strong rationale for including such programmes as part of the dispositional development of a student teacher. She was also a strong advocate for using calming techniques with her pupils, in the classroom and during counseling sessions, and found they helped her to connect and empathise more with students, and helped the students to regulate their emotions. She also used the zooming in and out technique (focused attention to open awareness) to help her with classroom discipline as she could attend to an individual whilst still aware of the dynamics within the room.

The interviews with Imogen revealed someone who had moved to a deeper state of mindful awareness than many of the student teachers. She did not just use the practice as a relaxation, or stress management technique, but also noticed how it had the potential for self exploration, by bringing up previously suppressed habits, or memories. This can be a challenging stage of mindfulness training, but as she noted, it allowed emotions to come through more quickly, less intensely, and be dealt with in the moment. Imogen became a strong advocate for mindfulness, using it both in her classroom and in her counseling sessions. However, she was very honest about the fact that at times of overwhelm, all her stress coping strategies eluded her. Although, in theory, this would be a good opportunity to practice mindfulness, the new skill had not been established as a trait or habit. In times of overwhelm, students and teachers just try to survive. Compassion is then a necessary quality for making peace with the situation and acknowledging the severity of the external stressors that they are having to deal with.

Imogen's insight into how mindfulness can bring up previously suppressed emotions provides useful warning for mindfulness facilitators, who must be able to hold the space for challenging experiences, whilst reassuring participants that this is a common stage of development within mindfulness training. Often when participants have these insights, they assume they are doing something wrong, and need reassurance that they are now able to see and feel more clearly, and this in itself can be enough to let the thoughts and emotions pass through.

Her challenging experience in the township school was reported by other students who did their TE, or found work in these areas (Luthuli and Sipho). Student teachers need to be warned beforehand of the severity of the discipline problems, and the lawlessness, so that they do not lose their motivation for teaching. In terms of choosing schools after the PGCE, strong recommendations could be made by the Wits School of Education (WSoE) that they learn the art of teaching in functioning schools, rather than taking their idealism into situations that are too challenging, and then leave the profession, demoralised.

When evaluating the MBI for student teachers, she was clear about the benefits, but also realistic regarding the length of the course, and the amount that people can change in a short time: "*I definitely feel it's beneficial, and it's sad that not so many people participated. And I feel that the people who should have participated, don't participate! Half of my friends just drive themselves crazy, but at the same time, it's difficult to undo*

habits that have been formed for over 20 years as well, in such a short time [. . .] *It would need to be a longer process I think, as well because it gives you* [. . .] *you know there is something out there that can help you but there might need to be a bit more practice and help in that sense.*" Several of the participating students pointed out that friends of theirs who had not participated might have benefitted significantly. They did not feel that those who signed up were more stressed than others, but rather were more willing to take responsibility for their stress and find solutions to it. Imogen's recommendation was that an MBI should be compulsory to all PGCE students, and take place at the beginning of the year, so that they could deepen their practice before the 'struggle for survival' stage of TE: "*I think it should be a weekly thing – I feel very strongly about it. If I think of my undergrad when I had to do tutorials, it should be a compulsory tutorial that you have to go to. Of course, people coming from different religious backgrounds, or being atheist, might find mindfulness to be a bit reluctant to engage in it, but if you can show that it is beneficial, there might be hope for that.*" Bonolo and Hannah's recommendations were similar.

4.4 Portrait of Luthuli

Life Context

Luthuli is a 26 year old black student, originally from Bushbuck Ridge in Mpumalanga. He studied Psychology and Philosophy at Wits, at undergraduate level, and has specialised in English and Life Orientation for his PGCE. He grew up with his mother, father and four siblings: "*The relationship for them is good, but for me, I have found there were so many injustices that were done to me when I was young, but I understand that they did not know any different* [. . .] *Personally, I feel my childhood was bad. Even though my parents might say 'no, it was ok', because that is what was natural to them.*" He has the sense of growing up "*as an orphan*", but feels this gave him an inner focus: "*I did not respond to the situation by being negative, and even today I am responding to the situation by working hard so that I change my situation*." When his father died in 2007, during his undergraduate degree, this affected his financial situation considerably: "*I had no choice as I had no money for transport, so I had to come to res* [residence hall]."

Predisposing Factors

One of the biggest challenges that Luthuli has overcome was his addiction to marijuana. It affected his ability to connect with other people, his schoolwork, and he still finds it hard to forgive himself for his addiction: "*I had a lot of problems from high school to honours year. I was addicted to ganja* [marijuana]. *I would say an addiction, because it was no longer having a positive effect. It was affecting me in a very bad way as I was no longer functioning* [. . .] *During the ganja days, I was not cool company* [. . .] *I was too strange. I was paranoid, sitting here, busy thinking, 'Why are you looking at me?'* [. . .] *I could see that if I didn't smoke the whole day I was fine, but after smoking the things came back. I was able to see this, but unable to stop. It was a futile cycle for 3 years. Ah! It was bad, it was too bad, too bad, hurt my friends, always scared, hiding, I could not feel the way I wanted to feel, or do things the way I wanted to do them because of the addiction. It was too bad. It was too bad* [. . .] *It's only two years since I renounced ganja. I'm still trying to form friendships. It's still a bit hard – up and down* [. . .] *During my undergrad years, the ganja affected my schoolwork. My marks dropped. I can only forgive myself after I have redone everything.*" In order to address his addiction, *"I studied psychoanalysis as I thought through reading I would be able to help myself. Even Buddhism. Along the way, other reasons came up as to why I should be reading as the material is very insightful*". He also started psychotherapy in 2007, as, "*I just woke up and said now is enough. Ever since then things changed* [. . .] *My therapy ended last week*".

He finds great enjoyment in attending poetry and reading sessions, and always carries around a notebook (his *book of magic*) where he writes down his emotional distress in order to achieve catharsis. He now uses this reflective writing style for his academic work – "*I read all the materials, then I reflect, and get ideas from the readings*" – although he originally used the technique for self-soothing.

He is very future-focused, goal-oriented and has strong self belief: "*I've set goals and that is why certain things I cannot do as they take me away from my dreams. I'd love to be a psychoanalyst, a philosopher, a lawyer. I'm still young, and it's free, I'm paid to read and write. What I'm born to do is to think, read and write and talk. That is my job. Through teaching I'll be talking and it is good practice for being a lecturer, which are the dreams I'll achieve later on.*"

Specific Current Stressors

In Luthuli's first interview, he talked of "*two types of difficult situations*" that caused him stress. "*There is one where maybe I am criticised or the feedback is bad.*" A negative comment from his lecturer "*got me off for three days, I had a minor depression. I'm very sensitive to negative feedback*". The second, he said, "*In terms of difficulties such as not having a job/bursary and so on and so forth, because of my goals, I'm not a person who sits and waits. I'm a go-getter, I do not relax until I get what I really need, but obviously in a morally positive way!*"

Although he has a sense of trust and determination regarding his financial problems, they worsened over the duration of the intervention, as he had to wait for 6 months before receiving the Funza Lushaka bursary, which put him in debt with his rental payments. He worked hard to solve his financial problems by taking up part-time jobs in addition to his academic work. This put a great strain on him, and he felt he was not giving his best to the PGCE: "*I wouldn't have missed classes as such, but because of this poverty* [. . .] *Most of the part time jobs I had to do on campus and had to walk from my place, in the morning at 4am, and then get here at 5am and start putting up posters, writing on the board and stuff like that*."

Although his stressors were predominantly financial, they also linked to the high expectations he had of himself, in response to making up for the years he feels he lost to addiction: "*I am a perfectionist. So far I have not forgiven myself because I feel I still need to fix certain things* [. . .] *My aim is to get a distinction for PGCE this year, and I can start forgiving myself as I will have corrected my mistakes.*"

During his first TE, Luthuli identified disappointment, as the reality of the school situation did not meet his idealistic views: "*The other teachers feel threatened* [. . .] *I feel disappointed* [. . .] *with my black people I always have such perceptions that we are not supportive of one another, always trying to get the other person down. I always approach my black people with that positive spirit, but time and again I get these different views from them, and always disappointing. Even last year, the place where I was working, the mindset, it was because of the same thing. People were not talking about progress, it was just entitlement and they regress, or are stagnated in one place. Now that I've encountered this I feel disappointed* [. . .] *I think the disappointment is due to my expectations, I expected that the relationship would be cordial and they would not think that I'm there to*

take something away from them so I'll just change my expectations by learning from experience."

During his second TE, he became frustrated to witness the lack of teaching and learning taking place in the school, "*because it somehow reminded me of my high school, because that is what the English teachers used to do. Just not come to class, or come and they do nothing* [. . .] *No, it's not because we are stupid, it is because we are not being taught anything.*"

Experience of the MBI

Luthuli was very open to the practices explored in mindfulness, and keen to be involved with the intervention: "*I've read the* Tree of Enlightenment*, and I loved that you have to accept the way things are. From emotions, to your mind, to the way things are outside. I loved the concept of mindfulness, where when you make a cup of coffee, your mind has to be there* [. . .] *I could not do the meditations when I was reading the books as I felt it needs to be under guidance. So I feel, I am getting something that I always wanted, to attend some sessions, where there is a trial practice of the principles.*"

He connected quickly to many of the techniques during the sessions, and started a regular practice, noticing immediate differences in his experience: "*I started with settling and grounding. It was very powerful somehow, I had a lot of energy during the day* [. . .] *I got addicted to 3 minute breathing – it's beautiful*." He also resonated strongly with the body-based practices, such as the body scan, mindful movement and mindful walking. The body scan "*was beautiful! When we started my toes felt too cold, but as we moved up and went back down, I started feeling more relaxed*". He continued to use it during Teaching Experience, "*every Friday because of the tiredness, and every Saturday* [. . .] *I enjoyed the body stretching. I love it! It is sweet for me, like I can taste it. I feel free most of the time when I do it*". He also found the mindful walking techniques very beneficial: "*the walk meditations, they are helping me a lot. They help a lot in terms of clarifying my mind. Even last week, I had some assignments, so I took a walk from Ghandi Square, late, around 6pm, to come to the Spar here in Hillbrow* [. . .] *When I went back home, my mind was clean and I was ready to continue working. The walks help a lot."*

Maybe the most significant techniques for Luthuli were the ones enhancing the qualities of compassion. He had much higher expectations of himself than of other people: "*In terms of dealing with other people, I move on quickly, but things about me, it is not easy for me to*

move on. I want to correct the mistake." Yet, with the self-compassion techniques, he was able to find greater feelings of kindness towards himself: "*Mindfulness has helped, and it's continuing to help, with not being too harsh on myself."* During the time of financial hardship, when he was missing some classes in order to carry out his paid work, he was able to reperceive his situation and accept the choice that he had made: "*I was feeling bad about missing classes. So I was just trying to remind myself of the other good things I'm able to do and get for missing classes, for example, I was able to cover outstanding fees, I was able to submit my assignments and trying to remind myself of these good things, and not just one bad thing of missing classes. That is one shift that has happened*."

He also experienced greater compassion towards others: "*Another thing again, which links with not being too harsh on myself, or being compassionate to myself, I forget when things are not going well, that other people are also going through the same things. To remind myself that other people have the same problems, maybe even bigger problems than mine, so it's helping me with this type of thought, to think in this way.*"

Application of Mindfulness Practices

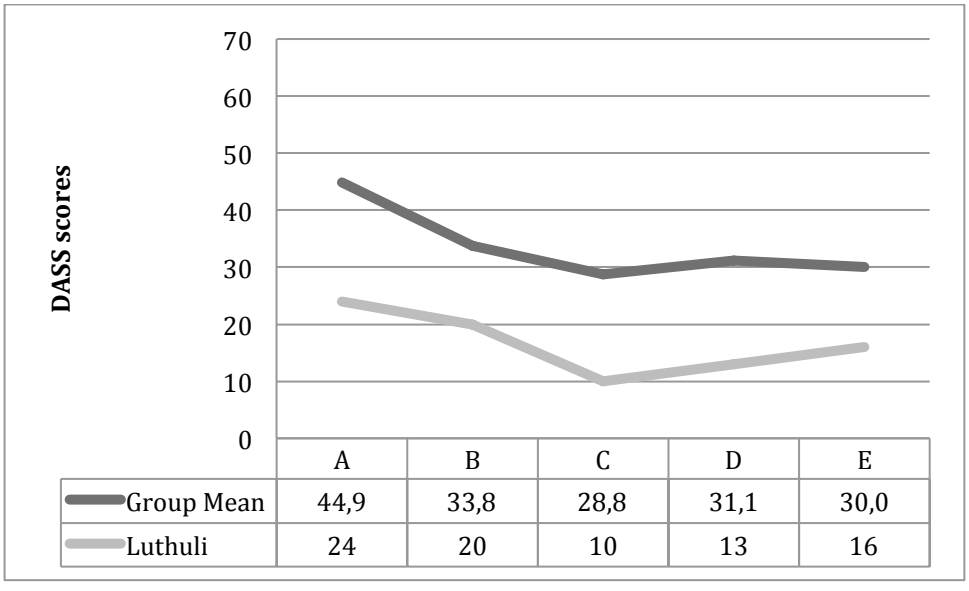
Luthuli discussed a specific incident during TE of when compassion towards himself and others prevented him from experiencing adventitious suffering. The debating competition he had prepared his students for had been cancelled at the last minute, and he had not been informed: "*I felt so embarrassed and bad. I was so hurt. Even the learners were too hurt. Why did they not tell us on time? They tell us when we are just about to leave*." He dealt with the situation through "*Compassion again, first to the people because I felt by continuing to blame other people, I am continuing to feel bad and embarrassed but if I quickly understand the other person's situation, then it's no longer bad because I understand they did this because they are suffering* [. . .] *I stopped myself from looking at an infinite chain of reasons why things could have happened like that, but just focused on the moment. I saw things that I was making up. So being present, to stop opening my mind to* [. . .] *not forcing it to close down, but looking at what is here.*"

In terms of his teaching, he also noticed a greater sensitivity and compassion towards a student in his class, who was behaving in a disruptive way with other students, and not completing his work. Luthuli was comforted to witness that treating the student with compassion, allowed him to refocus on his studies: "*I learnt the situation of the young boy, his parents were killed in front of him, I think it created a shift in my mind, the way I was*

looking at him. I was no longer looking at him as a disruptive learner, but I was looking at him as someone who is suffering [. . .] *I called him to stay behind and I went and told him that he should be careful with his friends, most of his friends have parents and everything. His situation might be different in other ways. He should be careful with this because someone who is from a wealthy family might not be scared to do anything because they know they have got their parents to stand up for them. You, maybe you are from a family without means, or without parents, so if you do what they do, you'll get into trouble and there'll be no one to stand up for you. I said that, and I also said, 'I have heard from the teacher that you are a very intelligent boy and you do well every time if you focus on your work, so maybe it is something that you should start doing.' And on the third meeting, he submitted one of his works that he had not submitted for a long time. He came and submitted and then again, on the third meeting, that young boy did not sit with him, I don't know what happened after class, but that young boy was sitting at the back, alone. And that one was behaving.*"

Self Report Scores

Luthuli's first three DASS scores, as illustrated in Fig 4-10, showed that he experienced appreciably lower mean scores than the rest of the group. Only Rupert scored lower than Luthuli on the DASS. It was only during his time of financial hardship that his total score rose slightly. During this time, when he was taking on part-time work, he missed one of the MBI sessions, and therefore did not complete the penultimate DASS questionnaire. His score of 13 was generated from the scores of 10 and 16 in the sessions before and after.



	A	B	C	D	E
Group Mean	44,9	33,8	28,8	31,1	30,0
Luthuli	24	20	10	13	16

Figure 4-10: Luthuli's combined DASS scores against the group mean

Table 4-11 gives a breakdown of his DASS sub-scores, showing that he was in the normal range for depression and stress, and experienced slightly elevated anxiety levels.

Date	Depression	Anxiety	Stress	Total
05/06/2012	8 Normal	8 Mild	8 Normal	24
26/06/2012	4 Normal	8 Mild	8 Normal	20
03/07/2012	2 Normal	8 Mild	0 Normal	10
18/10/2012	2 Normal	8 Mild	6 Normal	16

Table 4-11: Luthuli's DASS Scores

Luthuli showed strong improvements in the FFMQ and SCQ measures (Table 4-11 and Table 4-12 respectively). He ended the MBI, with the highest FFMQ score of the participating students. Within the FFMQ sub-scores (Table 4-12), his changes in the non-judging and non-reaction facets were notable. From his interpretation, and the statistical evidence, it appears that this was linked to his increasing understanding and experience of self-compassion. His improvement in the self-compassion score, by 7.95, was the highest in the group, whose average improvement was 3.6. His qualitative and quantitative results corroborated each other, strongly supporting the picture of his unfolding process of change.

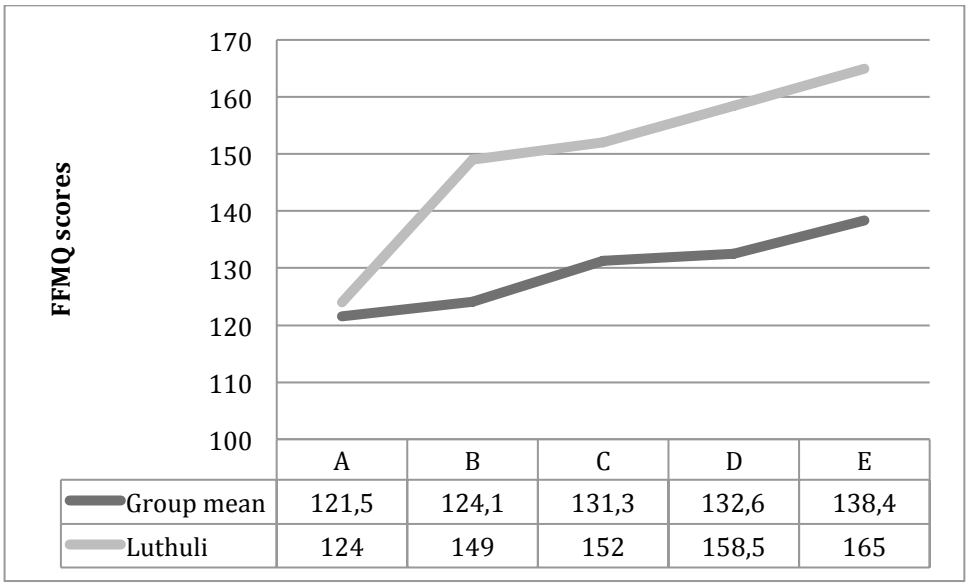


Figure 4-11: Luthuli's combined FFMQ scores against the group mean

Date	Observe	Describe	Act w A	Nonjudge	Nonreact	Total /195
05/06/2012	30	25	30	21	18	124
19/06/2012	34	32	32	28	23	149
02/07/2012	33	32	32	30	25	152
18/10/2012	39	34	32	32	28	165

Table 4-12: Luthuli's FFMQ Scores

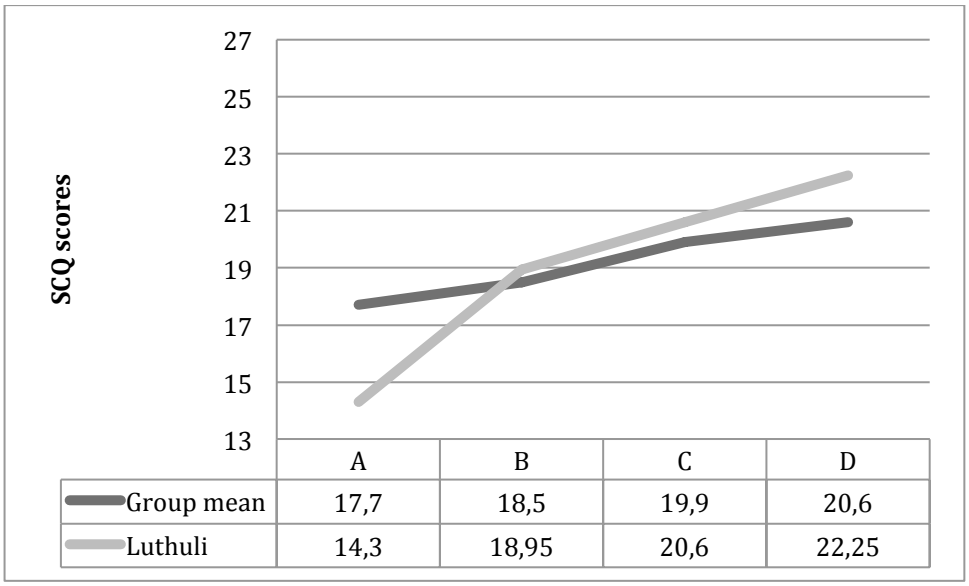


Figure 4-12: Luthuli's combined SCQ scores against the group mean

Date	Self-Kindness	Self-Judgment	Com Hum	Isolation	Mindful-ness	Over-ident	Total
18/06/2012	3	1.8	2.5	2	3.25	1.75	14.3
2/07/2012	3.2	3	2.75	3.5	3.5	3	18.95
18/10/2012	4.4	3.6	3.5	3.5	4.25	3	22.25

Table 4-13: Luthuli's SCQ Scores

Evaluation of Impact

Luthuli described himself as "*a hard core Freudian*", as he felt his psychotherapy had helped him gain great insight into himself and his childhood issues. However, at times, his paranoid habitual tendency exacerbated during his years of marijuana addiction, seemed to set off an analytical, ruminative cycle when he was faced with emotional challenges. The mindfulness practices, particularly the body-based ones, were beneficial for him, and allowed him to let go during the moment of struggle, into the experiential, and he noticed immediate relief. These practices, combined with the compassionate attitude, allowed him

to be more accepting of himself, and of others. When asked about his improving scores, and his ability to cope with challenging circumstances, he responded: "*Three things we can attribute this to: 1) obviously is the many years of psychotherapy, 2) the reflections, and 3) from the practices, just being aware of things and not dwelling on them, letting them just pass and fade away.*"

His experience points to the way in which mindfulness and compassion practices appear to be able to complement more traditional psychotherapeutic interventions. Analysing experiences of the past can be highly beneficial in terms of understanding and healing them, yet the ability to soften around emotional distress, and let go of the stories and thoughts, in the actual moment, reveal a transformative aspect of mindfulness and compassion practices: "*The practice of always reminding myself again that I'm not the only one who feels like this. Because that is the thing, I am like a worrywart, kind of, one thing triggers many thoughts* [. . .] *But now, it is a side effect of the practices of the quiet mind, the still mind, I was able to just face them and remind myself of the other good things and after that look at my mind for the thoughts, until they all disappeared and I was calm again.*"

As a complement to his five years of one-on-one therapy, the six-week group intervention seems to have allowed him to make considerable additional progress. The one may not be a substitute for the other, but financial considerations of using MBIs with large groups of people, are one of the reasons that they are becoming increasingly utilised in the medical systems in Europe and the States. For the majority of university students, with less deeply entrenched addiction or emotional problems than Luthuli, MBIs can be highly recommended as a cost-effective way of improving their health and well-being.

4.5 Portrait of Atandwa

Life Context

Atandwa was one of the oldest students in the group, at age 29. Her main PGCE subject was Life Orientation, with English.

She talked openly about her difficult childhood, where she never knew her father and was moved from relative to relative: "*I lived with my Grandmother, I lived with my Aunt, and my Aunt moved me to another Aunt, and then that Aunt, when I was visiting my other Aunt,*

brought back all my clothes and I didn't know what happened. All of that, being moved about, it felt like [. . .] *you don't feel loved, you don't create a connection because once you settle, the next moment you are being moved, shipped off to someone else and once you settle there, again you are being shipped off to someone else and you don't know whether you are being shipped off because maybe I did something wrong, or what?*" Currently she lives with her mother and sisters, and is re-establishing the relationship with her immediate family.

Personality Factors

She recounted clearly how this abandonment in early childhood has caused her problems in making connections with people, and a subconscious sense that she was somehow to blame: "*There is always this little voice inside, 'You're not good enough, you'll never be good enough, you're not perfect, you're not beautiful, you're not thin enough, you don't have the perfect nose, the perfect eyes,' you know, 'everything is not good about you and therefore you will never be'.*"

In terms of her current coping strategies, she spoke of crying to ease her emotional distress as well as her strong Christian faith: "*I used to drink but now I don't, I stopped. I used to drink a lot and so I stopped. That used to help, but then waking up with a babalas* [hangover] *but now I go to church, and so that helps, to pray, read the bible, meditate on it.*"

She makes the link between her physical health and emotional stress: "*When I get flu, I get flu for the whole month, or six weeks, I don't know what happens. I get antibiotics, they'll finish but the flu will still be there. It won't be as intense as it was, but I'll still be coughing, sneezing, blocked nose at night especially. I'm sure it could be related to stress. I always think my immune system is very weak, but the thing is I don't get others, it's just the flu, it's very intense.*"

Specific Current Stressors

Atandwa felt that her emotional reactivity contributed to her experiences of stress. She found she would usually react to what someone said, before they had had the chance to finish, and would regularly create conflict situations. This was one of her motivations for attending the MBI, and she stated her intention clearly: "*One thing I would love is to focus, it would benefit the next person, I look at someone but don't hear what they are saying. My*

mind will be elsewhere, I will just react to what they are saying, but not be mindful of what they are saying. That's one thing I'd love to learn, to focus, to cut out the noises."

Atandwa's second TE school pushed her to her limits: "*I was just feeling so overwhelmed that literally every day I cried. I fought. Literally I called the school to ask if they can move me to another school. I couldn't handle it. Six weeks was going to be torture if I was going to remain at this school for six weeks, but unfortunately they couldn't move me and it was like it's too late so I would have to bear and grin, and that's what I did. Literally it was a nightmare waking up to go to school, 'Oh my gosh, do I have to?' But I want to get my TE, I want my certificate and so I got up. It was the most stressful time of my life, literally, all my pains came back, my neck, everything came back, every time I think about that school, even now, I can just feel the tension around my neck* [. . .] *The teachers didn't even come to school. There was one time we had 8 teachers absent, out of 56 teachers, they were all absent. And there's a lot of classes. In one class we've got about 48 pupils* [. . .] *one teacher was absent for two weeks. Someone went to go see him, to find out if anything's wrong, should the school be concerned. Midday, on a Wednesday, he is on the floor, drunk* [. . .] *Every teacher is leaving. As soon as this year finishes, next year, there will be no teachers there. At least half of the teaching staff will be gone. It is a huge school. I think it's got 1000 something students.*"

Experience of the MBI

Atandwa had not been at the initial mindfulness presentation during the Education lecture, as she was trying to finish off an assignment, but her friend told her about the MBI: "*I was very curious because just listening to the word 'mindful', I love anything that's got to do with the mind. I love things that help you calm or sort of be in the now, because I feel like I want to be in the now, and not always refer to past. Let the past be the past and let the future be the future. I don't know what's going to happen, let it stay like that and focus on the now. I'm hoping that mindfulness will be able to help me really be on the now, focus on the past and not always looking at what happened, or going to happen, worry about the things that I have no control of in any case.*"

After three sessions, on her reflection sheet, Atandwa noted significant changes in her behaviour, and particular resonance with specific practices: "*Mindfulness based living course has been a massive journey of realization and discovery. I have learned new things about myself. Discovered my ability to breathe and awareness of my breathing, walking*

and sound. I even improved on being kind to myself and took notice to when I'm kind to others. I don't beat myself up when I don't achieve what I've set out to achieve, as I realise that things don't always work out the way planned. Sitting down in one place, doing nothing, being calm was a bit hard at first, 'cos my mind tends to think of everything and anything that I should be doing or can be doing rather than just sitting on one place. But I've learned to actually sit and just be calm. Also I think I talk about mindfulness to a lot to all my friends. I would love to learn more about yoga. It seemed interesting when we did it on Monday. Would love to do more."

Application of Mindfulness Practices

Even after the first session, Atandwa started applying the mindfulness principles into her daily life and gave the example of an incident when her uncle's car was blocking the driveway and she was delayed in leaving the house: "*To be honest, I was actually angry. If I was a white person I would have been red, at that moment. I actually did the breathing exercise. I just breathed and I calmed. I just had to calm myself down and then address the situation. I could feel my heart and I was getting hot, my hands were very warm and my face was getting really hot. I was grateful for the breathing exercise and I remembered, just breath 1, 2, 3. It calmed down, I was able to think clearly and calm down, because I was even driving recklessly, so I just calmed myself down and started driving properly.*"

Not only did she start to use mindfulness at times of difficulty, but also noticed how it improved her clarity and awareness in daily life: "*The breathing, that's the best one, just being aware. I'm actually aware of noises, sounds, chirping birds. It's amazing – just now someone thought I was going crazy because I kept talking back to the bird! They make such beautiful sounds, just loving that, being aware of all that, it's actually quite nice. That's one of the things and the breathing definitely.*"

She used her time on public transport as an opportunity to practice mindfulness: "*I do the 3-minute breathing space especially when I'm in a taxi. It helps just to be aware of where I'm at, how I'm feeling at this moment, normally in the mornings, which is quite nice. Why quit something that works?! More practice, more use of it, who knows what it can do for my life in the long run? I'm that type of person who when I pick up something that works, go for it all the way. It's not definitely a daily thing that I remember all the time, but when I do do it, I experience it to the full.*"

She connected very strongly to the compassion practices, particularly the Felt Sense of Kindness, and found that it changed her attitude towards herself, as well as influencing her willingness to show kindness to others: *"I find myself eager to do more things. Like now I joined this volunteer thing where we teach kids* [. . .] *I put my name down and you know its been great, its been working nicely. And we are teaching Grade 5s, which is not something that we are taught* [. . .] *but you know this is the type of group where you have to be calm, you have to be aware, you have to be present with them. You can't be wandering off. You have to always be present of what I'm doing, where I'm at, and not wandering off with my mind and thinking or be daydreaming. I've got to be at that moment and focusing on what I'm doing. I've actually learned to apply it in the classroom at this moment. I'll be doing this, and then we do whatever we are doing, and then we finish and go on to the next thing instead of my mind wandering off and going, 'Oo, what's the next thing, du-du-du.' I'm focused, I'm there with them, I'm learning from them and they are learning from me. So that's another way its actually impacted, actually now that I'm thinking about it, in the school environment, I think it's great.*"

She talked more about how mindfulness could be used in the professional context: "*That's one thing, if I would have a big banner and put it up, '*Be focused, be here and now*', forget about anything else. That would be the best achievement for any person, especially in a fast life environment. Because as a teacher you've got to be here in order to have a relationship with your learners, because if you are cut off from them, if you are just a body and not there mindfully, then that relationship breaks, there is no connection, you can't connect with them, and that's why it is so important for us to be there, be in the classroom and connect with our learners and have that relationship. That's the most important thing.*"

In terms of dealing with the academic stress of the PGCE, Atandwa was pragmatic: "*In all honesty, the amount of work that we are given, it's not beyond our capabilities. We can do it, but we become so overwhelmed by it and feel we can't deal with it. Then it becomes too much but if we could learn to do one thing at a time, and be disciplined in that, and do the things we ought to do, then it wouldn't be so overwhelming. It's just the overwhelmingness of it and learning how to cope with all of that, and actually once you look at it, the picture's not that huge."*

She changed a great deal of her negative self talk, became more light-hearted over her mistakes and found a very natural way of integrating "*the mindfulness with my Bible Studies, that's the one thing I'm learning about loving myself, God created me perfect as I am, there is nothing that was a mistake, I'm perfect as I am. So incorporating those things, loving myself, being kind to myself, knowing that I am a perfect creation and that makes it easier. I mean last week we were doing aerobics, we were jumping up and down, in fact even today I fell on the floor. People started laughing and I laughed with them, you know, I laughed with them because it was funny, instead of being emotional and crying, 'Why are they laughing at me?' I was like, no, I laughed with them and we all laughed and it became a nice joke and they helped me up and everything was fine*."

She not only noticed differences in her relationship with her body, but in her physical health as well: "*Normally I used to suffer with this pulling* [in her neck] *but I haven't felt that pulling in a long time, that's the honest truth, in a long time. Because I used to feel this pulling and I'd get headaches. I haven't had a headache in a long time, or this pulling, at all. I've had normal headaches, but not those stress headaches. I'm grateful for that.*"

Atandwa also found that her intimate and personal relationships have improved noticeably. She has started a relationship with a boyfriend, and feels a greater sense of connection than in previous relationships. She was also happy to talk about her improving relationship with her mother, based on the understanding that all humans suffer, and make mistakes: "*The relationship with my mum is getting better and getting stronger, and she also was one of the triggers of my horrible past because I felt she wasn't there as my mum, but she's there now, she's doing the best that she can. She's doing everything she can and she tries so hard to involve me in everything. She will tell me about stuff, she will ask my opinion about things and she won't just do things, which I appreciate a lot. That's also strengthening our relationship together. Other than that, I feel like I can't keep dwelling on the past. It's there. It's meant to be the past, that's why it's the past and for me to move on from that.*"

During the extraordinary difficulties of her TE, she was too overwhelmed to remember any of her usual or newly acquired coping strategies: "*I actually wish I did use mindfulness. Honestly, I didn't use anything of any sort, I think I was overwhelmed by the emotions so much that my mind couldn't think of anything to get out of the situation. The first thing I thought of was to literally get out of the situation but not how to work away within the situation, and I wish I had done that. I wish I had thought of ways, like the breathing*

techniques, because they are excellent, I've used them ever since I started mindfulness and they've worked for me so well in the past. I wish I had used those. Also, the one thing I always talked about, the one thing that mindfulness has taught me, the part where like this is where I'm at, and I can't be doing that. And in most cases, that was not what I thought. I would be, I'm here, I'm in History now, but I need to do English, I need to do LO right now. So my mind would literally be thinking of many things at the same time, you know, I couldn't control it. I couldn't bring it down to like, listen, this is where you are at right now [. . .] *I didn't use anything that I learnt and I don't know why. I don't know if it's because I was so overwhelmed, normally sometimes I pray when I am overwhelmed. I didn't even pray, I didn't even think of anything, but I felt like I wanted to be physically out. But I felt that if I had done those things, if I had done the breathing exercises, if I had done, this is where I'm at, then I could be able to actually focus on the children.*" From her interviews, it appeared that the school was extremely dysfunctional, and not a suitable place for a student teacher to learn the skills of good practice.

Self Report Scores

Atandwa revealed a greater than anticipated decrease in her DASS scores, illustrated in Table 4-13, until the last set of questionnaires were administered. She explored this during her interview, expressing the feeling of overwhelm she had experienced during the TE period, and how she felt she had not been able to utilise her new mindfulness techniques in the way she would have liked to. She was clearly in an extreme 'struggle for survival' situation (Maynard & Furlong, 1993) and operating from the threat-based emotion regulating system (Gilbert, 2010). In this situation, the qualitative data provided a unique opportunity to understand the individual circumstances behind this outlying questionnaire score, and reinforced the trustworthiness of both sets of data.

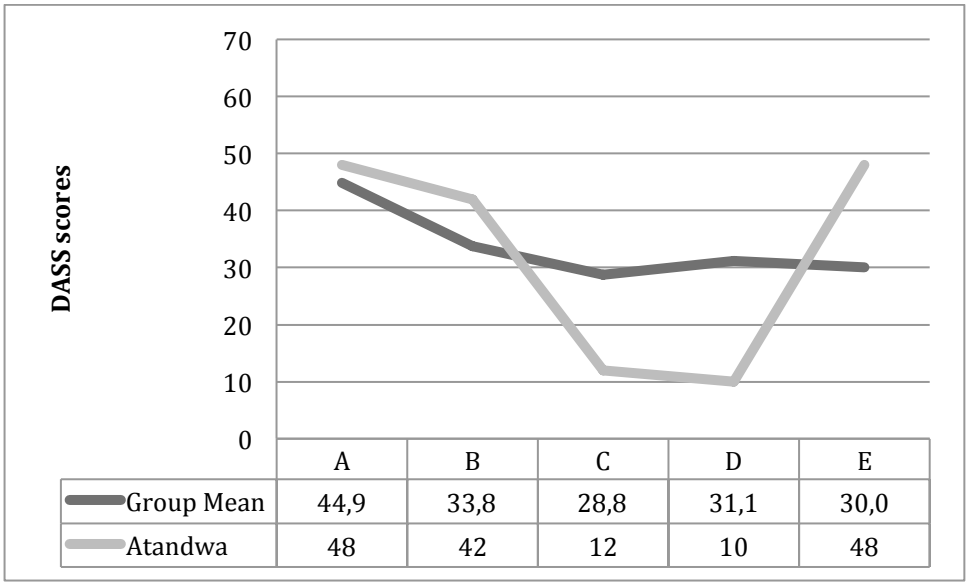


Figure 4-13: Atandwa's combined DASS scores against the group mean

Like many of the student teachers, Atandwa scored in the clinical range for anxiety, as shown in Table 4-14. By the end of the MBI, she was scoring in the normal/mild range for the sub-categories, but these escalated right back to her starting score due to the teaching experience.

Date	Depression	Anxiety	Stress	Total
04/06/2012	16 Moderate	18 Severe	14 Normal	48
18/06/2012	14 Moderate	16 Severe	12 Normal	42
02/07/2012	0 Normal	12 Moderate	0 Normal	12
13/08/2012	0 Normal	8 Mild	2 Normal	10
31/10/2012	14 Moderate	22 Xtr Severe	12 Normal	48

Table 4-14: Atandwa's DASS Scores

In terms of her mindfulness scores, she revealed a noteworthy change, moving from below the mean to well above it, until the last administration of the questionnaire, seen in Fig 4-14. It would be an interesting follow-up to find out whether she was able to maintain her higher mindfulness score, once the trauma of the TE passed.

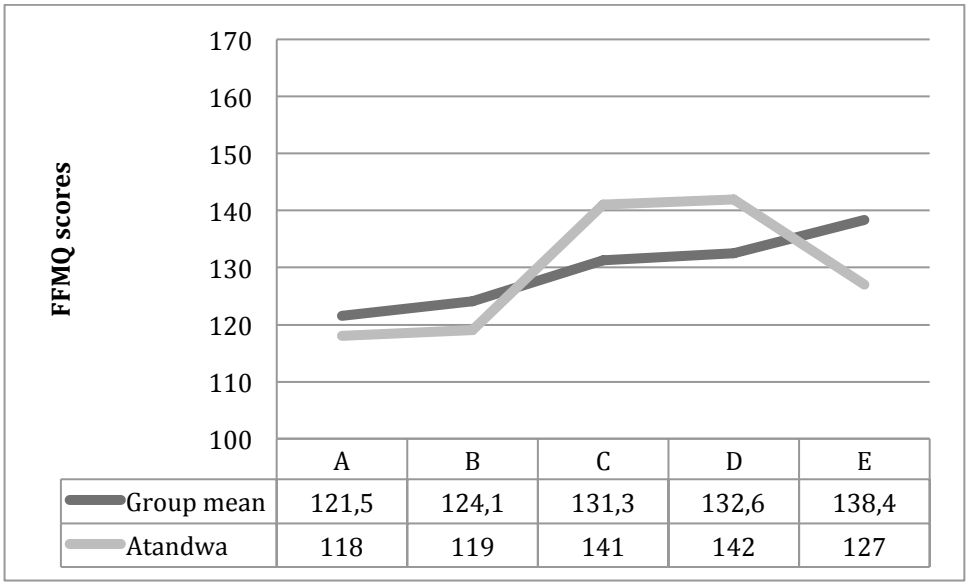


Figure 4-14: Atandwa's combined FFMQ scores against the group mean

Atandwa's sub-scores for the five mindfulness facets were evenly spread, with the greatest improvement witness in the Acting with Awareness category (Table 4-15). She talked of her increasing awareness in the classroom and found it a highly motivating experience to be so connected and engaged with the pupils she was teaching.

Date	Observe	Describe	Act w A	Nonjudge	Nonreact	Total /195
04/06/2012	25	26	20	25	22	118
18/06/2012	22	27	23	26	21	119
02/07/2012	26	31	31	32	21	141
13/08/2012	28	33	31	28	22	142
31/10/2012	24	29	25	30	19	127

Table 4-15: Atandwa's FFMQ Scores

Again, Atandwa's SCQ scores showed a higher than average increase, until the final questionnaire, as illustrated by Fig 4-15. She resonated strongly with the kindness and compassion practices, and was able to treat herself with much less judgement than she had done in the past. On a longer-term scale, she attributed this to her Christian faith and the mentors at church who supported her spiritual growth. In the short-term period of the intervention, her improvements in self-kindness and a reduction in self-judgement were notable, as seen in Table 4-16. She also started to feel far less isolated in her struggles, and a greater sense of her connectedness and the sense of common humanity.

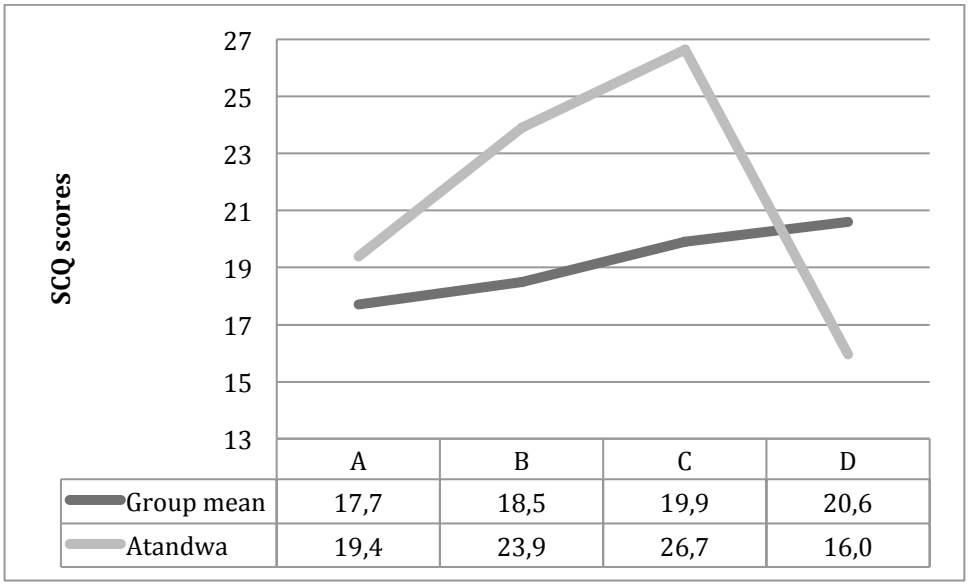


Figure 4-15: Atandwa's combined SCQ scores against the group mean

Date	Self-Kindness	Self-Judgment	Com Hum	Isolation	Mindful-ness	Over-ident	Total
18/06/2012	3.2	3.2	3.5	3.25	3.5	2.75	19.4
02/07/2012	3.4	5	2.25	5	3.25	5	23.9
13/08/2012	4.6	4.8	4.25	4.75	3.75	4.5	26.65
31/10/2012	3	3.2	2.5	2.5	2.5	2.25	15.95

Table 4-16: Atandwa's SCQ Scores

Evaluation of Impact

Atandwa became a strong advocate of the practices, often telling friends and family about their impact on her own life: "*I don't want to sound like a preacher, but things like mindfulness, getting connected with oneself, those things they really do help. Sometimes you don't even realise it, you are so used to doing it that you just do it naturally, that you don't realise that actually I did this, and this is something I've learnt from mindfulness. So those are the type of things that can help you as a person, as an individual, to realise this because when the self is happy, when the body is confident and strong, you can be able to tackle whatever life throws at you and you can become strong and confident.*"

At the start of the course, Atandwa identified that she wanted to improve her focus, particularly in terms of listening to others. This was an area where she noticed a significant change in her behaviour: "*I think that listening skill it has, in a way, enhanced from the time I started mindfulness, it has grown. I don't know where it's at right now, but I feel that it has grown, and I hope it grows even more because I wouldn't want to be a rash person throughout my life because, yes sometimes when something is so devastating that I*

just answer right then and there without thinking about it, but sometimes its like 'breathe, take a step back, think about it, analyse the whole situation and then give a response'. It's still a learning process, still a learning curve and sometimes I forget about it and sometimes I'm aagh, do whatever, and sometimes I do think about it."

In exploring the future application of MBIs in the teacher education context, she felt that it should become a compulsory course: "*I think mindfulness should be introduced, actually, as a course for PGCE. If it's done at the beginning of the year, and you do it consistently, it will always be a trigger that will actually remind you of mindfulness. Because we did it for such as short period of time, I feel like it wasn't enough. I wish it was longer, I could have done it from the beginning of the year because going through schools like what I had to, it shows the importance of having such things where you can be one with yourself, and come back to you, in order to give out to the kids. If you're not yourself, if I'm not ok, then there's no way in which I'm going to be able to teach the children.*

"*If it could be introduced as a course, this is something that could be useful for the learners. Even PGCE, as a course, is a stressful course on its own. We're bombarded with work after work and it becomes overwhelming, and then you have to go and teach naughty, disrespectful kids. You have to deal with that, so you need something to help you balance one's life, to balance yourself so that you can be sane at the end of it. My friend is insane right now, she's lost it, she's lost all hope, she just wants to write her exams and be done, and get out as fast as she can. I feel if she also had a bit of mindfulness to help her. I feel it has helped me, otherwise I would have gone absolutely insane, maybe even killed myself or something because it was so stressful, it was so tormenting that you just needed to get out. At the same time, there were some moments when I remembered a bit, it came to me, without even me trying so hard to remember mindfulness, but unconsciously my mind remembered things to do, triggers to use in order for me to be sane, in order for me to shift and to realise that it's not about me, it's about the kids and there's nothing I can do.*

"*I would definitely say introduce it from the beginning of the year so that people can walk out of teaching as sanely as possible. Then we will have more teachers who won't be absent, teachers will really come to school, to class, they will learn how to handle these kids at the end of the day, because when one is ok with oneself, they can be able to teach the children. I feel like it is so important, people need to understand this. I like the way with mindfulness you incorporate whatever it is that you've learnt, whatever it is that you*

have, a religious person, you incorporate your spirit in that. It's about you as a person and what I've learnt and what another person has learnt, we all came into this course at the same time and we learnt different things, depending on us individually. Each person for themselves will pick up stuff which will help them as a person to grow."

Atandwa's portrait reveals a wide range of potential benefits of mindfulness, despite the fact that she had not developed a formal daily practice, but rather focused on mindfulness techniques in daily life. She spoke both of ways in which she used the practices in times of stress, and as a way of increasing her awareness of life around her, and improving her skills as a classroom teacher. She did, however, explain clearly that she was not able to use them consciously in times of overwhelm, and felt the MBI could have been longer, or started at the beginning of the year so that the practices could have been more deeply ingrained as habitual coping mechanisms, that could possibly prevent student teacher burnout and improve sustainability in a country where there are excessive external stressors. The description of her TE school situation raises a red flag concerning the type of school where student teachers are placed, as well as highlighting the problems in a school where the administration is ineffective and the teachers are clearly demoralised and possibly burnout.

Atandwa's main behavioural changes focused on her emotional reactivity, and she felt she had developed a significant gap between a stimulus and her response, particularly in her communication with others. In turn, this had improved her intimate relationships, and she completed the year feeling that she had made a great deal of peace with her past, and had found a sense of kindness towards herself and others. She had also clarified her values in terms of what was important to her. When choosing between a post at the difficult school, where she was being offered a good financial package, and a post in a school for the deaf, she decided: "*My life, it's worth more than any money can offer. Money can come and go, but my life is here to stay, so I would rather take care of me personally, so that if I'm good, the kids will also be good* [. . .] *if I'm happy and satisfied emotionally, personally and physically, then it will project onto my kids I'm teaching.*"

4.6 Portrait of Mary

Life Context

Mary was one of the youngest participant, at 22 years. She was a white, middle class girl, who had been educated at suburban schools in Johannesburg. Having completed her BA in Pretoria in Psychology and English, she was now back in Johannesburg, living with her parents. This had not been a comfortable transition and she revealed how, "*I'm looking to be out of there as soon as I can, but it's not gonna happen*."

Predisposing Factors

She described herself as, "*Pretty introverted, rather quiet, don't really interact much with other people, get stressed overly. I'm fairly goal oriented, but lazy at the same time*." She regularly referred to her dominant coping strategy in the face of feeling stressed, "*I bottle it. It's been something I've done all my life. If it's stuck in a bottle, put the lid on it, it gets left for another day or whatever. It's unpleasant, but we try to leave that for holidays when we've actually got time to deal with it. Bottle it and leave it. It's been a coping strategy that I've had all my life. It isn't necessarily a good one, but it's what I've built up. It's something that should change and it sometimes does work, where I don't bottle, but other times I do."* She had been diagnosed with depression and anxiety as a school student, was put on antidepressants, and attended a few sessions of therapy. She had not found the interventions very beneficial.

Specific Current Stressors

In terms of current stressors, she described the academic demands of the course, *"We had about four assignments to do. It's probably the most stressed that I've been for a while. I didn't [cope]. I just sat and did one assignment after the other, and handed them in. I was totally drained at the end of it."* When she was asked about a particularly stressful event in the past, and how she coped, she said she couldn't recall one, *"I know it sounds odd, but I actually can't. All my seriously stressful events, I actually forget. It's almost like I've got this internal coping mechanism that I forget things. I've blocked off primary school, high school is disappearing. It is what it is. I've never really questioned it, it is what it is. I think it serves a purpose, and my Mum remembers all the bullying that went on with me in primary school and I can't remember it. No recollection whatsoever about it. My Mum can remember me coming home and saying I don't want to go to school. I can't remember it."*

Experience of the MBI

Despite her strongly ingrained habit of suppressing emotional difficulties, Mary reported that she had benefitted from the MBI, "*I just find I'm a lot more capable of stepping back from situations and seeing things for what they really actually are. It may not be immediate but it does happen a lot quicker than it used to."* She was unwilling to give a specific example as she said it was, *"One of those personal stories that I'm not quite willing to talk about as yet."* She rarely disclosed during the mindfulness sessions, thus reducing the opportunities to normalise her experience in the group. She did not find the approach of leaning towards difficulties very comfortable, "*It was almost a challenge to accept the approaches used initially as I'm so used to doing things in the way I've always done them,"* however, she noticed subtle changes in her experience, *"It was just a matter of actually sitting down and taking steps back, allowing things to be and just not trying to fix it, or over-obsess about it. Overall, I'm just a lot more relaxed at this stage, not obsessing about what has to be done, when it has to be done by, that sort of thing, seeing things in terms of the bigger picture… I just find I sleep a bit better, which is nice. I generally battle to sleep."*

She did express some anxiety with the body scan practice as she experienced physical manifestations of a stronger heartbeat, which brought up previous uncomfortable memories, *"I just don't enjoy that. I've had it a couple of times and never enjoyed it. It's something I've always tried to avoid. It's possibly because of one time I actually fainted because of low blood pressure, and before that I actually heard my heartbeat, it is a precursor I don't enjoy."* The unconscious fear that mindfulness practices will bring up previously suppressed experiences is noted in the literature, and Mary appeared to be alluding to these fears.

Application of Mindfulness Practices

During the interviews, Mary rarely gave personal, experiential examples of ways in which she had used the practices so it was not always clear whether she had benefited, or whether she was answering in a way she felt might be expected of her. Nevertheless, she did point out clearly the levels of stress that student teachers are under, and felt that some additional intervention was necessary, "*I don't think people are almost designed to deal with stress as effectively as they possibly can. Nobody tells you how to deal with stress. In terms of that, I*

think it can be very beneficial for people… I think just overall how to deal with stress overall would be very beneficial because one gets very stressed in terms of time management and how limited time we've actually got on pracs. And I think that would be good."

Self Report Scores

Mary's DASS scores started out as third highest in the group, which did not surprise her, but had stabilised by the end of the research process, and she appeared in the middle cohort. Her steady score decrease is illustrated below in Fig 4-16 with a slight rise just before she went back on teaching experience.

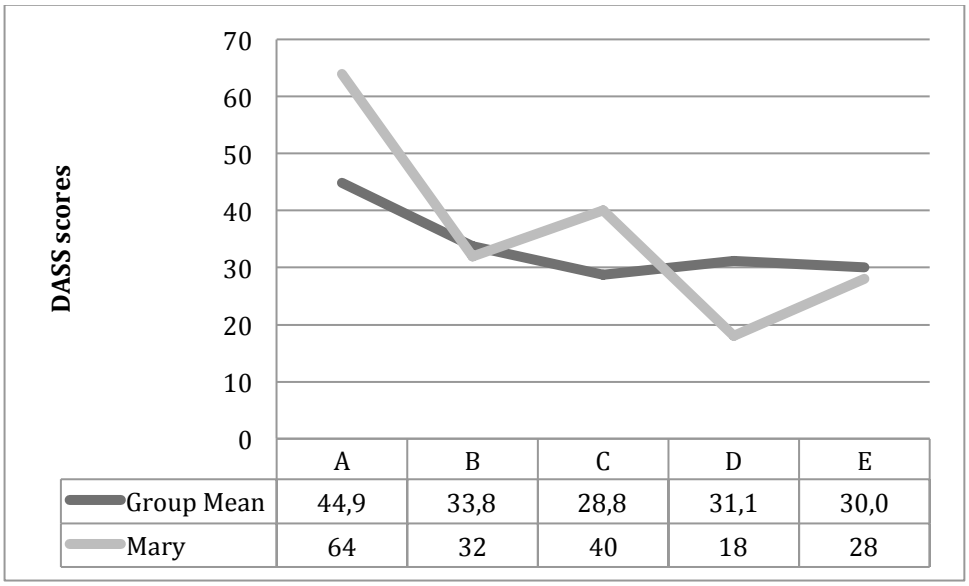


Figure 4-16: Mary's combined DASS scores against the group mean

Her depression and stress scores were at the severe level at the beginning of the intervention, but gradually normalised, as shown in Table 4-17.

Date	Depression	Anxiety	Stress	Total
05/06/2012	24 Severe	10 Moderate	30 Severe	64
25/06/2012	14 Moderate	6 Normal	12 Normal	32
02/07/2012	16 Moderate	8 Mild	16 Mild	40
15/8/2012	10 Mild	2 Normal	6 Normal	18
30/10/2012	4 Normal	10 Moderate	14 Normal	28

Table 4-17: Mary's DASS Scores

Similarly, her FFMQ scores were well below the student mean. She started as third lowest (just above Hannah and Nicholas), and then increased steadily throughout the intervention and research process, stabilising towards the end. She initially practised 3 or 4 times a

week, but did not continue after the end of the course, and her score revealed a levelling off (Fig 4-17), although still at a notably higher level than her preliminary scores.

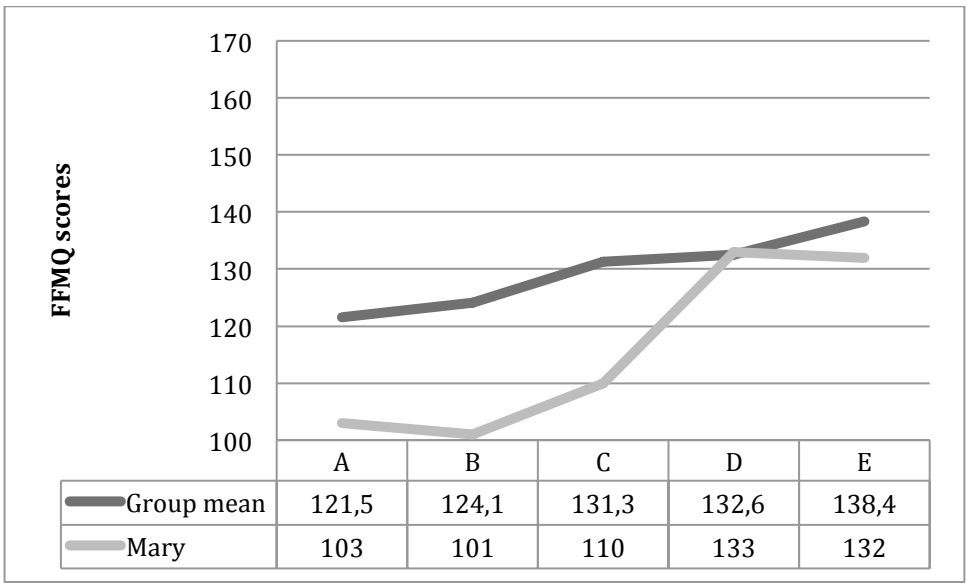


Figure 4-17: Mary's combined FFMQ scores against the group mean

Her sub-scores on the five facets reflected her evaluation of herself, that she blocked off feelings and was not able to observe or describe them as they arose. She was also very self critical at the start, but made noteworthy improvements in her non-judging and non-reactivity scores (Table 4-18).

Date	Observe	Describe	Act w A	Nonjudge	Nonreact	Total /195
05/06/2012	21	25	21	22	14	103
19/06/2012	21	20	23	22	15	101
03/07/2012	22	23	25	24	16	110
24/08/2012	27	24	32	29	21	133
03/10/2012	24	24	32	32	20	132

Table 4-18: Mary's FFMQ Scores

These changes, as seen with other students, may well have been linked to her rising, though moderate, self compassion scores (Fig 4-18). She appeared to gain an understanding from the compassion instruction that "automatic reactions are not their fault" (Gilbert & Procter, 2006:359). Her self-judgment score, on the SCQ sub-scales, showed the most improvement (Table 4-19). Whilst reviewing the effect of the MBI, she said, *"I think there is a slight change, but it's not overly dramatic. Sometimes my attitude does alter with awareness, and other times it doesn't. Sometimes I can be like, oh well, it is what it is, you can't fault yourself for it."*

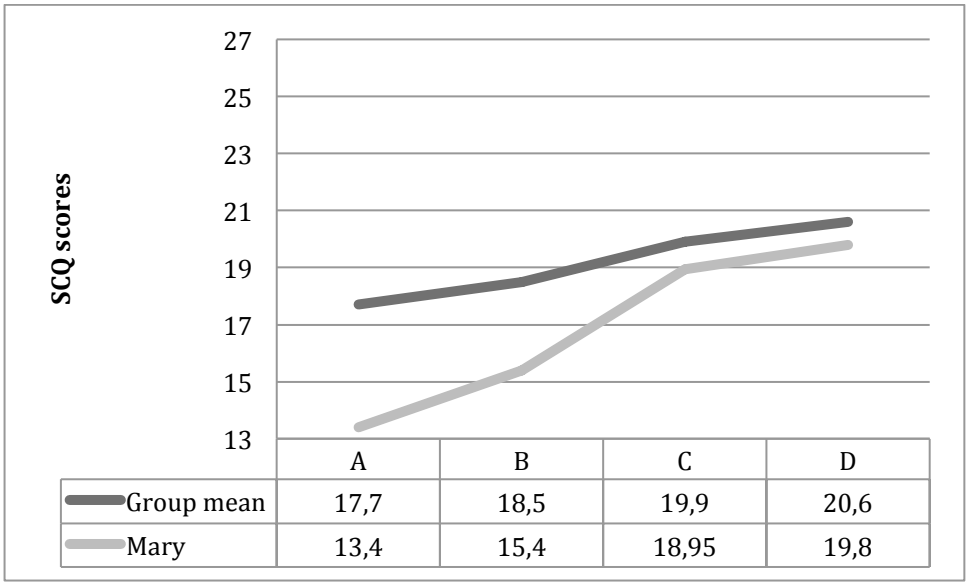


Figure 4-18: Mary's combined SCQ scores against the group mean

Date	Self-Kindness	Self-Judgment	Com Hum	Isolation	Mindful-ness	Over-ident	Total
20/06/2012	2	2.4	2	2.25	2.25	2.5	13.4
03/07/2012	2.4	3	2	3	2.25	2.75	15.4
24/08/2012	3	3.2	3	3.25	3	3.5	18.95
03/10/2012	3	3.8	3	3.5	3	3.5	19.8

Table 4-19: Mary's SCQ Scores

Evaluation of Impact

Although Mary's scores did provide evidence of improvement, she was still experiencing many difficulties at the end of the training. Due to her long history of psychological stress, I recommended that one-on-one psychotherapy might be a useful addition to the mindfulness training. She expressed unsatisfactory experiences of therapy in the past, so was not very open, but did also admit that, *"I've reached a point where enough is enough, I can't carry on bottling in and every now and again hauling it all out, I'll have a mental breakdown trying to break it all apart and deal with it."*

4.7 Portrait of Georgia

Life Context

Georgia was the youngest of the participating students, at 22 years old. She had completed her BSc in Geography and Environmental Science at Wits the previous year, and come straight to the School of Education to study for her PGCE.

Predisposing Factors

She described herself as not very confident and easily upset by things. With her academic work, she puts a great deal of pressure on herself: "*I'm not happy if it's anything less than the best.*" She has very supportive family and friends, who try to tell her to ease up: "*People put things in perspective for me. I tend to blow things out of proportion.*" Despite this, she experiences emotional stress responses and shared: "*My dad always complains that I'm in a bad mood when I'm at varsity.*"

She tends to hold in her emotions: "*I internalise everything, and don't show I'm angry. I have to sit alone and keep it to myself. I have this calm exterior, but I'm raging inside.*" One of the reasons she chose to participate in the MBI was "*to be able to verbalise what I am feeling*".

Specific Current Stressors

Georgia talked about having future-focused anxiety and academic stress. She has "*mild level of stress on-going whenever I'm studying. Not major stress, but wondering what the school will be like, will the teachers be nice. Stress levels for nothing*".

Experience of the MBI

Georgia explained her intention for taking part in the MBI: "*I am someone who feels stress very easily and is always worrying about the future. I would like to develop mindfulness in order to be more relaxed, control my emotions and live in the present. I would also like to have a more positive impact on those around me.*" She very soon found that she was able to address the aspects of emotion regulation, and of helping other people: "*Whenever things get to me, I always remember 'mindfulness' and even if I don't do anything about it, the thought of it being there kind of calms me down and I realise that I have to take control of my emotions and not to really let things get to me as much.*"

I've noticed that a lot of my friends have been needing some sort of stress relief in their lives as well and when we've been chatting about it I've mentioned mindfulness [. . .] *if someone comes to me and they're having a really tough time, then I say, 'Have you ever tried this . . . breathing.' It's been nice like that as well, being able to help some other people out.*"

Application of Mindfulness Practices

Although Georgia attributed many insights in her daily life, and interpersonal relationships, to the mindfulness training, the focus of this portrait is on her experience of teaching experience. In her first interview she openly acknowledged her perfectionism and need to be in control, but had not been able to find coping strategies for these internal stressors. She described her first TE school as a 'dream school' in terms of discipline, but she put enormous pressure on herself: "*Normally I would be up to 1 or 2am every morning prepping my lessons because I'd make these fantastic, amazing things* [. . .] *I completely burnt out after the last prac. I was dead. If it was any longer than those three weeks, I don't know what would have happened because I was so over the top on everything*."

Her second teaching experience, after the MBI, was a huge learning curve. Her supervising teacher "*was absent the whole way through the teaching prac* [. . .] *I was just thrown in the deep end*". The children were disrespectful: "*there was literally not a single disciplinary structure in place*." She persevered with implementing her classroom management strategies: "*They all really hated me the first couple of weeks* [. . .] *Normally I threaten and I won't have to follow through because everyone keeps quiet, but I realised that for the first time ever, I had to follow through with my threats. That was terrifying*." She felt "*sort of weak as a teacher* [. . .] *such a walkover*" and thought, "*I don't have the authority in this class to get them to do what I want. And then I realised that it wasn't actually me, it was that they'd never had authority in that year*". This ability to shift from an ego-centric focus allowed her not to take the situation so personally: "*I had this realisation that I need not take everything to heart so much*." She started designing interactive lessons, using lots of movies and visuals and "*all that, in the end, finally contributed to them actually listening to me and paying attention in my classes and not disrespecting me* [. . .] *I feel like I can handle more now*.

"*I was a bit freaked out at the beginning to be this perfect human being all the time, to be in the spotlight because they are watching every move you make*." Then she realised: "*I'm*

just going to teach them like a normal human being, so that was nice, to be able to let go a bit of that control. Some interesting things came out as well. When I was more relaxed, the children were more able to talk to me [. . .] *They'd actually explain their behaviour and it made me realise that it is not always me that influences the whole classroom atmosphere. There's a lot of different factors that contribute to the atmosphere*."

Towards the end of TE, the student teachers at her school had a conflict with the Wits admin, who asked them to change schools for the final week of TE. "*That was a bit hectic and the three of us were in panic mode* [. . .] *I was quite surprised to find that I was the calmest out of the three of us. Not like I've ever done this before, but I kind of had to take control of the situation and mediated between Wits and us, and try to come to a solution. I would normally never do that, I would normally be the one like crying and upset* [. . .] *the other girls sort of completely fell apart* [. . .] *I was a bit more relaxed and more logical than I normally would* [. . .] *I was quite proud of myself that I kept it together. I was 'they are people too and make mistakes' so it calmed me down before I wrote a scathing email* [. . .] *And I think coming across nicely, as opposed to the other girls who were just fuming and screaming and crying, and carrying on helped us in the long run where we came to an amicable agreement. Just being calm actually helped me. It's been a gradual change since the mindfulness started in every aspect where I am just thinking more before I act. The one girl, she's so sensitive and so easily upset and there were so many incidences on TE where she was bawling her eyes out in the bathrooms and saying, 'I don't know how to control this, I don't want to cry in front of everyone', and I was like, 'You just need to breathe. You really should have done that mindfulness thing with Lucy because it really helps.'*"

Georgia particularly resonated with the kindness and compassion practices, and the need for self-care: "*I think I realised how beneficial it is now to take time off for yourself, which I never did previously. I was always sort of over-motivated and over-striving, and burn myself out completely in doing so. And there's more to life than just getting straight As. You have to nurture yourself as well* [. . .] *just taking time off and doing something you enjoy doing, instead of panic mode all the time, because it is not healthy in the long run*."

Self Report Scores

Georgia's DASS scores showed a steady decrease over the course of the intervention (Fig 4-19). She did, however, note that during the August interview she was in '*panic mode*' due to TE, and noticed how her anxiety scores escalated, bringing up the overall score to

the group mean. By the end of year, her scores revealed her lowest ever experience of depression, anxiety and stress (16), with all sub-scales in the normal range (Table 4-20).

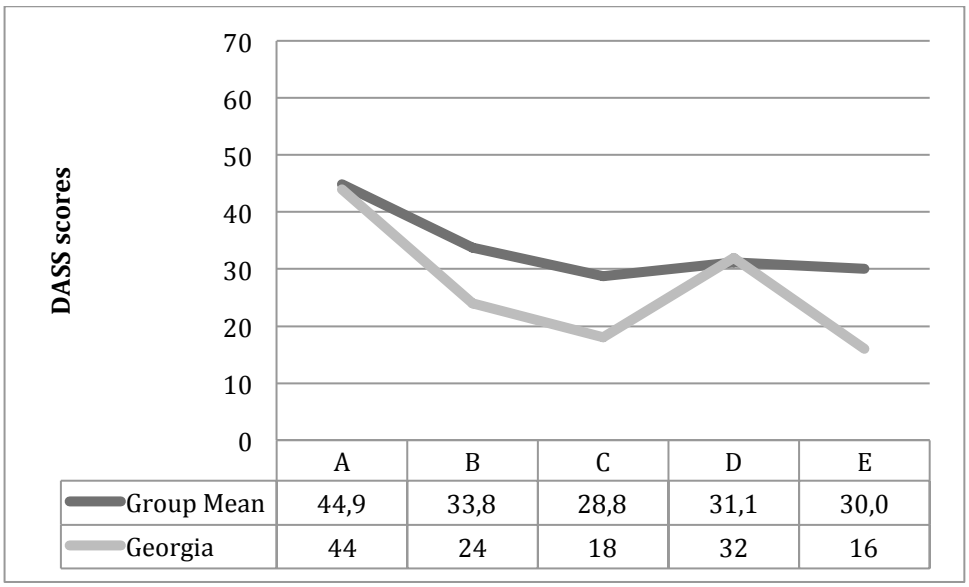


Figure 4-19: Georgia's combined DASS scores against the group mean

Date	Depression	Anxiety	Stress	Total
05/06/2012	14 Moderate	4 Normal	26 Severe	44
25/06/2012	2 Normal	4 Normal	18 Mild	24
02/07/2012	4 Normal	2 Normal	12 Normal	18
24/8/2012	4 Normal	18 Severe	10 Normal	32
03/10/2012	2 Normal	4 Normal	10 Normal	16

Table 4-20: Georgia's DASS Scores

Georgia's mindfulness scores showed a steady and considerable increase over the course of the intervention, as seen in Fig 4-20. These results were reflected in her interview data, where she gave numerous examples of changes in her emotion regulation, her feelings of connection with other people and her ability get a sense of perspective around challenging situations. She particularly found the daily life mindfulness practices beneficial, and allowed herself more time for attending to daily tasks, such as gardening and baking, in a fully engaged manner.

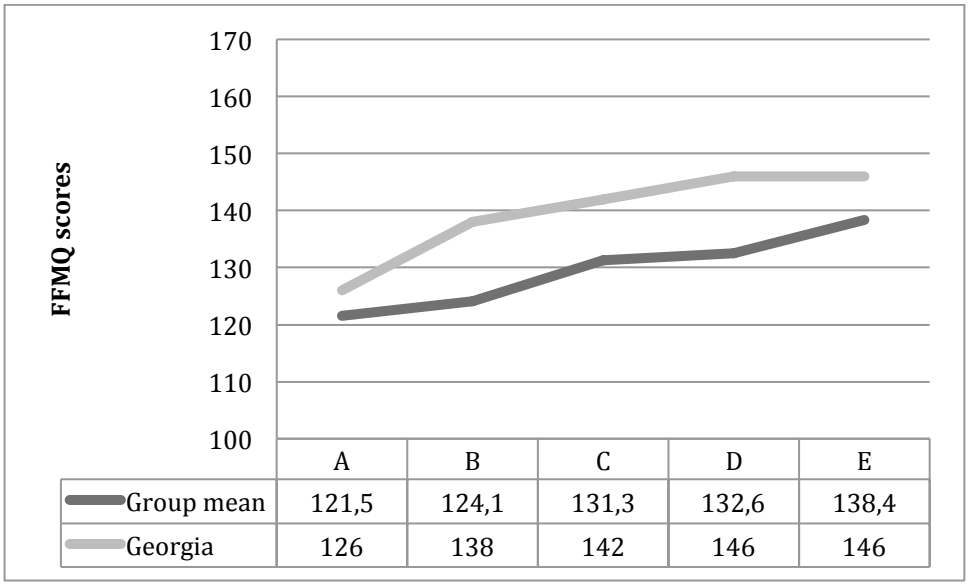


Figure 4-20: Georgia's combined FFMQ scores against the group mean

Georgia revealed a similar improvement in the facets of non-judging and non-reacting to other students (such as Hannah and Luthuli) who described themselves as perfectionists. These noteworthy changes are illustrated in Table 4-21. On several occasions, she referred to her ability to be less critical of herself, once she had explored, and understood the importance of, the practices around compassion.

Date	Observe	Describe	Act w A	Nonjudge	Nonreact	Total /195
05/06/2012	27	30	24	23	22	126
19/06/2012	31	32	28	28	19	138
03/07/2012	31	32	30	28	21	142
24/08/2012	30	34	32	29	21	146
03/10/2012	31	32	32	29	22	146

Table 4-21: Georgia's FFMQ Scores

Her SCQ total score improved by 6.75 points (as shown in Fig 4-21), only exceeded by Luthuli (at 7.95). She talked on a couple of occasions about the influence of the kindness and compassion practices, and how they had changed her relationship with her father and her boyfriend's father, as well as her willingness to be kind to herself during times of difficulty. The sub-scores for Georgia are given in Table 4-22, illustrating her improvement in self-kindness.

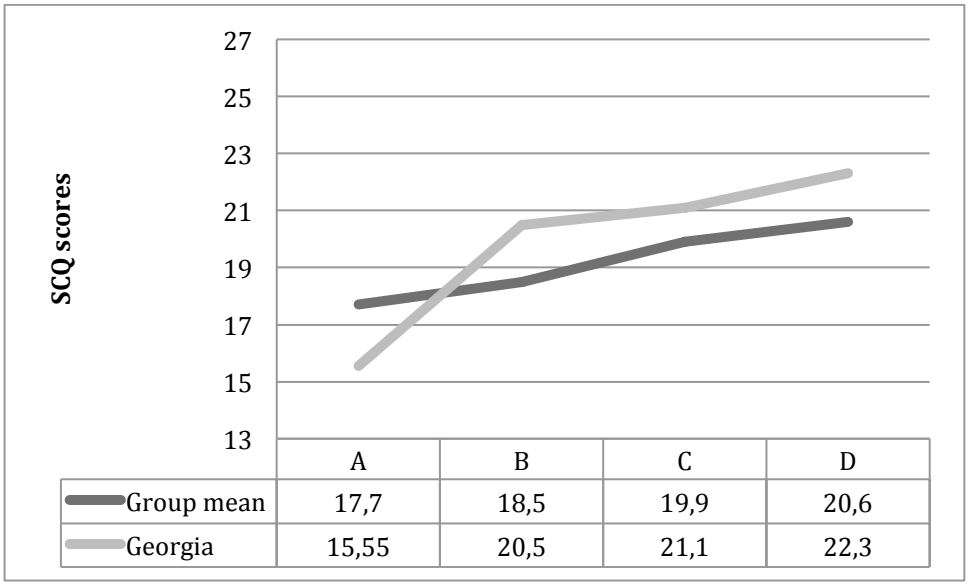


Figure 4-21: Georgia's combined FFMQ scores against the group mean

Date	Self-Kindness	Self-Judgment	Com Hum	Isolation	Mindful-ness	Over-ident	Total
20/06/2012	2.2	2.6	2.5	3	2.5	2.75	15.55
03/07/2012	3	3	4	3.75	3.25	3.5	20.5
24/08/2012	3	3.6	4	4	3.25	3.25	21.1
03/10/2012	3.8	4	4	4	3.25	3.25	22.3

Table 4-22: Georgia's SCQ Scores

Evaluation of Impact

Georgia was able to notice a 'bottom-up' change in her emotional reactions (Chiesa et al, 2013), suddenly becoming aware that she would normally have behaved differently in certain situations. She did not continue formal practise on a regular basis, but used her understanding of mindfulness and awareness in her daily life, with noticeable results. She was also able to reflect clearly on areas where she felt mindfulness had affected her professional growth, particularly the ability to regulate her emotions in the moment, and not to take things so personally. This shift from an ego-centric focus, to an other-focus, required a deepening of the trait of empathy, and she applied it in her school life and her interpersonal relationships.

CHAPTER FIVE: STUDENT TEACHERS' STRESS

The previous chapter drew portraits of seven of the student teachers as they progressed through their PGCE course, using verbatim accounts to reveal their experiences of stress and the MBI. The reason for using verbatim extracts and descriptive statistics, with low inference descriptions, is to ground the text in specific examples and address concerns over researcher bias. Chapter Five and Six, in contrast, will take a more interpretative approach, drawing out themes from the different accounts, and contrasting them with the current literature.

The student teacher interview accounts revealed higher than anticipated levels of stress, and the self report questionnaires served to reinforce these findings. The pre-MBI results from the Depression Anxiety Stress Scale (DASS-21) revealed dramatic data concerning the levels of stress that this cohort of student teachers experienced, and are compared with normative studies below. To provide explanatory data for these statistical results, standard analytic processes for IPA were used with the complete set of fourteen transcripts. Line-by-line analysis of the experiential accounts of the participants resulted in a variety of themes emerging from the data. The subordinate themes were categorised to produce an overarching set of superordinate themes. Many of these themes served to reinforce existing findings in the stress literature, but some strongly reflected the new context, and revealed the urgency of taking stress management interventions, such as mindfulness, into the field of teacher education.

This chapter is structured to give the baseline statistical data initially (using DASS-21), followed by a more detailed interpretation of the findings around stressors, coping mechanisms and personality characteristics. The Teacher Stress model (Kyriacou & Sutcliffe, 1979) is also evaluated against the South African data.

5.1 Depression, Anxiety, Stress Scale

The first time that the DASS survey was conducted was at the beginning of Week 1 of the mindfulness training, in early June. Students had returned from their Teaching Experience and were working on their academic assignments. The DASS focuses on participants' experiences of Depression, Anxiety and Stress in the one week before completing the questionnaire and is used in clinical settings to advise on whether patients require on-going therapeutic support.

The overall scores, with descriptors, are given in Table 5-1 below, in order ranging from least to most stressed.

N=14	Pseudonym	Depression		Anxiety		Stress		Full Scale
1	Kim	2	Normal	2	Normal	6	Normal	10
2	Rupert	6	Normal	4	Normal	4	Normal	14
3	Charles	8	Normal	4	Normal	4	Normal	16
4	Luthuli	8	Normal	8	Mild	8	Normal	24
5	Imogen	4	Normal	12	Moderate	10	Normal	26
6	Emelda	4	Normal	8	Normal	22	Moderate	34
7	Sipho	14	Moderate	4	Normal	16	Mild	34
8	Bonolo	10	Mild	18	Severe	8	Normal	36
9	Georgia	14	Moderate	4	Normal	26	Severe	44
10	Atandwa	16	Moderate	18	Severe	14	Normal	48
11	Nicholas	16	Moderate	24	Xtr Severe	18	Mild	58
12	Mary	24	Severe	10	Moderate	30	Severe	64
13	Ophelia	28	Xtr Severe	26	Xtr Severe	40	Xtr Severe	94
14	Hannah	40	Xtr Severe	30	Xtr Severe	42	Xtr Severe	112
	MEAN	**13.9**		**12.3**		**17.7**		**43.9**

Table 5-1: DASS-21 Scores for the Wits Sample (Draper-Clarke, 2013)

The full scale scores varied widely, from Kim, Rupert and Charles in the normal range for each sub-scale (10-16), to Ophelia and Hannah in the extremely severe range for each sub-scale (94-112). Nieuwenhuijse et al's study (2003) advised cut-off scores of 5 for anxiety and 12 for depression in terms of recommending people for clinical care. Applied to this cohort, it would mean that 9 out of the 14 students would be recommended for psychotherapeutic support to cope with their anxiety disorders, while 8 would be referred for support with depression. Some were experiencing both depression and anxiety. In total, then, 11 out of the 14 students were experiencing scores that put them in the range for clinical care. Two of the students who appeared in the normal range were Luthuli and Kim,

both of whom had suffered from psychopathology in the past and had already sought care. Only Rupert, Charles and Emelda, from their scores, did not appear to require clinical care, and even Emelda scored in the Moderate range for stress. This result was very worrying when considering that these students are preparing to enter a profession well known for its high levels of occupational stress.

These scores are also markedly high when compared to normative data in the literature of non-clinical samples as shown in Table 5-2. The student teachers in this study had notably higher DASS total scores (M=43.9, SD=29.8) than found in a non-clinical sample in the UK by Henry and Crawford (2005) (M=18.86, SD=19.32). This marked difference shows the serious extent of the depression, anxiety and stress experienced by these higher education students, in the context of South Africa. This impression is supported by a comparison between the Wits sample and a *clinical* sample of 437 patients who had presented for assessment and treatment at the Phobia and Anxiety Disorders Clinic at the Centre for Stress and Anxiety Disorders in the USA (Brown et al, 1997). As can be seen from Table 5-2 the means of the two are very similar: Draper-Clarke (M=43.9, SD=29.8); Brown et al (M=42.7, SD=28.6).

UK Non-Clinical Sample, Henry & Crawford, 2005					Wits Non-Clinical Sample, Draper-Clarke, 2012				
DASS-21 doubled (n=1794)					DASS-21 doubled (n=14)				
	Depression	Anxiety	Stress	Total		Depression	Anxiety	Stress	Total
Mean	5.66	3.76	9.46	18.86	Mean	13.9	12.3	17.7	43.9
SD	7.74	5.9	8.4	19.32	SD	10.7	9.3	12.7	29.8
Range	0-42	0-40	0-42	0-122	Range	0-42	0-40	0-42	0-122
Median	2	2	8	14	Median	12	9	15	35
USA Clinical Sample, Brown et al, 1997					RSA Traumatic Event Sample, Roe-Berning, 2009				
DASS-42 (n=437)					DASS-42 (n=134)				
	Depression	Anxiety	Stress	Total		Depression	Anxiety	Stress	Total
Mean	10.7	10.9	21.1	42.7	Mean	14.35	12.2	19.86	46.4
SD	9.3	8.1	11.2	28.6	SD	12.71	11	12.56	33.5
Range	0-40	0-42	0-42	0-122	Range	0-40	0-42	0-42	0-122

Table 5-2: Wits DASS results contrasted with normative data for clinical and non-clinical populations

The other South African study (Roe-Berning, 2009 in Table 5-2) reveals higher scores than the Wits sample: Draper-Clarke (M=43.9, SD=29.8); Roe-Berning (M=46.4, SD=33.5). The participants (n=134) were self-selected volunteers who had experienced one or more traumatic events in their life, although were not necessarily receiving any clinical support after the incident or at the time of the testing. Their mean age was 39 years (ranging from

18 to 79 years), so there are contrasts with the Wits group, but this provides additional evidence that non-clinical samples in South Africa are experiencing extremely high scores for depression, anxiety and stress.

Roe-Berning's and Brown et al's study used the DASS-42, rather than the DASS-21 doubled, but according to Henry and Crawford (2005), this does not pose a problem when contrasting scores.

The high scores for the Wits students is again seen when contrasting with a study carried out by Norton at the University of Houston (UH), and an Australian study, by Szabo, using DASS-21, shown in Table 5-3. The total mean DASS-21 scores for these Wits students is 21.93, in contrast to a score of 14.23 for the 895 UH undergraduates and a score of 12.7 for the 246 Australian adolescents. The samples are distinct (postgraduate vs undergraduate and high school) and the sample size makes comparison difficult, but the differences are still noteworthy.

Wits Non-Clinical Sample, Draper-Clarke, 2012				
DASS-21 (n=14)				
	Depression	Anxiety	Stress	Total
Mean	6.9	6.1	8.9	21.93
SD	5.3	4.7	6.4	16.34
Range	0-21	0-20	0-20	0-61

UH Non-Clinical Sample, Norton, 2007					Australian High School Sample, Szabo, 2010				
DASS-21 (n=895)					DASS-21 (n=246)				
	Depression	Anxiety	Stress	Total		Depression	Anxiety	Stress	Total
Mean	4.27	3.85	6.11	14.23	Mean	4.15	3.41	5.14	12.7
SD	4.32	3.79	4.38	12.49	SD	4.54	3.95	4.35	12.84
Range	0-21	0-20	0-20	0-61	Range	0-21	0-20	0-20	0-61

Table 5-3: Wits DASS scores contrasted with normative data for student populations

Worldwide, findings point to higher stress levels in women than men, so this was also analysed with the Wits population and confirmed: M=54, SD=34.48 [females]; M=30.33, SD=16.27 [males]. With Hannah (112) and Ophelia (94) scoring in the Extremely Severe range, the results are somewhat skewed. Yet, even with their outlying scores removed, the women scored higher on stress, and in the similar range on depression and anxiety to men. The mean score for women, excluding the two outliers, is still 37.67, in contrast to the men's mean score of 30.33. With Hannah and Ophelia included, the mean is 54, revealing a dramatic contrast to the men's score.

Wits Non-Clinical Sample, Draper-Clarke, 2012					Wits Non-Clinical Sample, Draper-Clarke, 2012				
WOMEN's DASS-21 (n=8)					MEN's DASS-21 (n=6)				
	Depression	Anxiety	Stress	Total		Depression	Anxiety	Stress	Total
Median	15	11	24	46	Median	9	6	8	29
Mean	16.5	13.75	23.75	54	Mean	10.33	10.33	9.67	30.33
SD	13.47	10.11	13.33	34.48	SD	3.88	8.62	5.99	16.27

Table 5-4: Gender Differences in DASS scores

The DASS-21 was administered on four subsequent occasions during the study, and the scores decreased from 43.9 at the beginning, to 30 at the end (Fig 5-1). The score of 43.9 falls within the clinical range, while the score of 30 is at the upper limit of the normal, non-clinical, range. The most noticeable decrease occurred in the first weeks of the intervention, during June. Without a control group, it is not possible to attribute this decrease directly to the intervention although many participants reported using the techniques (particularly mindful breathing) from the first session onwards. The approaching university holidays could also have played a part. Nevertheless, the scores fluctuated little in the weeks that followed, despite the changing external circumstances – the return to TE and the approach of the exam period. The individual portraits gave a clearer indication of how these changing external circumstances affected particular students (notably Bonolo [4.2] and Atandwa [4.5]).

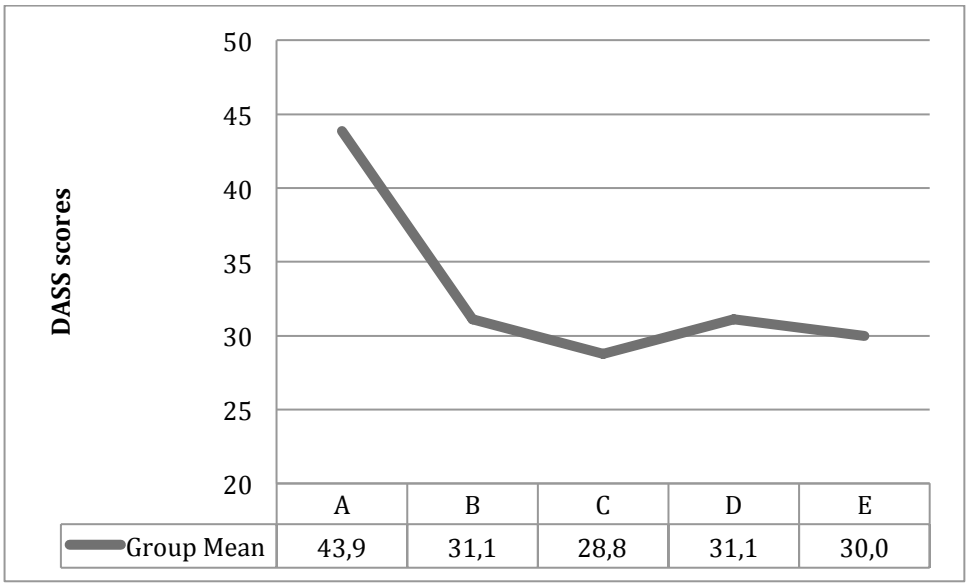


Figure 5-1: Mean DASS scores over the course of the MBI

Caution needs to be taken when drawing conclusions from such a small population sample, as the outliers can considerably skew the results. Nevertheless, the high levels of

depression, anxiety and stress cannot be disputed, and need to be attended to with some urgency, with particular attention given to the level of women's stress. Although the decrease in the mean DASS scores may look considerable (from 43.9 to 30), the post-MBI scores are still far higher than the UK non-clinical sample of Henry and Crawford's, where the mean score was 18.86, at the lower end of the normal range for the DASS.

5.2 Stressors

The interviews served to provide explanatory data for the dramatic scores described in 5.1 above, revealing the serious extent of the actual stressors provided by the context of South Africa. The Teacher Education course itself instigated a number of stressors, particularly during exam time and over teaching experience. The number of students who had experienced traumatic life events also came out as a strong theme, followed by financial concerns, domestic issues and transport issues.

However, Lazarus and Folkman (1984) have proposed that stress is transactional: an external stressor is mediated by a person's perceived ability to cope, which means that a potential stressor may be prevented from becoming an actual stressor if the person is taught appropriate coping strategies. There is also an increasing body of research around post-traumatic growth, particularly in South Africa, which has shown that if people are supported to cope with traumatic events, it can increase their resilience (Roe-Berning, 2009; Tedeschi & Calhoun, 2004; McMillen et al, 1997). Certain, usually unconscious, beliefs and attitudes become the factors that predispose some people to higher levels of stress, while others utilise appropriate coping strategies and are able to develop resilience.

5.2	Stressors Experienced by the Wits Student Teachers	
	Superordinate Themes	Subordinate Themes
5.2.1	Teacher Education Course	Academic: Deadlines, exams, course content
		Teaching Experience: 'Apprenticeship of observation' Anticipated stress - students, supervising teachers Discipline, jealousy from colleagues, criminal behaviour
5.2.2	Traumatic Life Events	Crime: Murder, Armed Robbery
		Unexpected Events: Red Ants, Death of friend/relative, Car Accidents
5.2.3	Financial Concerns	Limited financial resources, FUNZA issue
		Part-time work commitments
5.2.4	Domestic Issues	Interpersonal conflicts: Fights with partner, relatives, jealousy, divorce of parents
		Living Conditions
5.2.5	Transport Issues	Transport Issues: Road rage, crime, cost

Table 5-5: Superordinate and Subordinate Themes for Stressors

5.2.1 Teacher Training Course

Both the PGCE Coordinator and the TE Coordinator discussed the intense curriculum and the high levels of stress imposed by the course, and were concerned by the number of students who drop out each year. The awareness of the 'struggle for survival' phase was one reason why the mindfulness intervention was recommended for the one-year PGCE programme. The PGCE programme has certainly challenged most students, and many noted the number of assignments, deadlines and variety of courses as overwhelming.

Rupert, Hannah, Kim and Bonolo each recalled situations where they had felt extreme stress in meeting deadlines in the past, and noted that this was a feature of the high pressure PGCE course. Rupert recounted how he felt on the day of handing in his final dissertation for a previous degree: "*I felt quite stressed on that day, trying to get it all together and hand it in on that day before the office closed that afternoon. I didn't really feel any emotions except the stress, anxiety, pressure of getting something done, something very big done that day by a particular time. But once it was over, I felt fine. I felt relaxed as soon as I handed it over, it was done.*" Rupert was interesting, in contrast to some of the other students, as he recalled an experience of high stress, yet was able to let it go as soon as his academic work had been submitted. Other students, such as Georgia, appeared to perpetuate their stress by continuing to worry about assignments, or other events, long after they were over.

Atandwa was very realistic about the difference between the actual demands of the course, and students' perceptions of the demands of the course. She talked about being

overwhelmed with the number of assignments, but learning the need to attend to tasks one at a time. She had missed the introduction to the mindfulness intervention during the Education lecture because she was at home trying to complete her assignments. Bonolo's portrait illustrated clearly the amount of anxiety he experienced in the build up to the final exam period.

In terms of the unique stressors provided by the Teaching Experience period, Rusznyak, the TE coordinator at Wits, explained how students come into the School of Education with misperceptions about the challenges involved with teaching, which linked to Lortie's work on the apprenticeship of observation. For those coming from genuinely deprived teaching backgrounds, the teaching they have experienced is at such a low level that they think it is easy: "*They go into the classroom and it is a shock for them and they realise how difficult it is, and it looked so easy.*" For students who have had excellent teachers, there is also a mismatch in expectation, as their teachers have "*got that pedagogical thinking, their content knowledge is sound, they know their subject and they know how to induct students into their subject and into the ways and the practices of their subjects. Hammenis says they are no better, as they also come in with this idea that teaching is so easy, because their teachers had made it look so easy*". So for student teachers at both ends of the educational spectrum, there are challenges: "*For any student going into a school for the first time, they have these expectations that it is so straightforward, and they get there and they suddenly see how complex it really is. Now that's what prompts the struggle for survival*" *(Rusznyak, 2012, pers com).*

Teaching Experience brought out a further range of stressors – some that are well-documented in the teacher education literature, and others that are unique to the South African context. Bonolo and Mary both mentioned the anticipated stress of going into schools and not knowing what was expected of them from their school-based supervising teachers. Bonolo also expressed anxiety about being supervised by his lecturers. Rupert, Atandwa, Luthuli and Imogen talked about discipline issues in the schools – another commonly held concern of student teachers worldwide. Atandwa was shocked by the behaviour of the students who "*screamed for no reason*." She explained how: "*Those children* [. . .] *they are rude, they don't care for anything. You try and make a lesson interesting, you try to give some positiveness, you try so hard and they will scrumple it up*

and thrash it to the floor and spit on it. They will spit on your lesson plan. It was horrifying. It was absolutely horrifying."

What appeared more extreme than international studies, though, was the dysfunctional nature of some of the TE schools, particularly those in the townships. Atandwa reported on the high absentee rate of the teachers in the school where she taught [4.5] and talked of the unprofessional behaviour of the school principal: "*The principal was on the intercom, 'All the teachers that do some work, please can I call you to the office. I'm talking to the teachers that earn their money, please try to earn your money, do some work'. Over the intercom! What are the kids going to say now? How are the kids going to respect their teachers if the principal doesn't respect the teachers? If the principal is dissing the teachers over the intercom in front of the children.*"

Atandwa was shocked when she arrived at the school as it was not what she had anticipated: "*It used to be one of the best schools in our area, in Enerdale. It had 100% pass rate and the kids were well behaved, and then from 2005, what triggered, what happened, nobody knows. It was like a dark cloud came over. I'm not sure if it was the principal, coz he kept saying from 2005 the school started to change, so I'm assuming he was still a principal at that time, I'm not sure.*"

Imogen was placed in a school near Alexandria township and described the dreadful conditions prevalent in the area, and the criminal behaviour in the school itself [4.3] which had such a negative impact on the learning environment. Imogen, however, is a student with a wide range of coping strategies, and good situational coping, so she was able to grow from the experience, but acknowledged the severe challenges of being placed in a TE school, which was not fully functional.

Several students reported on challenging relationships with their teacher colleagues. Sipho was upset to "*experience negative energy*" on TE. He spoke to his supportive HoD about it, and the HoD said: "*people get threatened because not everyone went to Wits and some people feel that they are more advantaged, and now suddenly someone of your age and your qualifications, pedigree etc. and they feel threatened, they feel territorial.*" Sipho felt disillusioned by this experience: "*For me it's very sad, it is one of the best schools in Soweto and it sort of reflects a hypocrisy in our society, that we teach people to be better adults* [. . .] *but once they get there* [. . .] *If we are to progress* [as a society]*, we would*

expect disturbance or obstacles from much more undesirable elements than teachers, teachers who are supposed to own the future."

Imogen too found that her supervising teacher, "*was quite threatened by me and I had to deal with that, which was quite difficult.*" She undermined Imogen, by wiping off all her material from the board which she had written up for a supervised lesson: "*I felt it was a bit intentional what she had done. I had to adapt my whole lesson* [. . .] *I think it was a race issue a white girl coming in, also the fact that English is my first language.*"

It was a harsh shock for many of the students, particularly those with high ideals, to go into schools for their teaching experience. They suddenly realised what their future profession might be like, with unmotivated 'screaming' students and unsupportive colleagues.

5.2.2 Traumatic Life Events

Bonolo spoke of multiple traumatic events [4.2], related to crime in the township where he lives. While having his haircut, someone came in to tell the barber that he had killed a man in a fight and the barber's advice was to move to another city: "*From that day, that's where I saw that Johannesburg is a place where nasty things happen. That day I experienced it, I've heard it for myself.*" Later, he spoke of a traumatic experience, which happened to him near the taxi rank, when plain-clothes police broke up a group of gamblers by beating them with *sjamboks*. Each time he walks in that area now, he becomes hyper-alert and experiences the physical manifestations of anxiety, such as a rapid heartbeat.

Ophelia had been seriously affected by a 'smash and grab' incident in her car, reflecting how many Johannesburg drivers live under the fear of being hijacked. She had also experienced an armed robbery at her family home. She remembered how after the armed burglary, she kept having nightmares, and had problems sleeping for many weeks afterwards. After the second incident, the smash and grab, she sought therapy to alleviate the stress manifestations but did not feel it helped much: "*But I'm fine now and I'm sleeping better and I haven't had nightmares in a long time and I think it's just something, you've just gotta get through it.*" Ophelia referred again to this need to get over it, to put it behind her, saying, "*I can't stand victims, so I'm not like that drag it out and carry on complaining about it forever and ever.*" This suggested a sense of impatience with the slow process of healing from traumatic events. The danger of this response is that by pushing

away the normal responses to abnormal events, she might also miss the opportunity for developing resilience. Given enough time and support, survivors are able to experience greater inner strength, compassion for others, and increasing self-awareness. However, her statements suggested that she was in a rush to recover, and might also show that attitude towards others who she felt were behaving as 'victims'.

Charles, and all his possessions, were thrown out of his apartment at 3am, without warning, by the Red Ants (a security company employed to carry out evictions), as the rent that the tenants had been paying had not been passed on to the owner of the building. He recalled the incident in vivid detail: "*I remember we were evicted in one of the buildings I used to rent downtown, somewhere in Hillbrow. It was so humiliating, Lucy, I remember I was wearing only track pants, my vest and when these guys came in, they were cops, there were Red Ants, these guys who clear buildings* [. . .] *They took us out at 3am, we were outside with my bags and I left my books upstairs* [. . .] *These guys come in and take everything – steal in the process* [. . .] *I was so so so stressed. I felt like I hate Jo'burg that morning. I hate Jo'burg with a passion. I just wanted to go home now.*"

Charles, Ophelia and Bonolo's stories and feelings towards the city reveal another tendency of people who have experienced trauma. Memory is context-specific, so the place itself becomes a trigger for unhappy memories, which then spiral into a "cascade of destructive emotions that can end up making you unhappy, anxious, stressed, irritable or exhausted" (Williams & Penman, 2011). Without an inner awareness of what is happening in the mind, these unseen triggers result in an on-going process of trauma. This not only affects the traumatised person, but also influences the way they treat others, as they often unconsciously pushing away others' suffering in a futile attempt not to re-experience their own.

Divorce of parents (Imogen) and death of a friend or relative (Sipho, Atandwa and Imogen) were other unexpected, traumatic events that students referred to when recalling stressful situations in their lives. For some, these events were accepted, reframed and were seen as opportunities to develop resilience, while others were burdened by the memory of them.

Sipho shared with me his feelings around the loss of his youngest brother. It had caused him to reappraise his approach to life, and made him 'grow up' at a young age. His youngest brother, "*was 4 and he was the closest person I've ever been to in my life. He was*

like a son to me. In a short space of time, those things happened in my undergrad, in my final year, and I realised that sometimes in life, we cannot determine the times we are in, but we can determine what we do during those times". He experienced extreme anxiety and found that when he was anxious, he tended to get stuck in his head and procrastinate around the challenges that he needed to face. He sought medical support, and after some time "*I started feeling, I'll just live life as positively as I can, so I justify not only myself, but my brother – my late brother and my other brother who is still up and coming* [. . .] *I felt how awful the pressure of time is, because you never know when time is up for you, so instead of being anxious, let me just relax and grow. This concept of 'growing up', I just told myself, grow up and be a big brother. I was 21.*"

5.2.3 Financial Concerns

One of the greatest actual stressors centred on the student teachers' financial situation. Almost all the black student participants reported this stressor, as low income in South Africa is still predominantly a race issue, due to the legacy of apartheid. Bonolo described this situation clearly: "*I don't want to lie to you, some of the students who dropped out, they told me, 'Honestly, Bonolo, I cannot afford the fees, the transport, the money for gas, you can see the price of petrol keeps escalating.'*" It was interesting to note the assertiveness of the language with which Bonolo described the financial problems. He wanted his point to come across strongly, as an advocate for those in financial difficulties, as he was extremely frustrated with the government for not providing appropriate support for students experiencing financial hardship [4.2].

Many students applied for a Funza Lushaka bursary, and were not told for 6 months whether or not they had received it. Several did not receive it after this time, and had to find other ways of paying for the course and their accommodation, such as taking loans, borrowing from relatives, or taking part-time jobs on top of their studies. Charles revealed that, after a very challenging period of indecision, he concluded that he needed to withdraw from the programme due to lack of funds. When he went to the finance office, however, Wits were able to assist him through an internal bursary. In the meantime, though, he had missed his Teaching Experience and will need to make that up before he is able to receive certification, possibly delaying his entry into the profession and his income-earning potential. Bonolo summarised this concern: "*Money is one thing that keeps us stressing, because if you don't pay your fees by next year January, you might get employed*

by November, but if you are unable to show the letter to say you have completed your PGCE then you won't be able to get that job. Finance is a big problem, it's a big problem."

Hannah, Ophelia and Aaron were involved in putting on an interactive Educational Drama production about the financial concerns of many students at the university. They discovered that some of their contemporaries had not eaten for several days as the Funza bursaries had not come through. Some students had been given money for food and accommodation, but their residences used electricity meters, which they were not able to charge. This meant they were extremely cold in winter, and could not study at night in darkness. Some had resorted to sleeping in the library.

Part-time work commitments were also a significant stressor, particularly for Luthuli [4.4]. This became a stressor for him at a number of levels, as he was getting up early (4am), walking a long way, and also not having time to complete his assignments to the level that he wanted. It also meant that he had little time for social interactions and felt very isolated at times.

5.2.4 Domestic Issues

Many students talked openly about the additional challenges they faced at home, which added to their academic stress. Emelda had the difficult responsibilities of trying to balance the life of a wife, mother and student. Atandwa experienced conflicts at home as she was only recently reunited with her mother after many years of living with relatives, and shared the space with many family members. Nicholas was dealing with a sense of loss after the break up with his girlfriend, while Charles blamed his girlfriend over her pregnancy. Participants, such as Hannah and Mary, experienced challenging relationships with other students, and others, such as Luthuli, had conflicts with their lecturers, often over marks.

Emelda's decision to become a teacher put great pressure on her marriage, mainly due to financial issues and the loss of trust between her and her husband. She felt she had supported him financially when he was starting his businesses, but now he was not willing to support her: "*Every day there was a fight about something because of this one decision that I took. I was excited and could share with everybody* [except said husband] [. . .] *I need to know I can rely on him when I'm not there* [. . .] *He's an entrepreneur, he started many businesses when I was working and taking care of us. It felt like betrayal.*"

Charles explained how shocked and angry he had been to find out his girlfriend was pregnant, and felt that he had behaved badly towards her by blaming her. His reaction challenged his usual perception of himself, as normally, "*I'm this person who likes helping. I just love it* [. . .] *In Zulu there is an expression that a person is a person through other people, so it's that kind of thing. Sometimes it is at my expense, but I don't mind. I feel so good*". He described how "*this situation revealed a different aspect of what I thought I am. I think now I'm weaker*".

The feelings Charles described revealed an interesting conflict, which brings to mind Neff's investigations into cultures that are described as collectivist. It might be expected that members of cultures with a more interdependent sense of self would empathise more with the struggles of others, and therefore also have higher levels of compassion. However, she found that Asians actually tended to be more self-critical than Westerners (2010). She has not carried out research in the African context. From the interview with Charles, his experience appeared to undermine his confidence in himself as someone who embodied the highly prized concept of *Ubuntu*. Possibly, his own expectations, which he attributed to his culture, dictated that he should be more caring towards his girlfriend (rather than putting himself first), and therefore when his emotions of anger and blame emerged, he rejected them more strongly, as they contradicted the essence of *Ubuntu*. He was only able to talk about his feelings when the school counsellor noticed how angry he was, and invited him into her office. This normalised the experience for him, and he was able to accept the emotions and begin to address the reality of the situation.

Also revealed in these findings was the stress of having to live in the family home, due to financial constraints. Most of the students in this study were in their mid-20s and several, such as Mary, had previously left home for university, but had moved back to their family home and were struggling with the readjustment required. Atandwa was living in crowded living conditions, swapping the use of a bed with her mother who works the night shift. She reported how she has to study in the presence of her sisters, in front of the television, as she has no separate quiet study space. Bonolo, too, expressed that he had to work in the presence of his family: "*My family is talkative. When I'm studying I put on headphones, but I can still hear their conversation.*"

5.2.5 Transport Issues

Another external stressor in Gauteng is transport. For the lower income students, their stress levels are high due to the public transport system. This causes stress due to cost, travel time, safety and crime. Some students are travelling long distances to the School of Education, as they do not have accommodation nearby and cannot afford to stay in student residences. Emelda noted how she has to hold onto her bag at all times, on taxi rides, for fear of theft, while Atandwa revealed that she has to allow two hours travel time each way: "*I wake up at 4am, and do the classes and sometimes finish at 6pm, and if I finish at 6, I arrive home at 8pm.*" For the more affluent students with cars, such as Rupert, Georgia and Mary, many noted their stress caused while driving, and occasional feelings of 'road rage' during rush hour traffic.

5.3 Coping Mechanisms

In the first interview, the students were asked about their habitual coping mechanisms, and they revealed both adaptive and maladaptive techniques, depicted in Table 44. Adaptive strategies are those that alleviate stress in both the long and short term, while maladaptive strategies give a sense of alleviating stress in the short term, but usually have unhelpful longer-term consequences. However, even adaptive strategies, when used in excess, or in the wrong situation, can become maladaptive. For example, several students reported using exercise as a way of dealing with stress. However, if this mechanism is carried out in excess to avoid the underlying issues, then it too can become a maladaptive strategy, as it does not address the underlying stressors or the emotional responses. This point relates to the distinction between dispositional coping mechanisms and situational coping mechanisms (Carver et al, 1989). Student teachers need a range of coping mechanisms, which they can utilise according to the needs of the specific situation, and they need a quality of presence in order to be able to make use of the most effective coping mechanism for the situation at hand.

5.3	Coping Mechanisms	
	Superordinate Themes	Subordinate Themes
Predominantly Adaptive Coping Mechanisms		
5.3.1	Coping with Emotional Difficulties	Support Network: family, friends, community
		Spiritual/Religious Beliefs: Prayer, faith
		Creativity: Journaling, poetry, drama
		Emotional Release: Crying
5.3.2	Coping with Physical Tension	Relaxation: Visualisations, yoga
		Exercise: Jogging, competitive sports, football
5.3.3	Coping with Underlying Causes	Therapeutic: Counselling, therapy
		Problem solving: Discipline, analysis
Predominantly Maladaptive Coping Mechanisms		
5.3.4	Maladaptive Coping Mechanisms	Substance use: Alcohol, drugs
		Medical: Antidepressants
		Distraction: TV, chilling, zone out, comfort food
		Suppression: Bottling it
		Overwhelm: No coping mechanism used, survival

Table 5-6: Superordinate and Subordinate Themes for Coping Mechanisms

In terms of predominantly adaptive coping mechanisms, students discussed the ways they dealt with emotional difficulties, physical tension or pain, and underlying causes of stress. These distinctions reflect Kyriacou's classifications of palliative and direct action coping strategies. The maladaptive strategies were also discussed, such as in Mary's [4.6] and summarised below.

5.3.1 Coping with Emotional Difficulties

It was predominantly the female participants, but not exclusively, who turned to their support network at times of emotional difficulty. They noted that they rely on talking through their problems with friends, family or respected community members, and this allows them to gain a new perspective on the situation. As Georgia says, "*Talking to people makes me feel better. People put things in perspective for me. I tend to blow things out of proportion.*" Hannah and Imogen also found their families able to provide them with the support they needed in terms of easing the manifestations of stress, but not necessarily accessing the underlying causes. Rupert mentioned how his closeness to his family meant that he did not need to rely on friends for emotional support: "*I think because I have that strong family unit, I don't have such a strong need to make friends.*"

Almost all the black students spoke of turning to their religious tradition for support. Christian students found that prayer and reading the Bible helped them to cope. Atandwa spoke of her supportive church community: "*The church I go to, we've got sort of mentors, people that are there to help you, to talk to. Talking about it and getting that sort of help*

from other people who are more knowledgeable about the bible, that helps also." Bonolo revealed a spiritual/philosophical approach: "*Whatever is supposed to happen, will happen, whether you stressed or didn't stress. My response to difficulties is, I always employ a simple approach. I come up with the mentality that this happens for a reason, and you know some other things in life that are negative, they are not there to pull you down, they are there to uplift you, to polish you, to strengthen you.*"

Three of the male participants, Charles, Nicholas and Luthuli, reported that keeping a journal or writing poetry allowed them to explore their emotions and ease their stress. Luthuli had learned this approach during therapy, and talked of catharsis – his 'little book of magic' – where he wrote down all his feelings in order to release them. Charles spoke poignantly of having suppressed his creativity as he had been told that, "*you can't make money through drawing, taking pictures, writing books.*" However, he recognised the healing benefits of creative pursuits such as poetry and drama, which "*reminded me of who I really was supposed to be*". Nicholas uses his writing to reflect: "*I keep a journal of what I think of life*."

One requirement of TE involved the keeping of a journal. However, most student teachers focused purely on evaluating the lessons, rather than exploring their emotional responses to different situations. It could be a very valuable tool in terms of stress alleviation, given a more therapeutic focus.

Kim, Atandwa, Rupert and Sipho reported that crying was a palliative technique for them, easing the experience of stress at the time, or shortly after the difficult incident. Kim noted that it is a strategy that she uses discretely now she is older: "*I've learnt to try and keep it away, because when people see you cry, they have this, they lose respect for you for some reason. So I try not to cry, and just be strong and then go away, cry, come back.*" Crying did appear to acknowledge the authentic emotional pain that students experienced, and was often enough to allow for tension reduction or emotional catharsis.

5.3.2 Coping with Physical Tension

Many students used physical exercise, particularly jogging or competitive sports, as a way to alleviate stress and relax muscular tension. Three girls had explored yoga (Georgia, Imogen and Karen) or pilates and found them beneficial. However, in the situation where students, such as Ophelia, felt short of time, a commitment to regular physical exercise

was reported as one of the first things to drop away. Imogen, normally an extremely physically active person, found she was not doing any sport during her TE, as she was so overwhelmed with the emotional intensity of the experience.

Sipho revealed that "*What helped me also was my passions, sports helped me*". Even though he had broken his ankle in a soccer injury just before his brother died, he found that he started to cope with the loss once he was able to start exercising again, and focusing on living "*life as positively as I can, so I justify not only myself, but my brother, my late brother, and my other brother who is still up and coming*".

5.3.3 Coping with Underlying Causes

Luthuli was the only student to have attended long term therapy, and found it useful. Other students dismissed its effectiveness completely, and some, such as Bonolo, felt that their problems were not serious enough to seek a therapeutic intervention.

Charles and Nicholas both received counselling after particularly stressful life events. Nicholas attended willingly, while Charles was 'tricked into it' by his school counsellor, yet he very much appreciated the intervention: "*I just liked her approach, being busy as if she is not interested, but in fact she was, you know. I just loved the strategy she used, seriously! 'If you are not angry, it's fine, go. But if you feel you are angry, fine, and if you accept, then we are done, you can go'*." After the counsellor gave him the options, he said, "*No, I'm not going anywhere. Let's talk about this thing*." While reflecting on his perception of counselling, he revealed: "*I didn't want to go to counselling per se. I'm from Limpopo and there's always that perception that men don't cry, be strong* [. . .] *I don't know why, but I think that's what we've been taught.*"

Several students mentioned analytical problem-solving as a coping strategy, and noticed both adaptive and maladaptive aspects of this. Bonolo, in particular, preferred this approach: "*I've never been to counselling because I counsel myself properly. It doesn't mean I'm perfect or something, no, but it's just that I like thinking things deep* [. . .] *You know, sometimes, you solve your problems through your thinking, in your mind, that's how I solved it.*" Ophelia, however, was aware that this could be both adaptive and maladaptive. As she noted, "*I'm very analytical. Everything, I overanalyse everything. Sometimes it can be a curse, but sometimes that's also a blessing as you can see things, the bigger picture*".

She identified early on what became apparent for Bonolo during the training, that the rational approach does not allow a full emotional release at times of difficulty.

5.3.4 Maladaptive Coping Mechanisms

In terms of maladaptive coping mechanisms, students identified substance use, distraction techniques and suppression. Several students, such as Bonolo, Atandwa, Sipho and Hannah noted how they used to drink heavily, but realised that it was not helping, and Luthuli gave a detailed description of his *ganja* use. Several students still have a glass of wine or a beer to relax, but none felt that they were now using substances in a maladaptive way.

It was notable that five of the fourteen participants stated that they had suffered from depression in the past, and received some type of medical intervention (Kim, Hannah, Mary, Luthuli and Sipho). Sipho used anti-depressants for a while after the death of his brother, but did not seek therapy. Interestingly, he reported that the anti-depressants prescribed by his doctor acted more as an avoidance coping mechanism for him, yet allowed him to process the trauma of his loss at the pace he felt able to: "*They were useful to take, somehow to distract the immediate sensation. I could just zone out and sort of escape, and maybe try to read a book, or chat with friends, or Facebook. I found that I could be able to be more engaged in what I was doing at that present without thinking about the whole situation.*"

Mary went through a period of depression at high school. She tried antidepressants and therapy but did not find them beneficial: "*I just found, it was more the person that I went to who was totally, almost inadequate for dealing with what I needed to be dealt with.*" Hannah reported how she had been prescribed anti-depressants since the age of 13 (11 years) but again received no on-going psychological or medical support, except to receive repeat prescriptions.

Distraction techniques identified by Mary, Bonolo and Ophelia, were zoning out, TV and comfort eating. They recognised that these were not, ultimately, useful coping mechanisms, but found that they were strong habit patterns, linked to their personalities. For Mary, this was one reason why she attended the mindfulness training, in order to find alternative ways to cope with the extreme levels of stress that she was experiencing.

Mary spoke extensively about her maladaptive technique of suppression and found it impossible to remember a particularly stressful event: "*I bottle it. It's something I've done all my life. If it's stuck in a bottle, put the lid on it, it gets left for another day or whatever.*" She felt that this technique worked for her in the short term, allowing her to get through to holiday times, but she acknowledged that it could lead to longer-term negative consequences. During the MBI, she felt much more able to deal with issues in the moment, rather than shelving them until later, and was able to explore a more adaptive coping style.

A notable finding was that in times of overwhelm, particularly on TE, students reported forgetting to use any of their coping mechanisms, and focused solely on survival. Imogen and Atandwa's portraits provide clear descriptions of this situation. In terms of Kyriacou and Sutcliffe's model, this meant that coping mechanisms were not able to moderate the stressors, and student teachers experienced psychological, physiological and behavioural stress responses.

5.4 Personality Characteristics

As suggested in Kyriacou and Sutcliffe's model [2.2.2], personality characteristics, or predisposing factors, played a significant role in determining how the student teachers appraised, and coped with stressors. There was a nuanced understanding from several of the students regarding the difference between eustress and distress, and how certain factors, such as deadlines, could act as a motivating force, rather than a stressor, helping them to achieve their goals, as long as they remained in balance.

The factors mentioned in the interviews tended to be those that exacerbate stress. However, there are also personality factors, such as hardiness, faith, or willingness to seek social support, that are able to ease stress considerably. In addition, some characteristics, such as idealism or ambition, tend to operate along a continuum, either serving to moderate stressors, or exacerbate them.

The portraits given earlier highlighted many of the trait coping mechanisms they had developed in childhood, which were often now dysfunctional for them as young adults. The main personality traits that were reported to worsen students' experience of stress were inauthentic motivators; driven-ness; perfectionism; time pressure; idealism and

ambition; needing to feel in control and fear of failure. Only a few students talked about the authentic motivators that eased their experience of stress, such as their love of teaching.

These predisposing factors in terms of vulnerability or resilience to stress highlight the unconscious habit patterns that these young adults are carrying with them into their new profession. Students identified some of the personality factors that affected their appraisal of stressors in their initial interviews, and revealed others later on. This increasing openness could have been the result of the development of trust in the group, and between the researcher and participants. It also appeared to reflect their ability to notice their habitual tendencies more, over the duration of the mindfulness training, and discuss them openly, without any feelings of blame or shame.

5.4	**Personality Characteristics**	
	Superordinate Themes	Subordinate Themes
5.4.1	Driven Behaviour	Challenge of modern life
		Anxiety-proneness
		Needing to feel in control
		Perfectionism
		Overcoming mistakes of the past
		Ambition
		Guilt
5.4.2	Idealism	Authentic idealism
		Being true to yourself
		Unrealistic idealism
5.4.3	Fear of Failure	Going back to where I came from

Table 5-7: Superordinate and Subordinate Themes for Personality Characteristics

5.4.1 Driven Behaviour

Stress arose for many students when they felt driven by external requirements of modern life, rather than inspired from within. Charles described the voice that comes into his mind in regard to his studies: "*'If you don't finish, you're gonna fail, if you fail you're gonna . . .' That drives me. It is something that always keeps me going. It helps me at times, but at times I don't enjoy doing that. I wish I could just study for the sake of studying, because I want to learn, acquire knowledge, as I want it to be. But these days you do it, you acquire knowledge and use it to pass. That's one of the things that I hate about myself at times, but it's dog eat dog.*"

Georgia [4.6] and Mary [4.7] expressed how this driven quality revealed itself in their anxiety-prone tendencies around perceived time pressure. Mary talked about "*obsessing*

about what has to be done, when it has to be done by," and after meeting an assignment deadline said, "*I was still stressed as I was not sure that what I'd produced was of the quality that I was happy with*." This contrasted strongly with Rupert, who was able to let these feelings of anxiety go as soon as he had submitted his work.

Emelda felt driven by the multiple roles she played as wife and mother, which again played out in the feeling that she was never quite in control. She felt that "*my life could be better if I was more organised. I don't know if I'm just lazy. I want to do a lot of things, but don't have that personality to plan better. Time management – I need to learn that.*"

The unrealistic ideal of being perfect drove many students towards stress, even when the demands on them were not seen as excessive. Hannah, Georgia and Luthuli in their portraits, each referred to themselves as perfectionists, and described feeling guilty if they performed worse than they expected of themselves. Georgia felt a strong need to be in control, and was very clear that it is, "[. . .] *myself who puts pressure on myself. Others tell me not to put pressure on myself* [. . .] *I'm a perfectionist and I won't let things go until they are 100% in my mind*". In a recent situation with Luthuli's lecturer, he explained how sensitive he is to negative feedback and low marks, and how depressed he felt for several days. His desire to do things perfectly appeared to originate from a need to correct what he perceived as mistakes from the past: "*Getting low marks makes me ill – emotionally ill* [. . .] *I am a perfectionist. So far I have not forgiven myself because I feel I still need to fix certain things* [. . .] *My aim is to get a distinction for PGCE this year, and I can start forgiving myself as I will have corrected my mistakes.*"

Ambition is not, by definition, a negative construct, yet the students who identified themselves as ambitious, such as Hannah and Luthuli, felt that they were motivated by the desire to be better than others. This created a driven ambition, rather than simply a determination to succeed. Luthuli reported that, out of 99 students, "*The education marks came out and I was quite disappointed that I was 3rd and I thought I should pull up my socks*". Hannah's primary motivating force "*is not wanting to end up being ordinary*". She tends to overlook her past achievements and focus forward on what to accomplish next. After returning from London, she struggled with feelings of "*being a failure, wanting to be successful and waiting for my life to start*".

Hannah, Georgia and Luthuli described having to contend with guilt when having to prioritise tasks, or take time off for self-care. Hannah noted how she wanted to use reading as a form of relaxation, but couldn't allow herself to: "*I love reading, but feel guilty when I'm meant to be reading academic work*." Guilt often pushed these students towards excessive work, as they felt that the power to do more was within their control.

5.4.2 Idealism

Hannah, Georgia, Luthuli, Charles, Sipho and Emelda spoke of their idealistic reasons for wanting to become teachers. This desire either gave them the strength to get through difficult situations on TE, or resulted in difficulties for them when their expectations were not met by the realities of school life. Idealism, like ambition, only becomes negative when motivated from an inauthentic place.

The motivating factors that student teachers described in terms of their ideals about becoming teachers, appeared to be both authentic and inauthentic. Some students referred to their core self, and the need to be true to it. Charles spoke of the need to "*be me again*", as he feels there are "*problematic things in the human spirit, in the soul, that need to be worked out* [. . .] *If you work deeper, you work with the inner voice*". He felt, "*I wanted to be in tune with my inner being, that's what I miss most, more than anything else. I might be looking happy now but there is the inner being that is not tapped, not being used, not being utilised. In a way they say peace of mind generates power, so if you quieten your mind, then your power comes. I've seen that, I've experienced that*".

Nicholas talked of his pragmatic reasons for doing the PGCE: "*the African students, black students, and the white students, the reason why they pursue their PGCE course is different. For us, it's job related, for them, most of them, it's passion. So you can see, for us, I did the course because I was not getting a job.*" He also talked of his inner struggle, as he would like to do motivational speaking but feels he lacks the courage to talk to a group of people. "*That has been my struggle for as long as I can remember. You feel something inside, but don't know how to get it out. I'm not being authentic to the truth that I feel inside.*" He had decided that a PGCE, although academically and emotionally challenging, would allow him time to deepen and enhance these skills.

Bonolo and Sipho were driven by the desire to be inspirational to township students, as they themselves had made a success of themselves despite difficult childhood

circumstances. However, when the reality of school life was different from their expectations, they become somewhat disillusioned with the profession.

5.4.3 Fear of Failure

Two of the students from rural areas (Limpopo), Charles and Nicholas, revealed that their internal stress comes not so much from the need for high achievement, but from the fear that they will end up going back to where they came from without anything to show for their education, or without being able to support their families, financially and emotionally. Charles discussed this in detail: "*You've got to study to be successful, or if you don't study, you don't. There's this kind of panic. I'm living a panic kind of mode. Everything's about, if you don't, you go back. I've got two worlds – where I'm going, and I don't want to fall back to where I was […} I'm driven by, at times, it's fear, to be honest* [. . .] *and fear in such a way that if I fail, that's the worst thing, that's a nightmare, I cannot afford. I lose weight, I get sick 'coz now I see the different reality. Now I'm failing now and failure to me means going back. It doesn't mean you haven't done what you are supposed to be doing, for me, you go back if you don't. For me, it's eish, I don't know how to deal with that, I've struggled so many times but it keeps on coming back.*"

Nicholas explained: "*It was really difficult, especially if you are first born. Your siblings, you have to inspire learning in them* [. . .] *it's really draining because they have to go to varsity as well, and I should be the one helping in the schooling, especially financially*."

When Bonolo was expelled from school, he felt useless: "*I wanted to cry, I was so emotional* [. . .] *now I knew that being useless is not a nice feeling. When you sit at home doing nothing, you feel useless.*" He compared himself with his sister, who was working and able to buy presents for their mother: "*I thought this is inspiring. At the same time, it sort of applied pressure* [. . .] *I compared myself with my sister* [. . .] *and that stressed me a lot, and every day I would go to sleep, thinking that I need to do something, although it seemed almost impossible. I've got to do something with my life, I cannot settle for mediocre life.*"

Sipho also commented on the anxiety caused by internalising perceived family expectations and worry about letting other people down: "*I used to experience a lot of anxiety when I was still in undergrad because I'm the first person to go to university in my*

family, so I had a lot of anxiety about life and what am I going to do, will I graduate, will I get excluded, all those things."

5.5 Discussion

There seems to be no doubt, from the statistics and the interview feedback, that students are experiencing levels of stress far beyond their capacity to cope. The finding that only three out of fourteen students were in the acceptable (normal) range for depression, anxiety and stress was shocking. The qualitative data then provided a clear understanding of the multiple factors specific to South Africa, and Gauteng, that are causing these levels of psychopathology. The issues in this context are wider and deeper than the current student teacher stress literature suggests.

In Lazarus and Folkman's (1984) transactional theory of stress, this situation implies that they must soon develop stress coping strategies for fear of reaching levels of burnout, if not during their PGCE year, then possibly in their early years of teaching. Their coping mechanisms did not appear well developed and were not being appropriately applied to different situations. In a country so short of well-qualified teachers, this is an issue that needs to be taken seriously, and urgently. If negative stress input can be mediated through effective coping mechanisms, then resilience and hardiness can develop, allowing young people to handle the increasing stressors of daily life in their personal and professional capacities.

Hardiness represents a general orientation towards the self and the world conceptualised as consisting of a sense of commitment, control, and challenge (Chan, 2003). Certain students felt committed towards the teaching profession and were motivated to overcome the challenges of the PGCE, by focusing on areas that they felt were in their control. Emelda said: "*I care about social issues and want to be part of the solution. I feel empowered when I am in this job rather than in my administrative job.*" For her, idealism generated hardiness, as she was committed to the process of learning to teach, even though it was very challenging for her, given her domestic circumstances. In Luthuli's portrait he emphasised how his difficult upbringing did not cause him to be negative, but rather made him more focused and goal-oriented, and determined to overcome his challenging background. Other students, such as Bonolo and Sipho, also referred to their increasing resilience and hardiness, generated through difficult life experiences.

Kyriacou and Sutcliffe's model of teacher stress proved to be a useful model for understanding the progression of stress in the student teachers. Many were experiencing significant emotional, behavioural and physiological stress responses, although none had yet reached the stage of chronic symptoms. Hannah and Georgia, in their portraits, acknowledged openly how they negatively affected the people in their lives when they were feeling stressed. Emelda reflected on the impact that her stress-induced bad moods have on her children: "*When I'm in a good mood, it seems like everyone's fine. When I'm in a bad mood, they fight themselves,*" while Rupert revealed that, "*I'm a lot more grumpy, a lot less approachable. I think it makes everyone else feel more tense as well*". It was notably the women (Georgia, Imogen and Atandwa), who spoke of their physiological stress responses, such as increasing exhaustion during term time, which resulted in them getting sick during the holidays. Hannah, Ophelia and Mary reported repetitive migraines and also experienced disturbed sleep patterns.

The key findings were that the potential stressors of the student teachers bore a strong relation to other international studies in terms of their stress during Teaching Experience and their concerns surrounding the academic course. What appeared more extreme, however, were the non-occupational stressors, particularly the widespread experience of financial concerns and traumatic events. Many of the student teachers had experienced extreme events, which had not been dealt with in terms of their emotional repercussions. In addition, the personality characteristics that many described meant that they appraised these potential stressors as direct threats to their sense of self. Some students had a range of coping strategies, but did not always possess the ability to use them as situational responses. Instead, they tended to utilise dispositional coping mechanisms, which were often maladaptive, such as perfectionism.

Until young people become aware of the high levels of stress they are under, and the maladaptive ways in which they are dealing with it, they are not able to realise that their coping mechanisms need to change. By bringing these issues to the foreground, the student teachers now had a deeper understanding of themselves to take into the mindfulness training. Mindfulness plays a strong role in terms of learning to respond to situations, in the moment, rather than based on habitual tendencies. These aspects were unveiled, and then addressed through the MBI, and will be discussed in Chapter 6.

CHAPTER SIX: EXPERIENCE OF THE MBI

The process of evaluating an intervention revolves around the outcomes, the perceived effectiveness of the intervention and the mechanisms believed to be responsible for the change (Elliott, 2002). This chapter, therefore, will begin with the pre- and post-intervention descriptive statistics, and then explore whether these changes appear to be linked directly to the intervention, and if so, through which change processes.

The descriptive statistics reveal noteworthy changes for students both in the facets of mindfulness and self compassion. The IPA interviewing approach then allowed for students to reflect on open questions about the mindfulness training, and their self report questionnaire scores, in order to gain a deeper insight into the underlying processes of change. This provided a wealth of insights, often very specific to each student, on ways in which they felt they had changed, and what they felt was responsible for the change process. Seven specific case studies were given in the Portraits [Chapter Four], while the superordinate themes and responses to specific aspects of the MBI are highlighted below. When identifying factors responsible for change, the different practices were explored, the students' intentions and commitment to practice were noted, as well as the difficulties they experienced.

6.1 Self Report Scales

The self report questionnaires were utilised to provide baseline data before the MBI, and assess changes during and after the intervention. A criticism of much MBI research has been that questionnaires are only administered directly after the end of the training, meaning that longer-term change cannot be verified. The final scores were attained 2 months after the end of the training to take this concern into account, although a longitudinal study would be a highly valuable follow-up to this study. The results also informed the questions in the interview and student teachers were asked to reflect on their questionnaire scores in order to enhance the trustworthiness of the findings, and to interpret the findings at a deeper level.

6.1.1 Five Facet Mindfulness Questionnaire

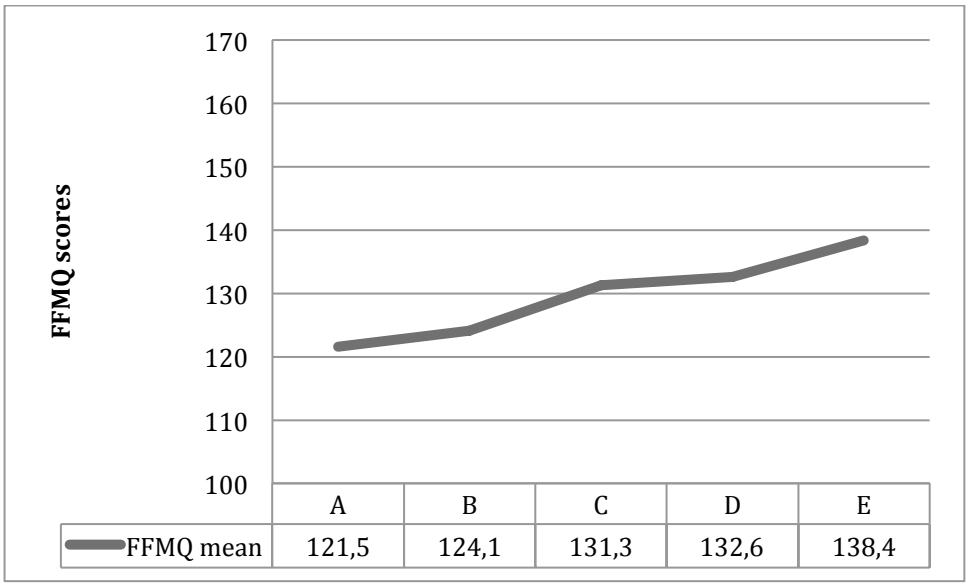


Figure 6-1: FFMQ mean scores over the course of the MBI

The mean score of the FFMQ revealed the expected trend, with the exception of Imogen [4.3]. Student teacher scores increased during and after the MBI, from 121.75 to 138.5. Paired sample **t**–tests showed that the full score changed significantly and in the expected direction (M=121.75, SD =16.54 [before], M =138.25, SD =13.32 [after], t = -2.691, p = 0.013).

The first time the FFMQ was administered, the scores ranged from a high of 152 (Ophelia) to a low of 95 (Hannah). Ophelia had previous meditation experience (concentration practices), although had not experienced mindfulness meditation before. Bonolo, Imogen and Sipho were clustered around 144, well above Baer's findings (2008) for students (124). Again, Imogen had previous meditation experience, but not Bonolo or Sipho, so it was interesting that their scores were so high. The next cluster (118-126) were more in line with Carmody and Baer's findings (2007) from the US, and included Emelda, Atandwa, Rupert, Kim, Luthuli and Georgia. The lowest cluster (Hannah, Nicholas, Charles and Mary) described themselves in the first session as having very distracted minds. Hannah's score was significantly lower than all the other students, and her portrait [4.1] revealed reasons for this.

In addition, Baer observed that scores often drop initially as participants become more aware of the construct of mindfulness, realise that they may not be as aware as they

originally thought and start to notice just how distracted their minds are. Hannah, Imogen, Sipho and Mary's scores, as well as their comments, provided evidence for this finding. Three students, Kim, Ophelia and Charles, did not complete the course, and therefore did not have final scores.

The student teacher portraits provided some explanation of the change in scores over the 4-month period. Luthuli's scores over the time period increased the most dramatically from 124 to 165 [4.4]. Luthuli showed great commitment to his practice for a few weeks, practicing for about an hour a day, but then was unable to continue due to time constraints, when he had to take on extra paid work in order to cover his rent increase, as well as meeting the requirements of his studies. Luthuli also combined his mindfulness practice with therapy, which helped to give him considerable self-awareness. His therapy was Freudian psychoanalysis, which caused a slight tension within his coping strategies. Mindfulness teaches people to experience their thoughts, feelings and physical sensations, without needing to analyse them. Luthuli sided towards self-analysis, which often seemed to contribute towards his stress, as he found himself engaging in ruminative cycles. Georgia, a strong advocate for mindfulness during and after the course, ended the programme with the third highest score, and also felt mindfulness had considerably altered her daily life, even though she focused on informal daily practices, rather than formal sitting practices. Atandwa showed a sharp increase (from 118 to 142) until the final questionnaire was administered (127) [4.5]. She had just returned from a very challenging teaching experience, where she described herself as so overwhelmed that she had forgotten to use any of her new coping strategies learned through mindfulness, such as breathing, and had even forgotten her habitual coping strategies, such as prayer. She described herself as in survival mode, which relates strongly to the Teacher Education literature. Mary's increase in the FFMQ was also significant, from 103 to 132, and her interviews reinforced this, as she felt much more able to deal with issues in the moment, rather than shelving them until later, which had been her coping strategy to date [4.6].

Other students also discussed their experience of increased mindfulness. Emelda, for example, showed a significant increase from a score of 118 to 153, and reported noticeable changes in her experience, particularly around emotion regulation. Nicholas's scores jumped from 96 to 133. This initially seemed surprising as he was unable to attend the last 3 sessions, because he traveled home to Limpopo for the holidays. When asked about his

experience, in the final interview, he said that he had continued with the practices, and also downloaded information about mindfulness from the internet. This brings up interesting questions around whether mindfulness requires direct transmission from a teacher, or whether beneficial results can be attained using online courses.

Bonolo [4.2], Sipho and Imogen [4.3], who each started on a high mindfulness score, showed little increase, possibly due to ceiling effects. Bonolo, who attended every session and reported significant changes in his daily life experiences was very analytical about his experiences. This gave him an initial high score, as he was self aware, but did not allow him to move beyond the analytical approach to thoughts, feelings and physical sensations. Sipho described feeling much more aware of his surroundings, which he attributed to the concept of mindfulness, yet he only attended the first week of the course. It was therefore not surprising that his scores did not increase, due to his inability to attend the sessions or develop a formal practice.

6.1.2 Self-Compassion Scale

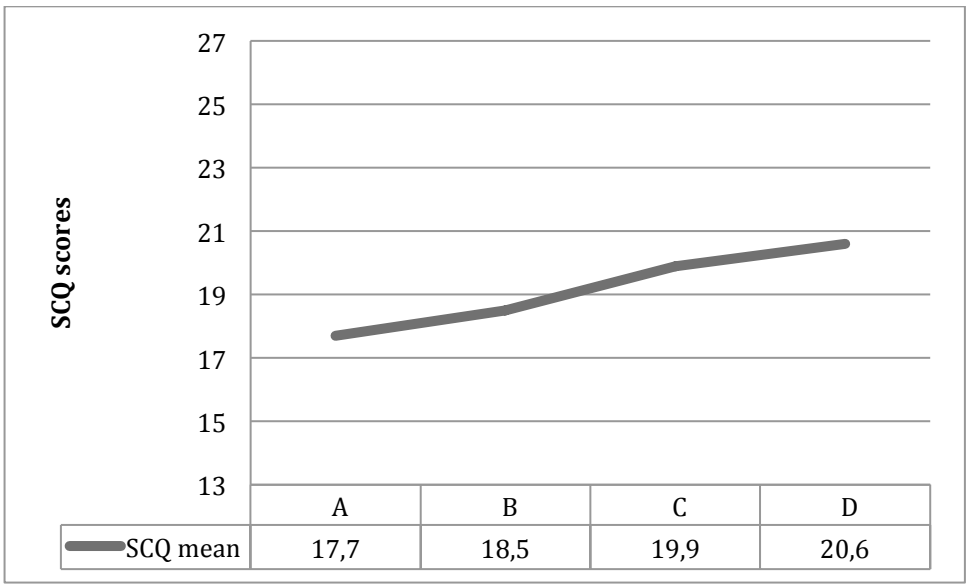


Figure 6-2: Self Compassion Questionnaire - mean score

The Self-compassion Questionnaire is divided into six components (self kindness vs. harsh self judgment, common humanity vs. isolation, and mindfulness vs. over-identification). The mean score is given in Figure 6-2, with the scores reversed for self judgment, isolation and over-identification. The results revealed expected changes, with mean scores increasing from 17.7 to 20.6 after the MBI.

It was interesting that those students who described themselves as perfectionists, and experienced a lot of guilt, particularly in relation to their studies, showed the greatest changes in their self-compassion scores: Luthuli (+7.95), Georgia (+6.75), Mary (+6.4) and Hannah (+5.9). Luthuli's score increased the most, from 14.3 to 22.25, and he mentioned how beneficial he had found this aspect of the training, especially when he was experiencing serious financial anxiety, and having to make decisions about where to focus his time.

Emelda's score also increased by 4.2, while Atandwa's increased initially, and then declined after her difficult teaching experience. Other students (Bonolo, Imogen and Sipho) all described themselves as quite kind to themselves, started on relatively high scores and did not show much change over the course of the training.

The self-compassion questionnaire was only administered in the second week of the programme, which may have limited the results, as the student teachers had already been introduced to the importance of a compassionate attitude during their first session. It also meant that those students who missed some sessions due to ill health, or did not attend the sessions during the holiday (Charles, Kim, Ophelia and Nicholas) only had one or no scores.

Neff's findings for students (undergraduates) revealed a mean score of 18.26, considerably higher than this group at 17.7. However, Hannah's extremely low score (7.7) lowered the mean from 18.9 to 17.7. Bonolo's scores were particularly high, higher even than the average for experienced Buddhist meditators in Neff's study. He talked extensively in one interview about his understanding that African cultures are based on kindness and compassion towards those less fortunate, *ubuntu*, and appeared to set this as a behavioural standard for himself, acknowledging too how being kind also helped him to feel happy – the 'helpers high'.

One further finding, noted by Neff, was the contrast in scores between men and women, with women scoring lower on self-compassion than men. Men in this study scored an average of 21.2, while the women scored 18.54, and these scores were reinforced in the interviews through the number of times the women talked about having, often unrealistically, high expectations of themselves. The self-compassion component of the

course seemed to allow them to be kinder to themselves during times of suffering, and to give themselves permission to take time off for self-care.

6.2 Results from the Intervention

The 6-week MBI offered a set of practices, with three key areas of focus, namely *calming*, *compassion* and *insight*. Although each practice might create the conditions for insight into habitual patterns, each practice historically has a distinct focus and is designed to cultivate specific habits of mind (Appendix E).

Salient verbatim responses are given in this section, but for an exhaustive list, refer to Appendix F itemising the lived experiences of each of the practices, in the students' own words. Some show the anticipated result of the practice, while others reveal common problems and pitfalls. The interviews also identified the effects in daily life that students attributed to the practices.

6.2.1 Calming Practices

Calming practices first allow the mind to settle, by concentrating on a single point of focus, and then allow the mind to open, so that it learns to stay calm in the midst of experiences from the outer environment. During the first few weeks, many of the students found it challenging to experience any calmness in their minds. If anything, by bringing awareness to the thoughts, feelings and body sensations, the effect was often one of 'getting worse', or noticing far more going on in the mind than they had previously noticed. This is a regularly reported phenomenon in MBI training. Some students found their minds tightening, planning and thinking about activities that needed to be done, with associated feelings of tension and guilt. As Mary reported: "*I started thinking – my mind went into overdrive. Almost like the 'let's go to sleep mind' started happening. How can you shut the mind down? One thing leads to another thing, to another thing.*" Her statement also revealed the mistaken perception that mindfulness is about emptying the mind, or 'shutting it down'. This point re-emerged later in Mary's goal-oriented approach to the practices.

As students become more familiar with the practices, they noticed the benefits, such as feeling more energised. Luthuli revealed: "*I started with settling and grounding. It was very powerful somehow. I had a lot of energy during the day.*" When students started experimenting with the practices that seemed to resonate with them, they could experience

a calming and slowing down of their thoughts, feelings and physical sensations. Rupert found "*the breathing and counting very calming and soothing. I think when I feel tense, I lose control of my diaphragm and I breathe faster than I need to*". The body-based practices seemed particularly effective and Imogen provided a clear reason why: "*I find it easier. It's as if you have something to focus on that's a bit more tangible. It's easier to focus on the present moment by feeling those movements as opposed to just sitting and not moving at all where you just have your breath and your heartbeat.*" Kim noticed that "*the first time I did the body scan, I was very restless – my toe was itchy. This morning, it was very calming and I didn't wander at all*". Mary was surprised at how powerful mindful walking was for her: "*I almost got wrapped into what I was doing, and there was nothing else going on. I was walking and that was it. I've had that experience very rarely throughout my entire life.*"

For some, it was so unfamiliar to feel calm that it was almost frightening, while others had times of remembering when they had felt this way before, such as experiences in nature. Richard revealed an experience he had once during a holiday job: "*I had long breaks, watching trees out of the window of the kitchen watching the leaves, trying to be present just for once. It was quite scary to become fully, fully present, it's almost like you are floating in a way, you don't think about past or future, just focusing on what you can see around you. To me it felt quite weird, very unusual to be fully present.*"

The ability to calm down translated, for many, into experiences in daily life where they might normally have reacted to certain events in an emotional way, but were able to regulate their responses, or at least be able to recover more quickly afterwards. The daily life experiences also revealed a greater appreciation for simple, regular pleasures, such as hearing birdsong, or taking time to eat a meal, or shower, in a mindful way. Imogen noticed how the practices even changed her eating tendencies: "*Eating as well, I was trying to taste the syrup, I really enjoyed it. I didn't finish all of it* [her breakfast] *as I realised I was full, but usually I would, and it made me realise that we often overeat.*" Georgia enjoyed bringing mindfulness into her daily life more than the formal practice: "*The other afternoon I was baking, and I was so focused and in the moment, focusing on my breathing, and loving it and I found that a lot more, not useful, but I enjoy the feeling more than sitting down for half an hour and doing my mindfulness. I'm finding with the everyday things I'm loving it, cooking, taking walks, that I'm enjoying a lot.*"

Longer formal practices explore the ability of the mind to move between focused attention and open awareness, with an attitude of acceptance, thus creating the conditions for insight to arise. During the longer practices that combine calming with the watchful capacity of the witness that is necessary for insight, some students were able to experience the concept that 'thoughts are just thoughts' – they are not solid and do not define a person. Some were able to explore the tendency of wanting to react to every thought that comes into the mind, and then remembering that they could give themselves time to consider a skilful response, rather than an instinctive reaction. Mary shared her experience: "*It gets easier and then more difficult. You'll have a stage when your mind does diddly-squat, and then goes into overdrive, and then diddly-squat again. You can have thoughts, they are there but you don't do anything with them. It just carries on, my brain gets bored of doing nothing. It needs to do something to keep awake. It's almost just how my mind works sometimes – it can shut down, but it doesn't want to shut down.*"

Some, such as Hannah and Georgia, also experienced the transitory nature of body sensations, such as when headaches come and go, linked to emotions and physical tension. Students also experienced the restorative impact when they allowed their minds to move from analytical, focused mode to experiencing, open mode, even in the mini-meditations, such as the 3-minute Breathing Space. Even after these short practices, some felt energised. Luthuli noted insightfully, with humour, his tendency towards grasping: "*I got addicted to the 3-minute breathing space!*"

6.2.2 Compassion Practices

Compassion practices specifically aim to bring feelings of acceptance, warmth and kindness to inner experiences, particularly those associated with strong emotions. Responses to the Felt Sense of Kindness activity showed interesting parallels with levels of self-compassion. For those with low self-compassion, it was often difficult to accept kindness from others, or even to recognise times when they had offered kindness. Hannah, for example, found that, "*It was very difficult. Not so hard to think about a memory when someone was kind to me, but a little bit more difficult to think about when I was kind to someone else*". For those with higher self compassion, such as Atandwa, the practices were very affirming: "*It felt good, if felt nice, I found myself smiling. It was like I was floating and I watched it taking place. That was nice. I felt it in my body, in my heart.*"

Sometimes the acts of kindness were viewed suspiciously, with a concern that it might need to be 'paid back'. Kim, particularly, was able to see how the giving of kindness needed to come from an authentic, unconditional place, rather than a sense of duty, otherwise resentment followed rapidly after the act. Others noticed how the body sensations of kindness were the same, whether they gave or received, and this encouraged them to show kindness to more people in the weeks following the practice. Emelda noticed that "*it feels like a privilege to be able to something for someone. It really made me happy. I felt a sense of peace and felt ok*". In dealing with a challenging relationship, Georgia noted how the kindness exercise allowed an empathetic response to arise. The practice "*made me realise that I mustn't take what he says too personally because it's just him and he sometimes does things that don't make sense to me* [. . .] *It's been really good, it's just made me think a little bit differently to how I would have normally*".

Although the practice focuses on the external giving and receiving of kindness, the participants also gained the insight that they can learn to give kindness to themselves. Developing self-compassion and self-kindness were understood to be prerequisites for meaningful change in habit patterns. The Self-Compassion Break allowed for a less judgmental, or fixing, attitude during moments of difficulty. Kim realised that, "*When you acknowledge it, it felt lighter, like everything is going away. There's no resolution, like what should I do to the situation to solve it, but it makes you feel lighter. There's a sense that there may be a solution some day*". Some remembered that they were not alone in their troubles and felt a sense of connection, while others, such as Georgia, resonated with the physical gesture of the hand on the heart: "*I love the hugging sensation, I think that works and that felt good. Then I felt something in my heart. It felt a bit sore, not sore, but I could feel it, and then after a while, it felt warm, a bit of a release.*" The practice also seemed to allow students to deepen their understanding that not all problems need to be fixed – feeling ill at ease (or suffering) is part of being human and not the result of having done something wrong. Even on occasions where they felt they may have acted inappropriately, the self-compassion allowed them to acknowledge their humanity and vulnerability, and act skilfully to amend any harm done.

6.2.3 Insight Practices

Insight practices aim to reveal subtle thoughts, which are rarely seen but lock habit patterns in place. Imogen described this clearly: "*You get moments when you feel like nothing is*

going through your mind. Then when you start talking about letting your thoughts go, I realise how much I have actually been thinking and I hadn't realised before. Not because I was actively engaging with them, but they were there subversively. It's quite interesting. I wasn't as engaged with them as I usually am, following them along and jumping around, there was just something sitting there."

Insight practices use a process of reflection and enquiry to access the subtle thoughts. The main insight practice that was taught (RAIN – Recognition, Allowing, Investigation and Non-Identification) provides a process that builds on the understanding of both mindfulness and compassion. Many found the practice challenging, and even overwhelming, as the desire to fix or sanitise the pain is extremely strong in most people, particularly inexperienced practitioners who have previously suppressed uncomfortable emotions. Hannah, particularly, shared that, "*It is difficult not to let it overpower you*".

However, by shifting more to the experiences of the body, it allowed some students to gain a sense of spaciousness around the difficult emotion. Atandwa noticed her changing experience: "*I was very angry, and I said, 'let me feel this anger. Let me feel it.' But it is uncomfortable - the pressing feeling on my chest is uncomfortable. I was resisting it at the same time. My mind was just playing with me. I want to feel it; I don't want to feel it at the same time. The sensation that I'm feeling is too intense. And then this joke came along, and I started laughing and I forgot about it and I was more relaxed.*"

Others, such as Imogen, gained an understanding that the feeling is made up of a constellation of other emotions, and therefore is less fixed and tight: "*I was thinking of being frustrated with him, but realised there are so many other emotions underlying that. Like sadness, confusion and disappointment more than anger and frustration, which is how it expresses itself. Being aware of that can help to deal with it a bit better.*"

Rupert felt a release based on the principle of self-forgiveness and experienced the concept of non-identification: "*The RAIN procedure was very useful to let go of regrets of things I feel bad about, or things that have happened to you, as they don't define you*."

Those with an analytical mind found these concepts difficult to put into practice, and a longer course might be necessary to assist this type of personality in benefitting from any insight practices. The cultivation of self-compassion was necessary to allow students to

gain insight into their habit patterns without judging themselves. Bonolo provided a clear example of this: "*Most of the time, when I think about bad things, they don't even knock, they just barge in. So I've been thinking, 'how do I deal with it?'* [. . .] *At times, when something bad has happened to you, you have to be kind to yourself first before you can deal with it.*"

6.3 Difficulties with the Practices

Developing a daily practice is the most regularly reported difficulty in the MBIs, and is explored more in 6.4 below. As Hannah described so clearly, modern life privileges the quick fix solutions, while mind training is a slow and sustained practice. Initially too, most participants noted that they appeared to 'get worse', in that they started noticing the relentless arising of thoughts in the mind. This can be a very challenging aspect of the early stages of practice.

Richard pointed out the 'doing' versus 'being' mind. This is one aspect of the practices that makes it so difficult for people to begin: "*I started falling asleep. We are hard-wired as doers, not people who sit around doing nothing*", while Georgia noted this common challenge: "*I find it really hard to let go of the stressful planning thoughts.*"

Mary also noticed how the goal-orientation creeps into practice. When participants have specific expectations, such as feeling calm or clearing their minds, these are often not met: "*You sit down and do your little practice and it doesn't do what you were hoping for it to do, but you get there. I guess it changes depending on what you aim to get out, if you don't get it, you tend to get a bit negative towards it.*" Without immediate positive results, many people give up on the practices before they have had time to start seeing the benefits.

Another difficulty, as identified by Imogen, is that the practices opened her up to a greater awareness of the difficult things in life, as well as the joys: "*In the car, I was becoming aware of my body and then all the people around me. On my drive home there are so many homeless people, on every second robot, even here, and I started feeling very heartfelt for them. I always have before, but more intensely. I was trying to be a lot more present and allowing myself to connect to them. In the past I say sorry and push it away.*"

In addition, it was clear in the insight practices that people can become easily overwhelmed if they have not yet developed a basic stability in their minds. There is a

dialectical tendency of the ego-centric mind to 'catastrophise', pulling between the extremes, rather than trusting in the process of holding contradictory concepts in the mind simultaneously, such as acceptance and change.

6.4 Engagement and Commitment

An investigation into the amount of practice students did outside of group training time highlights one of the most challenging issues of MBIs – how difficult it is to motivate participants to develop a formal daily practice. Table 6-3 below was compiled from interview information and feedback during the group sessions. The length of each practice and times per week were not systematically recorded, which would be a recommended addition in subsequent research.

Name	**Practices**	**Times per week**	
		During Course	*After Course*
Luthuli	Formal sitting/ Body scan	3-4	1-2
	Mindful walking/self-compassion	Daily	1-2
Imogen	Formal sitting/yoga	4	4
	Informal practice/walking/eating/talking	Daily	Daily
Georgia	Informal practices	Daily	Daily
Hannah	Body scan	3	2
Mary	Formal sitting	3	0
Atandwa	3-min breathing/walking	Daily	At times of stress
Sipho	Informal practices	Daily	At times of stress
Emelda	3-min breathing/kindness	2	1-2
Rupert	Formal sitting	2	0
Nicholas	Awareness of breath	At times of stress	At times of stress
Bonolo	Breath awareness/walking	At times of stress	At times of stress

Table 6-1: Amount of Formal and Informal Practice

It was not possible to make conclusive generalisations from the above data, but by combining this data with information from the portraits, it did appear that the more often student teachers practiced, particularly utilising the formal sitting practice, the more they claimed to benefit. Georgia focused more on informal practices, but continued her motivation to practice even after the MBI ended, and she reported satisfactory benefits from this approach.

Sipho only attended the first session, yet still felt that he had benefitted considerably, as he described his understanding of mindfulness as his 'missing jigsaw piece', expanding his awareness of things going on around him. Nicholas attended three sessions, and then had to go to Limpopo for the university holidays, but supplemented his practice with reading about the concepts and YouTube downloads. Reading gives a clearer intellectual

understanding of the concepts, but does not ground them in experience. In addition, he was very open to this type of modality, having previously attended Bhakti yoga classes at the university, and read the works of Eckhart Tolle and Wayne Dyer, both very strong advocates of present moment awareness and meditation techniques.

Despite Rupert's strong experience of being '*fully, fully present*', he felt that mindfulness for him was not life-changing and he did not continue with the practices after the course, yet his interviews revealed some interesting findings. His period of illness allowed him to see how he normally ignored his body. This allowed him to experience a sense of gratitude for a state that was previously taken for granted. This aligns with Thich Nhat Hahn's insight that we normally only notice pleasure and pain (1999). Once we become aware of neutral experiences (like a non-toothache), then the seeds of joy in daily existence are able to germinate. Rupert also saw the impacts of mindfulness retrospectively, suddenly realising that he had not lost his temper whilst driving for a long time: "*Now that I think about it, I think that I'm not as irritable when I'm driving. Like before I would hoot and scream and swear, now I'm just like I drive past, slow down, don't bother as much anymore.*"

6.5 Intention and Motivation

Several papers, and books from the Buddhist literature, summarised in the Literature Review [2.4.1.1 and 2.6.7], stated the importance of participant intention, motivation and commitment to mindfulness as a practice, if it is to have any long-term impacts on people's experience and behaviour. To this effect, students were asked to consider their personal intentions and reasons for taking part in the study. Several students mentioned how stressed they were at the time of the initial presentation and were looking for appropriate coping strategies.

During the first mindfulness session, students were asked to focus on their intention for doing the course and give feedback to the group. They were also invited to write this down as a homework activity, and twelve of them submitted their intentions at the next training session (Table 6-2). The intentions varied, and were categorised through the lens of Shapiro's research (1992), as falling into self-regulation, self-exploration and self-liberation. I took self-regulation to mean controlling an aspect of the self in some way, such as strong negative emotions, such as anger or anxiety. I defined self-exploration as a

sense of opening into the present moment in order to improve one's awareness of thoughts, feelings and physical sensations, and habitual tendencies. And I defined self-liberation as a wish to move beyond the confines of the ego-centric self, in order to help others.

Name	Stated Intention	Level of intention
Bonolo	Mindfulness is useful although I found it unnecessary in the beginning. I am saying this because one may not stop thinking about things I do or must do but I found it useful for my consciousness and relaxation. I don't struggle to relax myself even when I am under pressure and with mindfulness, I will have new ways of relaxing myself.	Self-regulation
Hannah	I cannot keep going the way I am. I am a horrible person to be around and get irritated very easily – I am increasingly bitter and angry and that makes me more bitter and angry and I HATE THAT!!!!!	Self-regulation
Hannah (2)*	I want to be happy. I want to live in the present. I want to be satisfied and content with my life. I want to be accepting and tolerant of people. I want to be fulfilled. I want to be kind to myself. I want to be accepting of myself.	Self-regulation
Kim	I want to find a way to relax and focus so once I am relaxed I can fully focus on tasks ahead. Hopefully this will help with my procrastination which in turn reduces stress.	Self-regulation
Mary	To find a way to de-stress. To be less self-absorbed when I shouldn't be.	Self-regulation
Nicholas	I want to be more present, to be aware and pay attention to whatever it is. Hopefully it will help me to connect with people more because whenever I have a problem, when somebody is speaking, I tend to think how am I going to respond instead of paying attention.	Self-regulation Self-exploration
Rupert	I want to develop mindfulness so that I can strengthen my ability to make the most of my current situation instead of wishing that I was already in a place or situation that I strive to be in.	Self-regulation Self-exploration
Emelda	I need to learn to quieten down. I need to be able to not engage all my thoughts, to be selective of what to pay attention to.	Self-regulation Self-exploration
Luthuli	To learn to relax from too much worry and be able to focus on the present. To learn to focus on what I need to do at the present moment, to be attentive to the present and able to concentrate.	Self-regulation Self-exploration
Charles	I wanted to be in tune with my inner being, that's what I miss most, more than anything else.	Self-exploration
Sipho	To be able to spiritually and emotionally manage myself. To be able to learn skills on how to strike a balance between my personal and professional life. To learn how to stimulate others and lead and interact with them better.	Self-regulation Self-liberation
Georgia	I am someone who feels stress very easily and is always worrying about the future. I would like to develop mindfulness in order to be more relaxed, control my emotions and live in the present. I would also like to have a more positive impact on those around me.	Self-regulation Self-exploration Self-liberation
Imogen	I believe mindfulness is a powerful tool for creating a more conscious, peaceful and joyful life. It filers into every area of one's life, positively influencing those around us – within the field of teaching one can learn to enjoy each moment, overcome stress and live more presently.	Self-regulation Self-exploration Self-liberation

Table 6-2: Student Teacher Intentions for the MBI

* During an interview, Hannah was asked to reword her intention using positive rather than negative language, in line with contemporary 'intention' research (McTaggart, 2007).

It became clear throughout the data collection process that the clearer the intention and volition of students, the more they gained from the MBI. Students such as Hannah, Georgia, Imogen and Luthuli who made mindfulness part of their daily lives (either with formal or informal practices) started to move beyond stability to an ability to reflect on their experiences in an open-minded way. Others, such as Atandwa, who had a specific

goal (becoming more focused) were able to reach that goal, and sometimes move further. Those whose intentions were other-focused, such as Ophelia and Bonolo, either dropped out of the MBI, or showed little change over the 6 weeks.

Sipho, Georgia and Imogen noted self-liberation aspirations in their intentions. Sipho only attended the first week of the training, thus limiting the change effects of the intervention, but it was interesting to witness that Georgia and Imogen were the two participants who appeared to gain the most insights throughout the process in all aspects of their personal and professional lives.

During session 1 of the training, some students gave a more detailed understanding of their intention. Mary thought that, "*it was a good extra-curricular activity to take part in, besides which I thought it would, could help alleviate the stress, which given that I'm so stressed most of the time, I thought maybe of benefit*". Imogen stated that, "*I'm really interested in everything you spoke about. It resonated with me especially because of my experiences in the past and how I was brought up. I truly believe in the power of mindfulness meditation* [. . .] *I was very surprised at your presentation – I never expected something like that in an academic setting*".

Two of the students expressed an interest to help the researcher. Ophelia noted: "*I actually just thought it was cool and I wanted to help you*." And Bonolo said that, "*First of all, it's for your benefit, and secondly, society is changing* [. . .] *I believe it's useful to know what type of thinking do we breed in our generation, and how do we change it for the future generation*". As Ophelia's initial motivation had been external, rather than internal, it did not strike me as surprising when she later decided to pull out of the study due to work commitments.

It was interesting how the different student's intentions appeared to influence their commitment to, and engagement with, the MBI. For students like Bonolo, Hannah, Mary and Nicholas, who wished to use mindfulness for self-regulation, specifically stress relief, they felt they benefitted sufficiently from understanding the concept of mindfulness intellectually, and did not develop a formal daily practice. They reported how they would use mindful breathing, or maybe the body scan at times when they were feeling stressed, both of which helped to ground them in the present moment, and bring a reconnection with the body.

For students such as Georgia and Imogen, mindfulness became a significant part of their daily lives, and they started to engage with the stage of self-exploration. As Imogen reported, this stage can be challenging, as she started to see her own, and other people's, habitual patterns in a clear light. She noticed how feelings become more intense as she allowed them to arise, rather than push them down, such as at the traffic lights, when seeing the suffering of the homeless. She experienced, though, that when she allowed feelings to arise, they appeared to be intense, but then released themselves quickly. She also became aware of wanting to help other people when she could see that they were creating the conditions for their own suffering, but realised wisely that they would first need to recognise their personal responsibility.

6.6 The Group Process

Hannah and Bonolo referred explicitly to having benefitted from the group process. Hannah revealed how she felt a sense of connecting with other people's challenges, as well as her own: "*I got to make new friends as it were, and it did show me that I'm not the only one. Everyone has their own set of issues or circumstances that affects them because you do tend to feel really alone.*"

Bonolo noticed that the mindfulness training had opened him up to making friendships across cultural barriers, with other people on the course. He would come to the sessions expecting to keep quiet about the issues that were troubling him, and then find them "*slipping off my tongue*", and releasing the burden by sharing his concerns.

With the MBI presented as an adult education opportunity, rather than a group therapy intervention, it provided the opportunity for many of the therapeutic factors of group therapy to be accomplished. The main therapeutic factors (Yalom & Leszcz, 2005) that were identified were universality, imitative behaviour, cohesiveness, interpersonal learning and self-understanding. Recognition of shared experiences among the group members revealed that most challenging emotions and suffering are universal to humans, whatever the external causes, and this broke down the barriers of race and culture. In addition, and equally important, shared experiences meant that students could reappraise their feelings of isolation. Hannah, particularly, talked about this heightened sense of connectedness, which helped her realise that she was not alone in her struggles. Students also commented on the cohesiveness of the group, and despite not knowing other students well on the PGCE

course, they felt a sense of belonging, acceptance and validation. Group members also achieved better self-awareness by interacting with other members of the group. Through the practices and the group enquiry sessions, participants gained insight into the origin of their problems, and were able to take greater responsibility for them, without blaming themselves for the past.

6.7 Emerging Themes from the MBI

The themes emerged from the individual transcripts of interviews and practice sessions, and have been consolidated into seven superordinate themes. The first two reflect the primary intentions of the MBLC course – the development of mindful awareness and compassion. These are outcomes in and of themselves, yet also act as mechanisms for further change. The following five are secondary outcomes of the training.

6.7	**Themes from the Mindfulness Based Intervention**	
	Superordinate Themes	Subordinate Themes
6.7.1	Presence and awareness	Vivid perceptions
		Greater concentration
		Clear and boundaried
		Aware of the environment/not taken by surprise
6.7.2	Kindness and compassion to self and others	Improved sense of well-being and self care
		Not so hard on myself/don't beat myself up
		Reduction in secondary suffering
		Sensitivity to the suffering of others
6.7.3	Emotion regulation	Not suppressing feelings as much
		Able to witness and label emotions as they arise
		Not so reactive to situations
6.7.4	Behavioural flexibility	Less need to be in control
		More relaxed in uncomfortable situations
6.7.5	Reconnection with the body	Increased awareness of breath and physical sensations
		Sleeping and eating better
		Increased energy
		Able to relax after traumatic events
6.7.6	Sense of perspective	Not taking things personally
		Less self-imposed pressure
		Ability to approach rather than reject difficult situations/feelings
		Awareness of overwhelm
6.7.7	Connectedness with others	Feeling less isolated
		Ability to use a support network
		Feelings of connection with the group

Table 6-3: Emerging Themes from the MBI

6.7.1 Presence and Awareness

A variety of themes emerged related to the area of presence and awareness, both in the student teachers' personal lives, and their experiences on TE and the academic course. The qualities of vivid perception and improved concentration have been noted in other mindfulness research, whereas the other themes of feeling clear and boundaried in the classroom, and aware of the surrounding environment had particular relevance for Teacher Education, and the context of Gauteng respectively.

Cognitive awareness is the ability to engage with the world of experience without distorting it through conceptual assumptions, opinions or ideas. Developing this faculty meant that some students noticed greater clarity, and appreciation of the small joys in daily life (such as bird song or tasty food). For Atandwa, awareness allowed her to regulate her tendency to distraction and to notice daily life more vividly: "*Just being aware* [. . .] *I'm actually aware of noises, sounds, chirping birds. It's amazing! They make such beautiful sounds. Just loving that, being aware of all that*." Rupert also recalled a vividness of perception in relation to the outside world, which he would normally not have noticed in 'autopilot' mode.

Other students (notably Georgia) identified this clarity as moments of knowing, where their previously held beliefs dropped away, and they were able to see the truth of a particular situation more clearly. These sudden moments of cognition eased students' preconceptions, allowing them to act appropriately, in the moment. This could be of enormous benefit in the school situation, enhancing the skills of situational, rather than dispositional coping.

The ability to sustain one's focus on the present moment was challenging for all the students at the beginning. However, several students, such as Kim and Georgia, noticed how persevering with these simple practices allowed them to concentrate for longer, or with a great sense of ease, on academic assignments. Georgia reported how she, "*did it* [the settling practice] *a while ago before I started writing an essay, and I realised that I was so much more clear, I knew what I wanted to say, everything was organised in my mind, and I worked so fast I couldn't believe it so I can see how it is beneficial, but it's just to get over that mindset that I'm doing nothing*". Bonolo noticed how he was able to concentrate better

during lectures. These findings are relevant and important for teacher education, in that they suggest improvements in students' study habits.

Imogen, Georgia, Emelda and Sipho gave interesting examples of times when they had felt a sense of confidence and clarity in the classroom situation, which allowed them to respond to challenging learners in an effective, boundaried way. Sipho described how, "*I think whoever you are, whatever stage of life you are in, you need to be there, in the present, alert. Obstacles and opportunities are always there instantaneously. It helped me handle naughty learners who were trying to put one up. I'm there, I'm alert. I'm still a young person but I can see you. Whatever tricks they'd try, I'd be almost aware. I wasn't threatened by them. Some of them would give me strange stares all the time, but because of the breathing, I wasn't under pressure*".

Both Sipho and Bonolo talked extensively of how awareness kept them safer during dangerous incidents in the townships where they lived. Sipho had discovered a quality of intuition, so that he felt able to notice changes in the environment as they were happening: "*Even some of the most adverse situations that I've faced recently, I've been able to deal with them, because of the presence of the mind, because of the breathing. I'm not caught napping, so to say.*"

It was interesting how the quality of awareness allowed different students to address their own unique areas of difficulty as they became more able to notice their habitual responses and choose whether or not to change their approach. These aspects are explored more in the following sections.

6.7.2 Kindness and Compassion to Self and Others

The second area of focus, Kindness and Compassion, was reported as equally, if not more, important for many students. As with the theme of Presence and Awareness, some of these findings reflect other research studies, while the unique context of South Africa, where many students are experiencing threats to their basic human needs, gave extra weight to the necessity for enhancing the dispositional trait of self-compassion.

Luthuli's portrait provided a particularly vivid case for the development of self-compassion. He was coping with financial hardship, recovering from addiction, as well as holding extremely high expectations of himself. The self-compassion concepts, and

practices, were transformational for him. The mindfulness course helped him to understand the difference between authentic physical/emotional pain and the adventitious mental suffering that is described as operating on a 10:90 ratio. Buddhist teachers use the story of two arrows to illustrate this. In any human life, it is inevitable that pain is experienced in such situations as sickness, financial hardship or the loss of a loved one. This is the first arrow that is shot into a human's heart and causes authentic physical and emotional pain, which cannot be avoided. However, when most people experience this pain, they cope with it in maladaptive ways, such as suppression, avoidance or overidentification and analysis – 'why me?' This second arrow is the mental suffering that exacerbates the pain caused by the first arrow. This mental suffering is usually experienced as a result of coping dysfunctionally with pain, or stress, and results in stress responses or chronic symptoms, which then require longer term interventions to alleviate (such as therapy). Luthuli described being able to let go of a stream of secondary stories, which only served to exaggerate the authentic pain he experienced, and allow himself to focus more kindly on the genuinely painful experiences that he was dealing with. He was working towards forgiving himself for what he considered to be his past mistakes.

Hannah, Georgia and Luthuli talked extensively of the driven quality of their behaviour, and their tendency towards perfectionism and guilt, while Nicholas mentioned the pressure of other people's expectations. All of them reported that the compassion element was particularly beneficial for them at their moments of stress. Other students, such as Atandwa, who had coped with challenging childhood circumstances, experienced fewer feelings of judgement towards herself, and also towards her family members who had acted in hurtful and unskilful ways. She realised that their behaviour was a result of their own suffering and was able to acknowledge that they are human, and therefore allowed to make mistakes. She forgave many of the incidents from the past, with a remarkable quality of acceptance. The concepts of compassion and self-acceptance were particularly influential for Nicholas: "*I'm not too judgmental on myself as I used to. I will do something and I will just realise that it happens as part of life, but I wouldn't say, 'I shouldn't be doing this, shouldn't be doing that.'* [My critical voice] *is less powerful.*"

Once Hannah and Georgia allowed themselves to give higher priority to self-care, they experienced improved well-being. Hannah's exceptionally high stress levels were eased significantly during the intervention, which she attributed to doing the Body Scan practice

and she also gave herself permission to go on holiday, without her laptop, and focus just on enjoying the present moment. Georgia identified how demanding she is of herself: "*I think I realise how beneficial it is now to take time off for yourself, which I never did previously. I was always sort of over-motivated and over-striving, and burn myself out in doing so.* [. . .] *Mindfulness has been great in that way, and cultivating things I enjoy instead of 'No, it's a guilty pleasure; I should be doing this instead'. And there's more to life than just getting straight As. You have to nurture yourself as well and what you want to do in life, and what makes you happy.*"

6.7.3 Emotion Regulation

The development of the witnessing quality of awareness, and the accepting quality of self-compassion were significant mechanisms of change for students, particularly when it came to emotion regulation. Some found that they moved from reactivity towards more effective regulation, while others were able to acknowledge and accept their emotions, rather than suppressing them. Several examples from the research data supported the work of Chiesa et al (2013) in terms of 'bottom-up' and 'top-down' emotion regulation.

Mary's portrait gave detailed evidence that she felt more able to witness emotions as they arose, rather than suppressing them completely, or shelving them for a time when she felt more able to cope. In this way, the emotional tension did not build up to such a great extent.

Several students, such as Georgia, Luthuli, Sipho and Emelda talked about not taking situations so personally, when they were able to see more clearly what was happening around them, particularly in their TE schools. They often used mindful breathing as a way of initiating a 'top down' change, where they felt strong emotions arise, but gave them space through taking a few mindful breaths. This resulted in a moderation of their emotional response, which meant they were less reactive to external situations or internal triggers. Nicholas reported: "*It has been very much* [useful]*, because sometimes when I encounter the stressful situations, I would do the breathing exercise, so those are the exercises that I do, especially when I panic or think a lot about things, so I use the breathing exercise. In that regard, it has been helpful. Especially when I am panicking and I have to refocus.*"

Georgia's example of her frustration with the university during TE was a good illustration of a 'bottom up' change. She surprised herself with how much she had changed, without consciously having to regulate her emotional response.

6.7.4 Behavioural Flexibility

Many students referred to their personality characteristics, such as perfectionism, which made them particularly vulnerable to stress, especially when applied to all stressors, rather than dependent on the situation. These dispositional traits appear to be coping strategies, developed in childhood, to deal with the demands placed upon the child. Many of these characteristics are no longer useful, and the mindfulness training provided an opportunity to bring awareness to these tendencies, so that a choice could now be made in terms of maintaining them, or releasing them.

Georgia talked about her greater sense of flexibility in the classroom during her second TE. In her first TE, she had exhausted herself with trying to be perfect, and in control, on all occasions. During her second TE, she suddenly realised that the classroom atmosphere was not entirely within her realm of control, and she witnessed an ability to relax with the situation as it was, and drop her resistance: "*I found the more rigid I was, the more they were trying to fight against me, you know, get their own control of the classroom. If I was a little more relaxed, they were like ok, this is fine, we'll do the work. It was nice to realise that*."

Mary referred more to her ability to manage her own emotions in a less controlling way: "*Allowing things to be and just not trying to fix it, or over-obsess about it. Overall, I'm just a lot more relaxed at this stage, not obsessing about what has to be done, when it has to be done by, that sort of things.*"

6.7.5 Developing a Sense of Perspective

Improved awareness and self compassion also appeared to allow students to develop a sense of perspective, not taking things so personally. Through this ability, they were able to deal more appropriately with stressors and not identify so strongly with the thoughts and emotions that arose.

Emelda's narrative gives a clear example of her own inner process during micro-teaching, and her growing courage to approach rather than reject difficult feelings or situations: "*I*

was doing a teaching prac in class, in the Maths class. In fact the lady before me couldn't do her teaching prac because she was panicking because they tend to be very critical. [. . .] *So one time I was teaching and then I was doing very well, although I know that it is not my strong point because it was not my major subject, and then one of the students stood up and said, 'That's mathematically wrong' and then went to the board and was explaining. I immediately stopped, and I kind of brought myself to this moment and said this is not about me, and it was one of those focusing, and I narrowed down to what he actually said, and what is actually happening. I think it is somehow linked to mindfulness because I had to step away from the situation. Even this lady who was after, when now giving comments, said, 'If I was you I would be crying' and I said, 'But it wasn't about me, he didn't say I was stupid or anything, he just said he has a better solution.' So I think it helped me in situations like that, and I definitely think it is going to help in the classroom as well.*"

When dealing with the academic and TE demands, several students spoke of attending to tasks in a relaxed way, one at a time. In this way, they were able to put less pressure on themselves, and accept when things were 'good enough'. Georgia described working to find balance and a broader perspective: "*I stress about not putting enough into it, but then I know that if I do it the way I was, it's not healthy. Mindfulness is better all round long term, but I still need to accept some things, it doesn't always have to be 1000%. I have to accept that a bit more. I am enjoying it when I am doing things a little bit more relaxed.*"

6.7.6 Connectedness with Others

Initially some students, such as Charles and Luthuli, talked of isolating themselves from others during times of difficulty, while others would rely heavily on their social support network, venting their frustrations, rather than taking personal responsibility for their response to external events. Mindfulness seemed to allow them to find a healthy level of connectedness with people, neither relying on them in total, nor rejecting the help of others. This enhanced their ability to take responsibility for themselves, in a compassionate way, and also allowed them to develop empathy for other people.

Bonolo and Hannah made specific reference to the benefit they gained from the group approach to mindfulness training, as it reinforced their understanding that everyone experiences both joy and sorrow, no matter what their material circumstances or cultural

background. This was a particularly noteworthy finding in the South African context, where the legacy of apartheid is still very visible.

6.7.7 Reconnection with the Body

The simple calming practices allowed participants to reconnect with their body, which automatically brought them to the reality of the present moment. They could witness authentic physical pain (as illustrated by the story of the two arrows), without allowing it to be exaggerated by adventitious mental suffering. In addition, regulated breathing allowed them to stimulate the relaxation response of the parasympathetic nervous system, therefore accessing a sense of calm.

Rupert noticed much greater body awareness alongside his increase in general awareness: "*I can feel the effects now from the course, for example, I definitely think I'm rushing less and not as rigid about deadlines and I'm more body aware. I've been doing less overeating. Also my posture, I'm not like this* [bent over] *all the time, with my back twisted like this. I'm also more appreciative of small things like a nice warm day, a nice breeze.*"

The body scan practice allowed students to calm their body and mind before sleep, allowing them to sleep more deeply and wake up more energised. Luthuli gained this result even from a short meditation practice such as the 3-minute breathing space, and was surprised by how invigorated he felt. Hannah, Georgia and Mary, who regularly suffered from migraine headaches reported improvements in their way of managing them. After the intervention, Bonolo reported quicker recovery times after stressful events, such as his experiences in the township bar, and at the bus rank, when the police raided the illegal traders. He became more aware of his body's responses, particularly his heartbeat, and was able to witness it calming down after a few minutes.

6.8 Discussion

Monitoring the impact of an educational or psychological intervention requires a careful look at three factors: outcomes, effectiveness and change process (Elliot, 2002). For this study, this involved exploring whether the group of students had actually changed, through their self report scores and their own perception. It involved looking at whether the mindfulness training intervention was generally responsible for change, or could have been a result of expected student teacher development over the course of their PGCE. Finally, it

involved looking at what specific factors (within the training or outside it) were responsible for change and which specific processes mediated change.

The sections above draw extensively from the verbatim accounts of participants, as well as the statistical data from the self report questionnaires, and are, therefore, as objective as possible in terms of gauging the outcomes. These data sources provided strong evidence to suggest that the student teachers benefitted in multiple ways from the MBI. Even a student such as Rupert, who did not feel that the training was '*life-changing*' reported many observations of how he was relating differently to his body and his outer environment, and feeling less tense while he drove. All the other students gave very positive examples of ways they had found to relieve their stress, while also gaining insights into their habitual tendencies that played a significant role in predisposing them to stress.

The ways in which they benefitted appeared to depend on their intentions, their engagement and commitment to the practices, and the specific practices with which they resonated. Those who engaged extensively, and developed formal or daily life practices, reported increased awareness and self-compassion, which in turn, allowed them to develop beneficial habits of mind. Those who engaged less actively, still reported a greater connection with their body, which helped them relax and calm down at times of difficulty, but did not allow them much opportunity for self exploration.

A frequently raised concern, when investigating psychological changes as a result of interventions, is the possible bias by self-selection. Were these students especially stressed, compared to their counterparts, or were they more capable of making choices to ease their stress? The comments from participating students suggested that their colleagues on the PGCE were just as stressed as they were, or even more so. Imogen noted how "*Half of my friends just drive themselves crazy.*" The students who took part in the MBI were perhaps more willing to address their experience of stress and take personal responsibility for finding solutions to it. Atandwa's portrait gave her opinion that her friend would not have considered giving up teaching as a profession, if she had been able to access the skills taught during the mindfulness training. Georgia, too, referred to reminding a stressed-out friend that she could also have taken the MBI. These comparisons with other students also pointed to the conclusion that it was the MBI that allowed changes to take place, and not just a result of development through the PGCE course. However, these findings can only

be confirmed through a larger-scale control group intervention, which would be a useful direction to take future research in this field.

Roeser et al's Logic Model [2.4.4] made theoretical assumptions about the way in which mindfulness training, and the development of particular habits of mind, could improve teacher (or student teacher), classroom and student outcomes. The student teacher accounts of their TE provided some evidence for the sequence, and underlying assumptions, of the Logic Model. Depending on the engagement with the MBI itself, and the daily life practices, students started to experience improved mindfulness and habits of mind such as emotion regulation, behavioural flexibility, a sense of perspective and feelings of connectedness. These allowed them to counteract certain personality characteristics that predisposed them to stress, such as emotional volatility, rigidity, perfectionism and taking things too personally. Several students, such as Imogen and Sipho commented explicitly on how their understanding of mindfulness, particularly the two skills of focused attention and open awareness, enabled them to manage the classroom effectively. Georgia talked of how her willingness to be less controlling and more flexible improved the interpersonal climate in the classroom, and how the students started to be more honest with her about their difficulties. Luthuli, too, found that by enhancing his own understanding of compassion, he was able to give clear guidance to schoolchildren in his care who were experiencing difficulties, while Emelda reported how certain students who behaved badly with other teachers, responded well to her clear and boundaried approach. The research design does not allow for conclusions to be drawn on the final element of the model, student outcomes, but this would be an interesting direction to take future research.

Although these improvements were not described by every participant, the majority reported an increased awareness of themselves as teachers, and a willingness to reflect honestly on their performance. Mindfulness appears to be a contributing factor assisting students to move along the Learning to Teach development models – from survival mode to the joy of teaching. The Four Stages of Competence model (Adams, 2009) bears a strong relationship to these findings and is a useful model in terms of teacher education. The model proposes that people move from unconscious incompetence, through conscious incompetence and conscious competence, finally attaining unconscious competence. Student teachers moved from unconscious incompetence, to conscious incompetence in terms of their awareness of their inner environment. This can be an uncomfortable stage,

and was supported by the self-compassion practices. They then started to develop skills of mindful awareness, and experienced conscious competence when using specific practices (such as the self-compassion break) at times of difficulty. Although not evident in this study, it can be anticipated from other research that with commitment to practice, these young teachers could move to the final level of unconscious competence, where their teaching, and personal lives, can become imbued with mindful awareness and compassion. This is the assumption underlying Roeser et al's Logic Model (2012) with regard to the development of habits of mind in teachers, and shows how the higher levels of competence produce beneficial classroom and student outcomes, thus enhancing the well-being of teachers.

CHAPTER SEVEN: A DEVELOPMENTAL MODEL OF MINDFULNESS

7.1 Two Contrasting Uses of the MBI

Emerging through the interpretative phenomenological analysis was the extent to which different students resonated in different ways with the mindfulness training. Most utilised the practices for stress management and emotional self-regulation, while a few explored their own personality characteristics more deeply in order to develop dispositions that were beneficial for their personal and professional lives. Initially, I was surprised that few students seemed able to access the deeper insight aspects of the training (in contrast to other adult MBIs I have taught). However, once the stress scores were revealed, it became clear that students needed first to relax their bodies and stabilise their minds, through regular simple practices, before they could become aware of the habitual tendencies that are often the underlying causes of stress. Through this phenomenological study, it was seen how the context and process worked together in the students' use of mindfulness. Their internal stressors, external stressors, and pre-existing coping strategies shaped the context. Their process was determined by which practices they resonated with, how often they utilised them, and for how long.

These observations laid the foundation for conceptualising a developmental approach to secular mindfulness, which may serve to advise the facilitation of MBIs in new contexts, such as teacher education institutions and school classrooms. The classical Buddhist texts give detailed guidance on the stages of development in meditation, both in concentration practices and insight practices, although these have traditionally been kept for the eyes of teachers only, and not shared with practitioners. Developmental stages have hardly been explored in the secular academic literature, with a few notable exceptions (Brown & Engler, 1984). An understanding of the graduated series of practices could be highly

beneficial for alleviating stress during times of difficulty and for enabling on-going growth in human potential.

7.1.1 Mindfulness for Stress Management

The findings from student interviews revealed that they used the mindfulness practices in two distinct ways: for stress management and for development of beneficial dispositions. The former was the most common with this cohort, where they acquired techniques to help themselves through periods of stress. The body-based coping strategies were reported as beneficial, as student teachers were able to alleviate the physical manifestations of stress, such as by using mindful breathing, or the body scan, in order to relax, to sleep better or for top-down emotion regulation.

One significant finding was that student teachers identified wide-ranging causes and experiences of stress, yet a single preferred mindfulness practice enabled them to cope, and was put into practice even after the first session of the MBI. These palliative coping mechanisms provided them with ways to address the physical and emotional stress responses, whatever the actual stressor. A further insight was that even the most basic improvements in awareness provided opportunities to engage with the external environment with more vivid perception. In Johannesburg particularly, this finding has important repercussions in terms of personal safety, where students could learn to 'Be aware, not afraid'. This finding supported the work of Zeidan et al (2010) who have studied brief interventions aimed at improvements in cognition, and still found them beneficial (in the short term, at least).

Several students still revealed that they were overwhelmed during their teaching experience, and were only able to remember their mindfulness practices in the later stages of TE (Imogen), or after it was over (Atandwa). Some even commented that they were unable to use any of their familiar coping strategies when they felt inundated by the emotional intensity of certain experiences during teaching experience, academic stress and at times of trauma. For teachers, then, the development of dispositions beneficial for teaching, such as presence, awareness and compassion need a longer commitment in order to become trait qualities, and provide the benefit of developing new habits of mind.

This has implications for the length of training required to develop mindfulness as an instinctive habit, rather than a palliative coping strategy. In the secular Western literature,

mindfulness has mainly been viewed as a type of stress-reduction or psychotherapeutic intervention (Brown & Engler, 1984). This contrasts with the Buddhist literature, which acknowledges the slow (lifelong) unfolding of these practices:

> *It is said to be an extensive path of development that leads to a particular end: total liberation from the experience of ordinary human suffering and genuine wisdom that comes from true perception of the nature of mind and its construction of reality. (Brown & Engler, 1984:261)*

7.1.2 Mindfulness for Dispositional Development

Through the students' voices, it became clear that mindfulness has the potential to be an intervention that can support the development of beneficial dispositions, once pre-existing habitual tendencies have been revealed and evaluated with an accepting attitude. This could have far-reaching impacts on the lives of student teachers, teachers and the children in their classrooms (Singh et al, 2013). The renewed focus on dispositional development – the person of the teacher – in North America (Miller, 2014; Soloway, 2011) adds weight to initiatives that can support student teachers in their personal growth, and recognises the truth in the quote, "Consciously, we teach what we know; unconsciously we teach who we are" (Hamachek, 1999:209). The results are promising worldwide. For student teachers who committed to formal or informal daily practices, the study produced evidence of the benefits of mindfulness for both their professional and personal development.

Students such as Imogen, Georgia, Atandwa, Emelda and Rupert reported improvements in the dispositions that enhanced their presence and performance in the classroom, such as an improved sense of perspective, feelings of connectedness and empathy, engagement with their students, behavioural flexibility, and authenticity. Students such as Hannah and Georgia also described an improvement in skills that enhanced their sustainability, such as self-care and improved resilience. In terms of their engagement with the teacher education course, student teachers such as Georgia and Atandwa reported improvements in their study habits and capacity for self-reflection.

These findings reinforced the work of Chiesa et al (2013), where differing amounts of mindfulness practice appeared to affect emotion regulation from the top down, or the bottom up [2.3.4]. Initially people are able to regulate emotions from the top down, using stress management techniques to calm themselves down at difficult moments. Others, usually after longer periods of practice, noticed bottom up changes in their emotion

control. Georgia's account of her time of conflict with the university reinforced these findings, where she described herself both consciously keeping herself calm, but also noticing that she was behaving in ways that appeared different from her more familiar behaviour patterns.

7.2 Mindfulness for Growth and Development

In a traditional Tibetan Buddhist context, children (predominantly boys) were educated in monasteries. Mindfulness practices formed part of their holistic education and were designed to develop ethical values and practices for acquiring inner happiness, as well as improve their ability to learn numeracy and literacy (Thurman, 2006; Bangsbo, 2004). In the Western world, most mindfulness practitioners begin their interest in the practices as a response to periods of difficulty, such as mental or physical illness:

> *Many people come into mindfulness-based groups as the result of a crisis – a difficult life transition, an illness, a loss – for which they do not feel they have sufficient internal resources or even compensatory social support. They are suffering, and are met with the promise of transformation if they will engage with the curriculum. (McCown et al, 2011)*

In this way, secular mindfulness has predominantly been used as a curative, rather than a preventative process. Moving mindfulness from the medical arena back into the world of education therefore makes an implicit shift, from recovery, healing and cure to prevention, growth and development. Doctors and psychologists, for the most part, see patients who are unwell, and stop seeing them when they have regained their former equilibrium, or developed the skills needed to prevent relapse. Teachers, however, have a longer-term commitment to the growth and development of their students.

The purpose of education is a contested topic, but within a humanist, constructivist framework, 'education', as a concept, implies the drawing out and development of certain understanding or faculties, such as the innate (though often dormant) traits of mindfulness and compassion, through experiential facilitation. Education is also a way of responding to the challenges of each generation, and learning from history. The belief that mindfulness can be developed, and can assist young people to find coping mechanisms for the fast pace of modern life, has resulted in a range of MBIs targeted at primary school children, right through to those at tertiary institutions, as well as the teachers themselves (Meikeljohn et al, 2012). Many educational institutions have initiated programmes that can offer their

pupils techniques to cope with daily life difficulties in more adaptive ways. These initiatives are designed so that mindfulness practices can assist in preventing pupils from going through periods of prolonged suffering or mental psychopathology.

The positive psychology paradigm (Seligman & Csikszentmihalyi, 2000), which parallels traditional Buddhist mind training, further lends itself to a developmental approach as it shifts attention away from pathology, to the development of human potential and well-being. With this philosophical underpinning, a developmental model gives an overview of the stages of growth possible, dependent on the individual and the relevance of the practices taught at different stages. However, developmental trajectories rarely take the form of clean-cut stage models, where steps are clearly defined and experienced, and one stage is left behind as a new one is achieved.

7.3 A Developmental Model of Mindfulness

For the purposes of clarifying which types of mindfulness practices may be most relevant in different developmental stages, and for different communities, I have developed new concepts: a) ***Restorative* mindfulness**, b) ***Dynamic* mindfulness**, and c) ***Transformative* mindfulness**. In this context, *restorative* implies the ability to regain, or come into balance so that growth can take place. Research from the medical community mainly falls into this category, as mindfulness practitioners find the ability to return to a state of health after conditions such as stress, panic attacks, anxiety, chronic fatigue, fibromyalgia, anorexia etc. (Grossman et al, 2004). *Dynamic* mindfulness, in contrast, is characterised by constant change, activity or progress and may be utilised with non-clinical populations, or within education, utilising practices and concepts that are relevant to the developmental stage of the child or young adult. *Dynamic* mindfulness can also develop out of restorative mindfulness with clinical communities, given sustained practice and an increasing stability of the mind. The term *dynamic* does not suggest a linear development, but a constant movement and deepening of awareness and self compassion, with the secondary effect of improving skills, particularly attentional, cognitive and emotional, such as working memory, resilience, flexibility, or interpersonal skills. Mindfulness from a Buddhist perspective is a path of liberation, providing the opportunity for an individual to transcend beyond a dualistic perception of the universe. There may, therefore, be a third category,

transformative mindfulness, but no evidence of this was found through the current research study.

7.3.1 Restorative Mindfulness

Restorative mindfulness is accessed predominantly through the body-based practices, such as walking, yoga or the body scan, as well as focusing gently on the present, through mindful breathing or opening to sounds. These focused attention practices lead to calming, which enable practitioners to develop a stability of mind, no matter what the external circumstances. Williams and Penman's (2011) mini-meditation – the 3-minute breathing space – provides a useful practice during times of stress, in order to reconnect participants with the present moment.

Developing self-compassion is an important aspect of restorative mindfulness as it allows an approach-orientation towards challenges, rather than one of avoidance. Neff's self-compassion break (Neff, 2013) allows the practitioner some space around challenging life events, and a movement away from the tendency to blame the self or another.

Restorative mindfulness assumes a willingness of the participant to explore new ways of relating to the world around them, and an understanding of their own responsibility for finding or regaining equilibrium. In situations of excessive stress or trauma, there may be a need for other forms of therapeutic intervention to restore the person to health (e.g. individual psychotherapy), but the mindfulness practice acts as a support between sessions.

The Buddhist Psychological Model (Grabovac et al, 2011) talks of the concept of non-self as the ultimate direction and aspiration. However, for many people with limited inner resources, developing a strong sense of self is an important first stage (Engler, 1984), particularly when establishing themselves in a new role, such as that of a teacher.

Restorative, or therapeutic, mindfulness appears to correlate with Shapiro's findings relating to the intentions of people coming to mindfulness meditation to alleviate conditions such as anger, depression, or pain (Shapiro, 1992). Comparable findings were evident in this study. Self-regulation was the overriding intention, with a search for health, well-being or balance as the motivating force. The primary effect of using mindfulness practices in this way is the attainment of state mindfulness and self-compassion, and an activation of the parasympathetic nervous system (the relaxation response). The restorative

practices are often accompanied by a feeling of well-being, thus providing motivation to continue with the practice, even through later stages.

7.3.2 Dynamic Mindfulness

The stage of dynamic mindfulness requires a commitment to facing the vicissitudes of life. It does not always provide the calming effects more available in restorative mindfulness. Once stability is established through the calming practices, it is possible to start gaining a deeper understanding of the self, with its helpful and harmful habit patterns. When negative habitual patterns are recognised, and accepted, they can then be released, without shame or recrimination. Self-compassion is still at centre stage through the dynamic stage, and starts to develop into compassion for others, with the recognition that all human beings struggle and therefore often act unskilfully. An increasingly open awareness is accessed with a sense of trust that a life with less attachment, aversion and ignorance is possible, and could lead to greater ease and happiness.

In both their personal and professional lives, student teachers reported how the mindfulness techniques helped them develop new ways of dealing with their life challenges. Some students were able to develop an understanding of their habitual tendencies, and then use situations arising to respond in new ways, rather than falling into old patterns. It was interesting that dependent on the particular locus of difficulty (maybe interpersonal relationships, or academic stress), mindfulness and compassion were used to explore underlying causes of these difficulties, and experiment with new ways of responding to them. However, they have to develop not just an understanding, but also an acceptance of themselves as fallible human beings in order for change to occur. This dialectical tension, as described by Allen et al (2009), is part of the process, as acceptance, paradoxically, allows for change to happen. The development of more trait-like qualities of mindfulness and compassion allow for a deepening of the understanding of the self, and an awareness of the constant changes integral to human existence.

7.3.3 Transformative Mindfulness

In the stage of transformative mindfulness, it becomes clear how a seemingly solitary practice is carried out for the benefit of others. Once a practitioner moves into this level of development, they are able to access non-referential compassion, where all humans and animals are treated with kindness, not determined by their level of relatedness to the

practitioner. These practitioners have a stability of mind, where emotions are regulated from the bottom-up, as the neural pathways in the brain have permanently changed their circuitry so that reactiveness to the external environment is minimised. Mindful awareness and compassion become trait dispositions and guide the practitioner in terms of how they respond to the external world. In order to access transformative mindfulness, deeper insight practices, such as on long retreat, would be required in order to enquire into, and to experience, the nature of mind.

This area was not covered by the current research, however, neuroscientists working with Buddhist practitioners may be leading the way in this regard, with MRI scans revealing a permanent shift in the functioning of the brain after years of meditation training. The French Buddhist monk, Matthieu Ricard, has been given the title of 'happiest person in the world' after his MRI scan revealed that Ricard's brain produces a level of gamma waves – those linked to consciousness, attention, learning and memory – "never reported before in the neuroscience literature" (Davidson & Lutz, 2008).

7.3.4 Overview

The three concepts of restorative, dynamic and transformative mindfulness can be linked with other theories from the secular mindfulness and Buddhist literature, as elaborated in Table 7-1.

Graduated stages of mindfulness practice are important to support practitioners' progress, and to assist them in maintaining motivation, particularly during challenging times. This is an important understanding for MBI facilitators. Each stage is enabled by certain practices, yet not restricted to specific practices. Restorative mindfulness is made possible through concentration/focused attention practices, resulting in calmness and stability. Dynamic mindfulness requires the willingness to practice insight training/open awareness practices, from the foundation of a calm, stable mind.

Stages of Growth	Restorative Mindfulness	Dynamic Mindfulness	Transformative Mindfulness
Intention	Self regulation	Self exploration	Self liberation (Shapiro, 1992)
Motivation	Restoring a balance (Akong Rinpoche, 2005)	Ethical lifestyle focused on helping others (Holmes, 2010)	Enlightenment, to help all sentient beings (Holmes, 2010)
Secular Practices	Relaxation practices. Focused attention and open awareness, supported by self-compassion. Daily life mindfulness. Mini-meditations e.g. 3 minute breathing space or self-compassion break	Focused attention, developing stability, with open awareness, supported by compassion practices. Formal, daily sitting practice	>10,000 hours[1] of formal daily sitting practice and retreat Non-referential compassion practices
Buddhist Practices	Shamatha/shinay	Vipassana in the midst of shamatha/shinay	Unification of shamatha and vipassana through Mahamudra/Dzogchen training, enquiring into the nature of mind (Dzogchen Ponlop R, 2003)
Benefits for different people	A better daily life	A reorientation of life's focus	The path of selfless service
Primary effects	Occasional state mindfulness and compassion	From state to trait mindfulness and compassion	Trait mindfulness and compassion
Secondary effects	Body awareness Relaxation Stress relief Focus and concentration Emotion regulation	Perspective Connectedness Clear seeing of instinctive, reactive thoughts and feelings, without secondary processing	Change in brain functioning (Davidson et al, 2003; Davidson & Lutz, 2008) Clear and direct experience of the nature of all things (Dzogchen Ponlop R, 2003).
Emotion regulation	Top down	Top down with awareness of bottom up changes beginning to occur	Bottom up (Chiesa et al, 2013)
Sense of self	Weak sense of self gradually transforms into a strong, clear sense of self	Sense of perspective with regard to self and others	Non-dual, no separation between self and others (Engler, 1984)
Graduated Path (Buddhist)	9 levels of increasing concentration (Khenchen Thrangu, 1993)	16 stages of insight (Sayadaw, 1994)	Enlightenment

Table 7-1: Graduated Stages of Growth through Mindfulness

[1] 10,000 hours is the time proposed by Gladwell (2008) required to develop expertise in a chosen field. Interestingly, it also corresponds with traditional Tibetan long retreat time, of 3 years and 3 months. However, few people coming through long retreat would suggest that they had reached enlightenment, or self liberation, but they might have made significant changes to their brain chemistry, and moved towards trait mindfulness and compassion.

One stage is not left behind when the next is reached as Lutz et al have acknowledged:

> *Note, however, that the possibility to disentangle mindfulness [open awareness] from concentration is not as easy as one would expect. Indeed, a strong relationship exists between these two practices and improvements in one meditation type are thought to implicitly influence improvement in the other type of meditation as well. (Lutz et al., 2008)*

For example, experienced meditators will still require the stabilisation of their minds through focused attention, before exploring insight practices. Insights do not arise from the analytical mind, but from the experiential mind. This subtle difference cannot be experienced until the mind is stable and free from striving. Differing levels of insight are accessible at different stages of development.

7.4 Cautions about the Use of Developmental Models

The idea of stage models in mindfulness and education can be problematic, as discussed below, yet fairly common in the spiritual literature (Sayadaw, 1991). Nevertheless, findings from this mixed methods study have encouraged me to propose a developmental model of mindfulness informed by the three practices integrated in the Mindfulness-Based Living Course (calming, insight and compassion). This model will need to be critiqued and expanded as mindfulness moves into the new fields of teacher education and the school environment, but in the meantime may open up new ways of seeing the interconnectedness between the practices and the underlying mechanisms of change.

Pruyn (2010) highlights a valid concern regarding stage theories of adult development in the context of education. He cautions against privileging 'higher' stages of development, and what he terms 'developmental elitism'. Educators and mindfulness facilitators need to be particularly attentive to scaffolding learning in ways that are appropriate to their learners, so that they do not rush to 'more advanced' practices without the necessary groundwork. Stage theories should not imply that we must expedite the transition from one stage to the next, and must, indeed, acknowledge the importance of integrating each stage. However, development can be supported through appropriate practices, targeted to take the practitioner's individual needs into account.

Engler's (1984) paper highlighted how Westerners often progress slower in mindfulness than Easterners as they get caught in thinking about, rather than experiencing, phenomena, have problems in developing concentration, and become fascinated with the content of consciousness rather than attending to the process of observing. The lack of a supportive cultural context is also highlighted by Engler, which adds weight to the importance of this study, focusing neither on Westerners nor Easterners, but on the African context. The optimum practice is, therefore, the one most suited to the given internal and external conditions of the practitioner, which may vary over time and across population groups, and requires skilful facilitation. For the majority, practitioners are best supported by the availability of a mindfulness (or spiritual) teacher, a like-minded community, and a scheduled time and venue for practice.

A further caution needs to be highlighted: a negative aspect of adopting a developmental approach is the implicit assumption that certain goals are attainable at different levels. As soon as a specific goal is attached to mindfulness, such as becoming calmer, participants feel that they must be doing something wrong when calmness does not arise in their sessions. The experience of certain students illustrated this clearly. Striving is a trait commonly associated with modern consumerist culture, and this leads to a push for the perceived 'higher' stages of development. Striving prevents the necessary stability required for deepening the practice.

The findings from this research study bring out the challenging paradox of mindfulness – how to have a specific intention without attachment to it, and how to maintain motivation and put commitment into a practice that may not seem to yield immediate results. The earlier stages of mindfulness practice benefit from being goal-oriented, such as the wish to learn stress relief strategies, while later mindfulness practices are essentially goal-less, except for the commitment to remain mindful and compassionate whenever possible in daily life. There are many beneficial secondary effects of mindfulness, but these are often elusive when they become the focus of a goal.

7.5 A Sample of a Buddhist Developmental Model

The concept of progressive mindfulness development is nothing new in the spiritual literature and the use of some of the practices are summarised in Appendix E. In addition,

murals such as Figure 7-1 below are commonly painted on the walls of monasteries and places of instruction.



Figure 7-1: Stages of Meditative Concentration

The Stages of Meditative Concentration illustrated above is applied to *shamatha* or calm-abiding meditation, with the understanding that insight practices can only be accessed after stage 4 of *shamatha* is reached. At stage 4, the monk (practitioner) has the elephant (the dull mind) on a rope and the monkey (the restless mind) is more relaxed. Both animals are becoming more white in colour, depicting a stabilisation of the mind. This image illustrates the stage where concentration is placed steadily on a mindfulness support (e.g. breath or

sound) and does not wander throughout the formal mindfulness session. The challenge in stage 4 is more one of attitude than stability; the mind tends to move between excitement and laxity.

Within a monastic education setting, young students would initially be offered simple practices to bring stability and calmness to the mind, and from there they would progress to insight practices, with the intention of gaining enlightenment through transformation of the mind. This is beginning to happen in the secular mindfulness context, as practices are finding their way into schools, but it may also be important to keep a long-term view. The mind has the potential for complete transformation, although requires sustained and committed practice. This view is rarely explored in the secular context where mindfulness is still predominantly conceptualised as a therapeutic intervention, rather than a long-term set of sustained dynamic practices, providing the opportunity for transformative human development.

7.6 Conclusion

The following poem provides a light-hearted conclusion to the developmental path of mindfulness outlined above. Many student teachers fall into the metaphorical 'deep hole in the sidewalk' during their PGCE, as identified in Chapter 1 of the poem. Initially they may deny it (Chapter 2), but by Chapter 3, they start to take responsibility for getting themselves out of the hole. This represents Restorative Mindfulness. In Chapter 4, they are addressing their habit patterns in a way that can be equated with Dynamic Mindfulness, and by Chapter 5, they make a distinct shift in their approach to difficulties. Through the theoretical and pedagogical training they receive, complemented by the mindfulness intervention, they may ultimately be able to 'walk down a different street', choosing skilful ways of acting in the world. After developing mindfulness at the transformative level, maybe there is no hole!

Autobiography In Five Chapters

1) I walk down the street.
There is a deep hole in the sidewalk.
I fall in.
I am lost... I am hopeless.
It isn't my fault.
It takes forever to find a way out.

2) I walk down the same street.
There is a deep hole in the sidewalk.
I pretend I don't see it.
I fall in again.
I can't believe I'm in the same place.
But it isn't my fault.
It still takes a long time to get out.

3) I walk down the same street.
There is a deep hole in the sidewalk.
I see it is there.
I still fall in... it's a habit.
My eyes are open.
I know where I am.
It is my fault.
I get out immediately.

4) I walk down the same street.
There is a deep hole in the sidewalk.
I walk around it.

5) I walk down another street.

by Portia Nelson

The academic literature on mindfulness has tended to focus on the two extremes of this model: the restorative qualities of the practices, for psychological health, and on the transformative potential for the brain, evaluated through neuroscience studies with monastics. Less research has been carried out on the dynamic stage, which has the potential to enhance practitioners' stability of mind and insight, resulting in beneficial effects on their personal and professional lives. This is the area where I believe mindfulness can be of most benefit to students and teachers within the world of education, but MBIs need to be thoughtfully constructed, given the age and context of the learners, and need to be developed as long-term practices, within a community of support. This requires a much broader view of the potential for mindfulness to contribute towards conscious engagement with the challenges of modern life.

CHAPTER EIGHT: CONCLUSIONS

The final chapter draws together the findings from the study, outlining the contributions to the current literature, and making recommendations for implementation and further research. It also evaluates the trustworthiness and limitations of the research study.

8.1 Contributions of the Study

The following findings and recommendations emerged from the data, and have implications for future mindfulness research directions, the teacher training curriculum, and the facilitation of mindfulness-based interventions.

The overriding research question focused on the potential for a mindfulness-based intervention to alleviate the stress associated with the transition from student to teacher. In line with other research on mindfulness, statistically-significant improvements were found, in the anticipated direction, in several of the quantitative measures carried out during the intervention (FFMQ, SCQ and DASS). The qualitative data, however, provided a richer data set in terms of the range of stressors experienced by these young adults, their personality characteristics, and the ways in which they utilised mindfulness – to alleviate negative emotions and experiences of stress, and to enhance positive dispositions and improve their professional confidence. Indeed, it was this range of reported benefits that gave rise to the Developmental Model of Mindfulness, outlined below, which challenges the current mindfulness community to focus more on long-term mindfulness interventions that can support the development of conscious and compassionate human beings.

8.1.1 Evidence of Extreme Stress

The assumptions underpinning the research study provided a useful point of reflection in terms of the findings. It was anticipated that student teachers would be experiencing elevated levels of stress associated with the 'struggle for survival' stage of their PGCE. What had not been anticipated was the **extreme level** of stress that they were under, in contrast to normative studies in other countries. These appeared to be a consequence of

their personality characteristics and the actual environmental stressors (including the PGCE course and the Gauteng context).

The dramatic preliminary DASS-21 results from this study reinforced findings in the learning to teach literature that student teachers move through a 'struggle for survival' stage (Fuller, 1969; Maynard & Furlong, 1993) and therefore need additional support to manage the demands of the profession, maintain their own health and well-being, and create supportive learning environments for their students. It is useful to tease apart the reasons for the struggle, in order to see more clearly the areas where interventions in teacher education might be beneficial. Fuller (1969) sees this survival stage as linked to skills development (classroom management), content knowledge and concern over evaluation of their performance. Skills and content can be enhanced through a traditional teacher education approach, but concern over evaluation is an internal stressor, an anxiety that originates from within the student teacher's mind. An intervention which supports the students' ability to befriend their anxiety, to reflect realistically on their own practice, to accept that they are learning and therefore likely to make mistakes, and develop an openness to evaluation could be of great benefit in supporting them through this transition phase.

What became apparent from the interviews is that the stress of daily life seemed to be a significant factor for many students, and not just the anticipated stress of academic work, and the change in role from student to teacher during Teaching Experience. This contrasts with the student teacher stress literature, which puts teaching experience as the most stressful component of the PGCE, followed by academic stress and then daily life (Kyriacou & Stephens, 1999). The number of traumatic events and daily life challenges came up as particularly noteworthy, and revealed the extreme stress that many people are living under in Gauteng. Post-traumatic stress, depression and anxiety are regularly reported as critical issues in South Africa, given the history and socio-economic situation within the country. This finding needs to be attended to with urgency, especially for young adults who, according to the human development literature, are especially vulnerable. Further research would be valuable to ascertain the levels of stress, anxiety and depression across different groups of students at the Wits School of Education, with the subsequent implementation of appropriate stress management interventions. The findings also suggest a great need for stress management interventions for the population as a whole.

In terms of the stress of TE, Maynard and Furlong (1993) describe the personal survival stage as a time when student teachers "cannot make sense of the noise and movement around them" (p72), they rush through explanations without having the children's attention, they experience fear that the class will not respond, fear to deviate from what they planned, and feelings of powerlessness" (Rusznyak, 2008). Many similar fears were revealed in the portraits. Again, these are all emotional struggles, often exacerbated by a distorted perception of the classroom environment. An intervention that gives students techniques for becoming more aware of the classroom, 'taking a breath' before giving instructions or responding to pupils' behaviour in the moment, adapting to unplanned situations and befriending their own feelings of fear could allow them to develop resilience to these emotional struggles, and form their own integrated teacher identity.

A further prediction on which the research was based was that stress would undermine student teachers' enjoyment of their new profession. This was evident, with many students using the word 'overwhelmed' in their interviews, when referring to their teaching experience and the academic demands placed on them by the PGCE. One student, however, did note that the academic demands were not, in reality, too onerous, but that most students did not have the time management skills to address their tasks in a structured way, and became paralysed by anxiety, rather than attending to assignments one at a time.

Imogen's and Atandwa's portrayals of the harsh realities in certain township schools need very careful consideration, both from government and the School of Education. These schools are clearly not providing a suitable learning environment for the school children, the staff appear demoralised and burnt out, showing high levels of absenteeism, and the student teachers placed in these schools are not so much learning how to teach, but how to survive. This poses ethical concerns with regard to sending young people into such challenging environments. Without effective coping mechanisms, these student teachers are more likely to leave the profession than learn good teaching skills or develop resilience.

The situation in these township schools illustrates the broader prevalence of stress experienced by many teachers. The Department of Education (2004) acknowledged the urgent need to address issues of teacher stress and put out a call for research on the status, causes and possible prevention of stress-related diseases in educators. The single year of a PGCE course provides a window of opportunity to implement stress management

interventions, such as mindfulness, in order to help retain capable teachers who are leaving the profession because they find their work environment too stressful. It stands to manifest long-term positive effects on individuals and schools, not just in their ability to manage stressful situations, but also in the development of more mindful classroom teaching. If MBIs start becoming implemented at this early stage in a teacher's career, then this would be a profoundly valuable outcome of this research study.

Roeser makes a strong case for mindfulness training (MT) based on findings in the American context, which have been substantiated in this study:

> *Teaching is among the most stressful of human service professions given the uncertain, emotional, and socially demanding nature of teaching. Surprisingly, neither teacher education nor professional development (PD) programs currently prepare teachers for the attentional and social-emotional demands of being a teacher (Roeser, Skinner, Beers, & Jennings, 2012). When teachers are not assisted in developing habits of mind such as focused attention, cognitive flexibility, and emotion regulation that are essential for managing professional demands effectively, their occupational well-being and instructional practice, as well as their ability to create a supportive context for student learning, can suffer (Jennings & Greenberg, 2009). Recently, MT has been introduced in teacher education and teacher professional development settings to provide teachers with the kinds of skill sets and mindsets they need to manage job-related challenges and demands. (Roeser et al, 2013:278-9)*

Any intervention that enables student teachers to become more aware of their inner processes and their values might develop beneficial teaching dispositions, yet might also result in an early departure from teaching, especially where the primary motivation to teach is inauthentic. This point was made by Nicholas, who felt that many students chose teaching simply because it was a safe financial career choice, while others were authentically motivated, with a passion for the profession and the learners in their care. The PGCE might act as a screening process, ensuring that those who do become teachers are certain that teaching is the right profession for them, and able to develop resilience from the challenges they meet.

Given that no control group was used, it could be argued that the decrease in DASS scores was simply an indication that students had moved through the survival phase onto Hitting a Plateau (Maynard & Furlong, 1993) or Mastery of Skills (Fuller & Brown, 1975), regardless of the MBI. However, this proposition was neither supported by the questionnaire data, nor the interview data, nor by studies internationally. The questionnaire

data revealed an immediate drop in the DASS-21 scores at the beginning of the intervention, with a stabilisation thereafter. This was before their second TE, so students had not yet moved to the stage of Hitting the Plateau or Mastery of Skills. The phenomenological findings from the interviews also revealed that students attributed their lowered stress scores, their increasing resilience, and their new skills of perspective-taking and emotion regulation to the intervention and not simply to their progression through the PGCE year.

While Murray-Harvey (1999) also asserts that learning ways to cope with the stress of teaching needs to be addressed at the pre-service stage of a teacher's career, Poulin et al (2008) and Steinberg (2012 pers com) point out that it is not fair to put all the responsibility on human service professionals, when structural changes also need to take place to reduce stress. Many of the external stressors experienced by the student teachers in this study, such as financial concerns, crime issues and dysfunctional schools, require immediate and concerted action from appropriate governmental bodies. It limits the potential of young people when they are expected to shoulder these additional burdens, whilst moving through a period of academic challenge and identity transition. As has been seen, several of the schools used for TE were barely functional, with little teaching or learning able to take place, due to administrative or discipline issues. These issues were beyond the remit of this research study, but add weight to nationwide calls to assist students financially, to address issues of crime, and to ensure that schools are safe for pupils, student teachers and teachers alike.

The poor administration of the Funza Lushaka grants was a case in point. This financial source of stress could have been easily avoided with some political will. The grants were not awarded timeously (most students having to wait 5 months to receive the funding), and those who did not receive funding were never informed of the outcome. Uncertainty is a major source of stress. In a country where redressing the inequalities of the past needs to be given high priority, this was a finding that raised grave concern, especially in an environment where the government is wanting to train more teachers, particularly those from previously disadvantaged backgrounds. The poor administration of grants predominantly disadvantages black students who do not have a secure financial foundation. In South Africa, many of the sources of stress are still essentially a colour issue.

A further initial assumption was that these students would be healthy young adults, and it was surprising how many talked about their own, or their friends' levels of psychopathology. Five of the fourteen students had either taken, or were still taking antidepressant medication, without any supplementary therapeutic support. The teaching profession is known to be stressful worldwide, but if young adults in South Africa are entering the profession with pre-existing mental health issues, then the stress statistics are likely to escalate rapidly, with a concurrent departure of young teachers from the profession.

These issues need to be considered carefully in the recruitment and training of student teachers, and appropriate support provided for them. The UNISA study asserted that "[m]ost teachers have difficulty coping with teaching-related stress. They appear unable to pay attention to the emotional needs of learners because they seem to need emotional support themselves" (Jacobs, Kemp & Mitchell, 2006:140). If such issues of mental health are not taken seriously, then both teachers and the children they teach will continue to suffer. Action needs to be taken as a matter of urgency.

8.1.2 Demand for Stress Management Interventions

The recruitment process for the MBI provided some interesting insights into the perceived demand for stress management interventions. Of the 99 students who were enrolled on the 2012 PGCE, only 69 attended the compulsory Education lecture where the short MBI presentation was made. When enquiring about this low attendance, students revealed that their colleagues were either unwell, or completing overdue assignments, and they noted the irony that the low turn out was attributed to stress – those who might have benefitted most did not hear the presentation! Out of the 69 students who were in the lecture theatre, 33 wrote down their email addresses, indicating that they were interested in taking part in the intervention. 22 of these were women and 11 were men (representative of the common gender ratio in the teaching profession). This initial interest revealed the great need of this cohort to access stress management techniques, despite few of them having heard of mindfulness before. Once the more detailed information was sent out to the students, outlining the 6-week programme and the expected level of commitment, 17 attended interviews. 3 later withdrew. The male student had decided to attend psychotherapy sessions and did not want to mix this with mindfulness, while the two female students

reported how they felt too overwhelmed with the stress of the PGCE curriculum to take on an additional course.

Of the 14 who began, 11 completed the training and attended the interviews. Ophelia had done meditation before and felt she knew the techniques, and preferred to allocate her time to her academic work, so she withdrew after Week 1. Kim was forced to pull out of the PGCE course during the year as she had, in previous years, been diagnosed as bipolar, and she once again experienced a depressive episode. Nicholas was unable to attend during the holiday period as he travelled to Limpopo, and did not return for the final interview. Two other students did not complete all six weeks of the training, but attended the final interview. Charles, like Nicholas, travelled to Limpopo and missed the second half of the training, but he did access the notes, watch YouTube clips and continue with some of the practices. Sipho had financial pressures, which meant he missed most of the sessions to attend to his small business, but did attend the final interview, and felt he had benefitted from the concept of mindfulness, the notes and some of the simple breathing practices learnt in the first session.

The high numbers of students initially interested showed the level of need and interest there is at the university. The higher than anticipated numbers allowed for two groups to be offered the MBI improved the trustworthiness of the findings across different facilitators. Although a few students did not complete the full course, those who did showed that they do have the capacity for commitment in terms of finding solutions to their stress. Several students noted that their friends were in great need of this, or a similar, intervention.

The advantage of offering a mindfulness intervention, in contrast to other forms of stress management, is that it includes a wide range of practices. Participants have the opportunity to experience body-based techniques, focused attention or open awareness techniques as well as compassion practices, and can experiment with which are most appropriate for their personality and presenting issues. The main reason given for low uptake of this MBI was the stress of taking on an additional course. If a mindfulness intervention were to be incorporated into the curriculum of the PGCE course, then it would provide the potential for student teachers to learn stress management techniques, but also to enhance dispositions appropriate to this human service profession.

In terms of implementation, an MBI would be most appropriately placed at the beginning of the academic year, so that student teachers become familiar with the practices before the

academic demands of the course reach their peak. The DASS-21 could be administered to all students for screening purposes. Those exhibiting clinical levels of stress could be taken through a training that predominantly focuses on restorative mindfulness practices so that they are able to gain stability of mind. Once their DASS-21 scores have decreased, they can be exposed to the full dynamic mindfulness training, with all the insight practices that allow for the development of mindful classroom teaching. The mindfulness course could also be used as a screening process for making recommendations to students who might benefit from one-on-one psychotherapy, given the emotionally demanding nature of teaching and the number of personal issues that are triggered during the PGCE year. A further suggestion would be to include brief mindfulness practices at the beginning of tutorial sessions, so that student teachers feel more centred and less vulnerable when asked to reflect on their own teaching competencies.

Inevitably, there will be challenges to the implementation of MBIs in the education context, particularly that of Teacher Education which already has competing demands on the curriculum. Crane and Kuyken's (2012) analysis of the experience of bringing MBCT into the British National Health Service (NHS) highlights six key issues: structural, political, cultural, educational, emotional and physical/technological. The main concern emerging from their survey was how to find a match between MBIs, which need to be seen as a long-term investment, and the quick fix culture of the NHS. This concern would apply equally in an educational setting, where professional development (particularly in schools) is generally offered as a once-off intervention. However compelling the evidence might be in terms of the needs for mindfulness in health or education, the roll-out needs careful thought and systematic implementation. If an evidence-based practice is to flourish, then the research must be translated into a format that providers can understand: "ownership is key, enthusiasts are needed, a contextual analysis is essential, credibility must be established and leadership is needed" (Crane & Kuyken, 2012). These aspects take time to develop, which is where enthusiasts have an important role in maintaining the momentum needed to expand implementation, particularly in a country which has not previously been exposed to the benefits of mindfulness.

Roeser et al (2013) also points out a potential barrier to implementation in terms of recruitment, called the 'up-front value proposition problem', which applies to teachers, student teachers and those responsible for managing the teacher education curriculum:

> *Teachers are overwhelmed, have limited time, and thus are often unable to see the value "up front" of such programs. However, once they commit to and participate in MT, they often value it and show high levels of engagement. This "problem" raises issues in recruitment of teachers for MT. (Roeser et al., 2013:280)*

This challenge may mean that early implementation is best carried out on a voluntary basis, or as an optional course component and then rolled out in subsequent years, depending on the feedback. However, the initial interest in the training seemed to suggest that the course could be adopted as compulsory for all students, even those from different backgrounds, and would be gratefully received.



Figure 8-1: Barriers to MBI Implementation in Schools

8.1.3 A Developmental Model of Mindfulness

In terms of the mindfulness intervention, Grabovac et al's (2011) assumption that the development of mindfulness is gradual, progressive and requires regular practice was born out very clearly. Within the confines of a 6-week course, added on to an already busy curriculum, very few students developed a regular practice and many were therefore unable to reap the full benefits of the practices. However, many participants were still able to use some of the key concepts in moments of difficulty as 'emergency measures', which assisted them in finding temporary relief. Without developing stability of mind (through calming practices), it is rarely possible to gain insight into personal habit patterns that are

one of the main causes of stress. It was from these insights that the Developmental Model of Mindfulness emerged, revealing that at a preliminary stage, or during times of extreme stress, *restorative* mindfulness may be more appropriate (mainly focusing on self-compassion and body-based practices) than *dynamic* mindfulness, with its movement towards insight practices. Once a certain level of mental stability has been achieved, participants may benefit more from insight practices and deeper enquiry questions, designed to unveil their subtle thoughts and unconscious habitual tendencies. Any stage model can be criticised for over-simplifying reality, yet an understanding of the general progression of mindfulness is useful for mindfulness facilitators, in terms of advising participants on how to focus their practice, and on engaging with enquiry sessions at the level of the participant's direct experience.

Another factor may also be the fertility of the ground onto which the mindfulness seed is sewn. With students, such as Imogen, who are already open to these body-mind modalities (and willing to practice regularly), the techniques seemed to land quickly and take immediate effect, while for others with habits of mind that challenge, or undermine, these techniques (such as Bonolo), they were not able to access the deeper levels of understanding and experience. Mindfulness cannot be forced onto those who are closed to it; intention and motivation are critical components (Shapiro et al, 2006). Analytical students are often particularly resistant as they privilege the rational, logical approach to problem-solving over more experiential, approach-oriented, body-based approaches.

For student teachers with greater innate capacity for mindfulness, and lower pre-existing levels of stress, the MBI provided the opportunity for them to bring some of their unconscious habitual tendencies into conscious awareness, where they could be evaluated without judgment. The combination of mindful awareness with self-compassion supported their personal growth toward greater well-being, and also gave them the opportunity to bring this awareness into the classroom context. *Transformative* mindfulness remained theoretical in this study, but is being explored in the neuroscience literature (Davidson & Lutz, 2008) and is already well-documented in the Buddhist literature.

Findings from this study point to a number of insights: a short course and a focus on daily mindfulness practices rather than formal sitting practice, are still highly beneficial for restorative, or therapeutic outcomes. However, this comes with a provision. If the course has been too short for students to engage experientially with the concepts, and develop

mindfulness and compassion practices as a habit, then in times of overwhelm, they still forget that these techniques are available to them. Mindfulness practices seem to be possible only after the initial fight/flight/freeze response has passed in practitioners who have not yet been able to develop awareness.

In terms of dynamic mindfulness, a commitment to a formal regular practice (daily to thrice weekly) seems imperative. Although there is an understanding that all humans have the innate ability to be mindful and compassionate, it is initially important to develop the 'mindfulness muscle' in order to notice habit patterns as they arise in the moment. Students reported how they were often still too late to stop the habitual reaction, but were then able to stop rumination or other adventitious cycles of thoughts, or indeed, to apologise sooner to the person they had upset!

The conceptualisation of a Developmental Model of Mindfulness within the secular mindfulness community (drawing on the established Buddhist developmental stages) also serves as a call to the mindfulness academic community to start developing longer-term approaches to mindfulness development. The predominance of the 8-week course in the current literature is pragmatic, yet misses the vast potential of mindfulness as a lifelong practice, to produce conscious and compassionate human beings. Dynamic mindfulness need not be the domain of monastics only, but needs to be made widely available to lay persons who are seeking to develop beneficial dispositions so that they are able to bring these wisdom qualities of mindful awareness and compassion into their personal and professional lives. This is another urgent need, given the current environmental, social and financial issues of the global community. The Dalai Lama is reported to have said that, "If every 8 year old is taught meditation, we will eliminate violence from the world within one generation."

8.1.4 Mindfulness, Spirituality and Religious Beliefs

In a multi-cultural, multi-faith society such as South Africa, there is often concern about implementing interventions that focus on spiritual growth. Both Georgia and Imogen felt that the MBI could benefit students as a compulsory training across the entire PGCE cohort, but wondered whether the meditation component of the course might be a barrier for some, depending on their religious background. This discussion point highlighted the

commonly-held confusion between the definitions of spirituality and religion, as summarised in Tanyi's work (2002).

Religions offer particular systems for achieving this universal capacity for growth, but spiritual growth is still possible outside of a religious framework. Mindfulness has drawn from the contemplative traditions, particularly those of the East, but is not exclusive to them, and therefore makes a valid claim to be neutral with respect to a particular paradigm.

Emelda and Atandwa, both committed Christians, felt that the mindfulness intervention complemented their religious practices, rather than contradicted them, even enhancing their feeling of connection with God. Atandwa particularly, realised that mindfulness was a unifying quality: "*I like the way with mindfulness you incorporate whatever it is that you've learnt, whatever it is that you have. If you're a religious person, you incorporate your spirit in that*."

There was no evidence in this study, or in other MBIs that I have taught, that mindfulness could not be implemented on a large scale within the university, despite the multi-cultural community at Wits. It provides a set of practices that tap into the human capacity for growth and resilience. Indeed, in Carlson et al's study with cancer outpatients, participants' increased experience of spirituality was reported as a positive outcome of the intervention (2000). The academic studies that have been conducted in diverse communities worldwide add valuable evidence, and reassurance, that this secular training programme can provide individuals with a range of practices that assist them in coming back to the present moment, without inculcating any specific beliefs.

8.1.5 Mindfulness and Psychotherapy

A further area of consideration is the relationship between MBIs and one-on-one psychotherapy. From this research, it became clear that most students had a dismissive attitude towards therapy. Several had been sent in earlier years and not found it beneficial. Luthuli, in contrast, had attended seven years of therapy, which had been successful in supporting him through his marijuana addiction. In the MBI group, student teachers were able to witness that they were not especially 'messed up', but that their challenges were simply part of the human condition. For those willing to share openly, their experiences were normalised. However, students unable to share their experiences, such as Mary, were not able to benefit to such an extent.

Mary became aware that she had dissociated from her childhood experiences (of being bullied) and could not remember then. Strong feelings of fear came up during some mindfulness practices, which could indicate that other issues she had been suppressing since childhood might arise. As Miller has noted: "As mindfulness strengthens, the meditator is better able to face increasingly more difficult material with calmness and equanimity. Similar to what often happens in psychotherapy, previously repressed material continues to arise as the meditator becomes more skilful at working with it" (Miller, 1993:171). However, for students with deeply repressed issues, the fear of these arising stood in the way of developing a stable mindfulness practice. In the case of Mary, I recommended that her issues might need to be explored more deeply in a therapeutic setting, in order to integrate them safely.

It would appear that MBIs can provide a complement to psychotherapy for some (e.g. Luthuli), a substitute for psychotherapy for others (e.g. Georgia), and a way in for those who were not previously aware that they could benefit from one-on-one support (e.g. Mary). In the Teacher Education context, mindfulness training might also act as a cost-effective screening process, so that students who do not feel safe to disclose their issues can be referred for therapy. Miller gives a pragmatic suggestion that "regular meditation could be integrated with less-frequent psychotherapy sessions. This would reduce the cost of psychotherapy and very likely facilitate progress as unconscious material is unveiled through meditation" (Miller, 1993:178).

Teaching is an emotionally demanding profession, and several of the student teachers were aware that their own issues were triggered in the classroom context, particularly when dealing with traumatised students, of which there are many in South Africa (Tlali & Moldan, 2005). The widely reported incidents of violent crime and sexual abuse in South Africa cannot be ignored, and student teachers need to be prepared for dealing with these situations in their own lives, or the lives of their pupils. An area for future research is how to link MBIs with one-on-one therapy most effectively, particularly in the education sector.

8.1.6 Compassion Practices

Taking mindfulness training into the context of South Africa necessitates a significant emphasis on compassion practices. The stressors that many of the students were dealing with are directed at their basic levels of safety and security, such as financial stress and

fear of crime or violence. In Western contexts, where much of the secular mindfulness literature has originated, the stressors that many people are experiencing are internal, relating more to their personality characteristics. In these circumstances, a focus on the passing thoughts in the mind, and compassion for these involuntarily arising thoughts, can be enough to alter the experiences and bring awareness to the habitual tendencies that lead to suffering. The threat system (Gilbert, 2010) was triggered for many students on a daily basis in Gauteng. The understanding that they could be kind to themselves, that all other humans suffer and that things would change seemed to allow them to stay present to the difficulties, thus developing greater resilience.

Within South Africa, student teachers need an acceptance of both their internal and external struggles, and the strength of character to address the external ones in the most effective way possible. Compassion practices are required to approach difficulties in a way that informs skillful action. One common misunderstanding is that acceptance of difficulties implies acquiescence. This is not the case. Acceptance means that the whole issue can be viewed with clarity, and from that basis, constructive engagement can take place, in order to find solutions.

This finding added weight to the current debate within the mindfulness literature, that the inclusion of specific components and practices around compassion can allow for increased psychological resilience and well-being and may, indeed, be the more significant mediator of change than mindfulness alone (Neff and Germer, 2013).

8.1.7 MBI Facilitation

An interesting consideration, when bringing mindfulness into the education sector, is that of the pedagogical approach. Mindfulness includes many key concepts, but is essentially experiential in approach. The education sector often privileges academic information over experiential process, but the latter has been shown to be particularly beneficial for allowing participants to develop their practice to a deeper level. A positive aspect, though, is that the educational focus, rather than a group therapy approach, made sure that the student teachers reaped the benefits of therapeutic factors of group therapy, without any of the associated stigma.

Group Training

McCown et al (2011) have explored the ‘comradeship and egalitarianism’ developed within the group during MBIs, and these findings was borne out in the study. Several

benefits attributed by students, such as Hannah and Bonolo, to the training seemed to be the result of the group approach, as explored in 6.4.

The recognition of shared experiences among the group members revealed that most challenging emotions and suffering are universal to humans, whatever the external causes, and this broke down the barriers of race and culture. The sharing of experiences also meant that students could reappraise their feelings of isolation, and witness heightened connectedness with other members of the group. In addition, they gradually learned that they could disclose their perceived weaknesses and vulnerabilities in an environment where they would not be judged. This allowed for the development of increasingly honest self reflection, which is such a valuable trait in the teacher education context.

Individual Interviews

One aspect of this research and the training that is not common to all MBIs was the focus on individual interviews. These were carried out to collect information as part of the research, but were also reported to have therapeutic benefits. Most students who had tried therapy in the past were dismissive of its benefits. By attending interviews under the auspices of gathering data, students benefitted from the therapeutic opportunities of discussing stress issues in a non-judgmental context. Atandwa and Sipho commented on the ease of talking issues through with a non-family member, particularly someone embodying the qualities of mindfulness.

Individual interviews may be particularly useful for participants who benefit from the restorative aspects of mindfulness, for example those who have experienced trauma. For participants who are working with the dynamic qualities, the group sharing within the traditional MBI format appears to be sufficient, and does make it possible to offer effective mindfulness training to larger groups.

Dialectical Method

Many aspects of MBIs appear to be paradoxical at first glance, and the student teachers sometimes challenged the underlying rationale of the training. Rupert, particularly, worried that self compassion could be used as an excuse for laziness, and might prevent students from meeting their assignment deadlines. This revealed the tendency of the mind to pull between extremes, taking an either/or approach. As a mindfulness facilitator, it is useful to understand dialectics, particularly as a tool for the enquiry aspect of mindfulness facilitation.

A number of paradoxes were discussed during the training, such as: accepting a situation as it is allows it to change; listening to oneself, or caring for oneself, develops the ability to listen to, and care for, others; and, self-compassion gives rise to empathy and compassion for others. A fruit tree metaphor can assist in this understanding. Focusing attention on personal growth, from a seedling to a mature tree, is all that is needed to benefit others, as people become instinctively able to provide shelter, nourishment and support to others, without it diminishing their own resources in any way.

An experiential understanding of these paradoxes allowed student teachers to move from an either-or, to a both-and orientation. In terms of dialectics, this is explained as allowing a transcendence of dualism, where mutually exclusive polemics are identified and moved beyond. This helps to elucidate a real but previously veiled integral relationship between apparent opposites that have been held in place by the ego-centric mind, and regarded as distinct. Traditionally, the dialectical method talks of entailing a leap of the imagination to a quantitatively higher level. However, for the purposes of mindfulness facilitation, I experienced how opposites can be integrated in order to provide for a *deeper* understanding. Once the superficial nature of the ego-centric consciousness is challenged, the deeper wisdom from awareness can be accessed (Krishnamurti, 1969). This understanding of dialectics proved to be a useful method both for exploring paradox with students during the training and interviews, and for drawing out general themes from the data.

8.2 Trustworthiness and Limitations

There are inevitable limitations of any research methodology and this study was no exception. Within the social sciences, all research results are considered conditional and partial but this does not negate the value of empirical research and often lays the foundation for future studies. The limitations of this exploratory research study derived both from the conceptual framework and the study's design. Studies on different approaches to stress management in education are relatively new on a global scale, and almost non-existent in South Africa. Mindfulness has certainly gained credibility in the medical arena, through the work of Kabat-Zinn, Williams and others, but there is limited literature in teacher education circles, particularly utilising the chosen research methodology.

The research design chapter summarised four key criteria to consider when addressing issues of trustworthiness – credibility, dependability, generalisability and confirmability (Guba, 1981) – and suggested ten specific techniques to account for these (McMillan & Schumacher, 2006). These recommendations were taken into account during the design and implementation of this research study, and are summarised below.

Credibility is achieved by demonstrating that a true picture of the phenomenon under scrutiny is being presented. The mixed methods approach strongly supported this aspect, as it allowed for cross-referencing between the questionnaire scores and the interview findings. In each interview, the student teachers were able to confirm that their scores represented their experience, even when they appeared anomalous (e.g. Atandwa's final DASS score). This is particularly important in a multi-lingual context, where questionnaires may not be written in the respondent's first language. When the self report questionnaires were completed for the first time, I sat with the students and explained any items on the list they felt they did not fully understand. Only two students questioned the items. From then on, they answered confidently.

However, there were other challenges. The sample size (n=14) was small for the quantitative component of the study (see transferability below), yet large for the qualitative component, particularly using IPA. Interviewing 14 participants, on 3 different occasions provided extensive transcribed information. The maximum number of transcripts in IPA studies evaluated by Brocki & Wearden (2006) in a meta-analysis of IPA was 48, but usually the transcripts are far fewer. The concern with analysing large data sets is with the loss of "potentially subtle inflections of meaning" (Smith & Osborn, 2003). However, a PhD thesis does give the benefit of time, compared to other research studies. I felt that detailed thematic analysis was possible, but not the nuanced, multi-perspective exploration that might be more associated with a phenomenological method using fewer case studies and extended interviews.

The interview length was an additional practical limitation as it had to be kept within an hour to fit into student's schedules. This did not always allow for full probing of stress-causing life events and limited the ability to gain insights into subjective perceptual processes, the reasons behind student teachers' thoughts, beliefs and behaviours, particularly in instances where the issues were complex or dilemmatic. For future research,

I would recommend that fewer interviews were conducted (selected according to the pre-intervention self report scores) but with more time allowed for deeper issues to emerge.

In writing up the results, the use of verbatim extracts with low inference descriptions, particularly in the portraits chapter, grounded the text in specific examples, giving a clear picture of the student teachers' experience and addressing the concern over researcher bias. Negative data was provided where available, but the majority of the students felt they had benefited from the MBI. However, despite the participants' claims, alternative explanations for the positive experiences reported cannot be ruled out. For some, it may simply have been non-specific factors such as the ability to share stressful experiences, in a non-judgmental group, that allowed for growth. Others may simply have learned new stress management techniques for themselves over the course of their PGCE year. Separating out specific aspects of the MBI against non-specific mechanisms such as the benefit gained from group support and one-on-one interviews is not easy to do with psychosocial interventions, although data did point to certain conclusions. More research is also required in this area.

The concern over participant bias also needs to be considered. Two students (Ophelia and Bonolo) did admit in their first interview that they wanted to participate in order to help the researcher. The reliance on interviews and self report measures can increase the possibility of response bias, as the student teachers could have been motivated to report positive changes in order to please the researcher. Having presented this concern, however, there was only one student (Bonolo) who claimed in the interviews to have benefitted, but did not show evidence of any improvement in the self report questionnaires. This could also have been a ceiling effect as he was one of the highest scoring students. In general, the results from the qualitative analysis agreed well with the quantitative results, and Bonolo's exception provided a useful theoretical case study.

The verbatim accounts, the inclusion of negative data, the availability of the session and interview recordings, and the transcribed texts, allow a strong claim of credibility, ensuring that a true picture of the impacts of the MBI were represented in the thesis.

The meeting of the **dependability** criterion can be difficult in qualitative work, as it is not possible to ensure that identical results would emerge, even if a similar cohort were given the same intervention. Humans are complex and their responses are context and time

specific. Nevertheless, the findings were strongly corroborated by the available literature, particularly in the area of stress, which strengthened the dependability of the results. In addition, I kept a research protocol and journal in order to record the sequence of events, and the unfolding of the research project, and to ensure that any future investigator could repeat this study, with another PGCE cohort. By presenting the same intervention, with two different facilitators, it also assisted in showing that it was the intervention itself that was responsible for any positive results, and not the impact of one particularly charismatic facilitator.

Nevertheless, it was unclear as to how representative this population was in relation to the rest of the PGCE students, although several students talked about their friends needing the intervention as much, or more, than they did. A useful follow-up would be to administer the DASS self report questionnaire to all students in the PGCE year group, and possibly use the results as a way of selecting participants for mindfulness interventions. Also, the amount of time spent on practice was not gathered accurately, and this would be a useful addition to a future study.

Issues of **transferability** are also worthy of discussion. This criterion is addressed when "researchers provide sufficient detail of the context of the fieldwork for a reader to be able to decide whether the prevailing environment is similar to another situation with which he or she is familiar and whether the findings can justifiably be applied to the other setting" (Shenton, 2004:63). The context of this study was explored at length, with biographical information provided for each of the participants. As was stated earlier, fourteen students is a large number for IPA, but small for using quantitative methods. Nevertheless, the pre-post intervention quantitative findings were statistically significant for the FFMQ and SCQ (using two-tailed t-tests), and for the DASS (at 90% probability or at 95% probability with the removal of the outlier) even with such a small research group. All changes were in the anticipated direction and in line with the other available normative data, both from overseas and South Africa. This would allow for claims of transferability particularly for studies with South African university level students generally, or PGCE students in particular.

For a future study, I would recommend working with a larger group (+/- 100) and using the results of the self report questionnaire from this study to provide baseline data. It would be

useful, too, to divide the cohort into an intervention group and a control group, as long as the control group were provided with the mindfulness training at a later stage, to fulfil the ethical requirements.

Finally, to achieve **confirmability**, researchers take steps to demonstrate that findings emerge from the data and not their own predispositions. In order to address concerns of phenomenological bias, I shared findings with the other trainer during the training process, in order to improve objectivity while carrying out the data analysis. Interviews were then transcribed and shared with the trainer and my supervisor. Inevitably, with a qualitative research method, no two analysts will come up with an exact replication of the other's analysis, yet the differences picked up in this study were more a matter of degree along a continuum (stress vs posttraumatic stress), than contrasts in interpretation.

Member checks were also carried out with the research participants, after the second draft was complete, in order to ascertain whether the information was recorded as remembered by the interviewees, particularly those represented in the full portraits. Those who responded to the email all agreed that the information was accurate. However, some did not reply. Hannah's feedback stimulated additional ideas. She commented that reading her portrait had reconnected her with the importance of continuing the mindfulness practices. Hannah's comment also pointed to the concern that there are few longitudinal studies in the mindfulness literature.

As Kabat-Zinn (2005) asserts, "mindfulness is simple but not easy". It can be learned quickly but takes a lifetime of practice. Even if the research participants record significant short-term reduction in their stress levels, it cannot be known whether there will be long-term impacts. It could be beneficial to carry follow-up evaluations to see whether these participants are able to maintain their practice over time, for stress management, or dispositional development, during their lives as teachers.

8.3 Conclusion

The work of Palmer in the *Courage to Teach* (2010), and Miller's 2014 publication, *The Contemplative Practitioner*, both emphasise the importance of bringing mindful awareness and presence into the work of the teacher:

> *Teacher presence is often ignored in teacher education as the focus tends to be on theory and teaching strategies; yet, teacher presence is critically important, particularly in holistic education. Presence and being in the moment mean that there is less chance that we will be teaching from our egos. If teaching is ego-based, it can beome a frustrating series of mini-battles with students. The classroom becomes focused around the issue of control. If we teacher from that place where we are present and attentive, teaching can become a more fulfilling and enriching experience. (Miller, 2014:140)*

The findings, and the supporting literature, led me to make strong recommendations that mindfulness training interventions be adopted at teacher education institutions. There have been numerous calls worldwide to assist teachers and student teachers with their high levels of stress, and to enhance their classroom praxis, yet few suggestions regarding how best to address these needs. In South Africa, the urgency for such an initiative appears to be even greater. Mindfulness has a strong evidence base in many fields, and the literature in education is compelling. A mindfulness training programme could include some of the generic aspects of all MBIs, but with a specific focus on mindful teaching, as described in Singh et al's recent study (2013). A programme of this nature could be incorporated within the training for BEd students, or as a course component of the PGCE training. The voices of the students who participated in this research study give support to these recommendations.

It is clear from the literature that emotional support needs to be provided to all student teachers, so that they can develop the necessary skills to cope with the emotional intensity of teaching. From a pragmatic perspective, secondary stress management interventions are more cost effective and can be as beneficial as tertiary interventions for the majority of student teachers. If student teachers can develop practices that help them to respond skilfully to both potential and actual stressors during their PGCE, then there is less need for tertiary interventions such as counselling or therapy. Mindfulness-based interventions are strongly recommended as they provide both stress management techniques and allow the development of positive attributes and dispositions beneficial for the teaching profession.

Recent secular mindfulness, and 2500 years of Buddhist mind training, have shown the efficacy of MBIs in altering people's relationship with their external environment, thus giving them increased resilience and equanimity. At first glance, it may seem paradoxical that an individual practise of getting to know one's own mind can benefit others, but research has also shown that becoming more mindful and compassionate with ourselves

gives us the capacity to support and care for others. In my opinion, these are the skills that could be of transformative benefit in all human service professions, and especially in our schools and classrooms. Mindfulness is an approach that is showing enormous potential worldwide and South Africans must also be allowed to benefit.

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Appendices

APPENDIX A PARTICIPANT INFORMATION SHEET

About the 'Mindfulness for Stress Management' Study

Researchers across many medical fields are currently involved in studying the impact of mindfulness training on stress, and stress-related illnesses. Although teaching ranks as one of the most stressful professions, little research has been carried out on mindfulness in the education field.

This study focuses on investigating the experience of stress among student teachers, particularly its perceived impact on their personal and professional lives. As there is little current research in this field, a qualitative study will be conducted in order to allow for an in-depth exploration of perceptions of the causes and manifestations of stress. An alternative stress management strategy – mindfulness – will be taught through a 6-week training.

This is an experiential course, where participants will learn through practical activities, instruction, discussion and reflection. The 6-week programme will cover the following topics, during 1.5 hour sessions:

1. Mindfulness – How to Begin
2. Settling the Mind
3. Mindfulness Supports: Sound and Breath
4. Working with Distraction using Mindful Movement
5. Acceptance and Loving Kindness
6. Living Skillfully in Daily Life

A series of four informal, in-depth interviews will elicit feedback on the coping strategies that student teachers currently employ in their personal and professional life before the mindfulness intervention, and their experiences after the mindfulness training. These interviews will take between 30 and 45 minutes each. The interview schedule is intended to access information on perceived stressors, coping strategies, mindfulness and its application in the classroom situation.

The study will explore the response to the mindfulness training, in order to ascertain whether it can have beneficial effects on student teachers under stress.

The primary objectives of this study are to explore:

- the nature of stress amongst student teachers
- the coping strategies student teachers use to alleviate stress
- the impact of the mindfulness training as experienced by the student teachers
- the implications of these findings for teacher training institutions.

The results of the study will be made available to the School of Education at Wits University and the Gauteng Department of Education, and will be published in academic journals.

If you have any questions please feel free to contact:

Lucy Dixon-Clarke
Office: 011 717 3040
Cell: 071 419 8816
lucy.dixon-clarke@students.wits.ac.za

APPENDIX B INVITATION TO STUDENT TEACHER TO PARTICIPATE

Dear Sir/Madam

My name is Lucy Dixon-Clarke of the Wits School of Education at the University of the Witwatersrand. I am a PhD research student, investigating whether mindfulness training can assist in relieving the stress levels of student teachers, particularly during their teaching practice.

You have heard a presentation about Mindfulness and its potential benefits for student teachers, and I would now like to invite you to participate in this important research study. A consent slip is attached below.

If you are currently seeing a psychologist, or counsellor, it will also be necessary to provide a consent form from him/her, to indicate that you are well enough to receive this training at present. In the event that consent is not received from your psychologist/counsellor, he/she can recommend that you receive the training at some stage in the future.

As part of the research study, you will receive an 6-week training in Mindfulness, consisting of weekly 1.5-2 hour sessions in a group of between 8 to 16 participants. The facilitator is an experienced trainer, and a member of the Mindfulness Africa organisation. At the end of the training, you will be provided with information on how to continue this practice, if you need on-going support, and the venues around Johannesburg that offer weekly mindfulness sessions.

You will be invited for a series of four 30-45 minute interviews regarding your current experiences of stress with me, the researcher. These interviews will take place before, during and after the mindfulness training, where you will be asked to reflect on your experiences of stress, particularly in reference to your teaching practice. The interviews will be audio-taped.

Please note the following points:

Participation is voluntary, and refusal to participate will involve no penalty to yourself.

You may discontinue participation at any time without penalty.

In the event that you experience any discomfort or side effects, you will be referred to a university counsellor at the Campus Health & Wellness Centre (CHWC) for support. They can be contacted on Tel: 717-9113 or 717-9111. The researcher and trainer are not clinically trained.

A Separate Informed Consent Form will be provided for interviews and audio-recording. The recordings will be used for transcribing interviews, which will be checked by the interviewee for accuracy. This data will be kept for 5 years by the researcher's academic supervisor, and then destroyed.

Please indicate whether you would like to participate or not participate in this study, by filling in the slip below.

Sincerely

Lucy Dixon-Clarke, PhD student
Wits School of Education
Office: 011 717 3040
Cell: 071 419 8816
lucy.dixon-clarke@students.wits.ac.za

Student Teacher Participation Consent Slip

I,_____, as (position)_____, understand the nature, requirements and benefits of participating in the study, and consent to PARTICIPATE / NOT PARTICIPATE (circle appropriate phrase) in the study.

Signature _____ Date _____

APPENDIX C INFORMED CONSENT FORM FOR AUDIO-RECORDING INTERVIEWS

Dear Sir or Madam

If you consent to participate in the study, you will be invited for a series of four 30-45 minute interviews regarding your current experiences of stress. I, the researcher, will conduct these interviews, which will take place before, during and after the mindfulness training. You will be asked to reflect on your experiences of stress, particularly in reference to your teaching practice.

The interviews will be audio-taped and the recordings will be used for transcription purposes. Once the transcription has taken place, you will be invited to check the transcription for accuracy. You will remain anonymous and your real name will never appear in any reports, either internal or external. You will be assigned a pseudonym for the purpose of reporting.

The written data will be kept for 5 years by the researcher's academic supervisor, and then destroyed by shredding. Digital CDs of audio recordings will be cut in half and thrown away.

Sincerely

Lucy Dixon-Clarke, PhD student
Wits School of Education
Office: 011 717 3040
Cell: 071 419 8816
lucy.dixon-clarke@students.wits.ac.za

Student Teacher Audio Recording Consent Slip

I,_____, as (position)_____, understand the nature, requirements and benefits of audio recording the interviews, and consent to the interviews being recorded.

Signature _____ Date _____

APPENDIX D DRAFT LETTER TO TEACHING EXPERIENCE COORDINATOR

Dear Dr Rusznyak

I am a PhD research student at the Wits School of Education (Wits) , investigating whether mindfulness training can assist in relieving the stress levels of student teachers, particularly during their teaching practice.

Researchers across many medical fields are currently involved in studying the impact of mindfulness training on stress, and stress-related illnesses. However, although teaching ranks as one of the top six occupations in terms of stress, little research has been carried out on mindfulness in the education field.

As there is little current research in this field, I would like to carry out a qualitative study in order to allow for an in-depth exploration of perceptions of the causes and manifestations of stress. An alternative stress management strategy – mindfulness – will be taught through a 6-week training in between the two teaching practice . This will consist of weekly 1.5 - 2 hour sessions in a group of between 8 to 16 participants. The facilitator is an experienced trainer, and a member of the Mindfulness Africa organisation.

I will conduct a series of four in-depth interviews to elicit feedback on the coping strategies that student teachers currently employ and their experiences after the mindfulness training. The study will explore the response to the mindfulness training, in order to ascertain whether it can have beneficial effects on student teachers under stress.

The primary objectives of this study are to explore:

- the nature of stress amongst student teachers
- the coping strategies student teachers use to alleviate stress
- the impact of the mindfulness training as experienced by the student teachers
- the implications of these findings for teacher training institutions.

The results of the study will be made available to the School of Education at Wits University and the Gauteng Department of Education, and will be published in academic journals.

I would appreciate your assistance in setting up a suitable time (a half-hour session) early in the academic year 2012 when I could talk to student teachers about mindfulness in general, and this research study in particular. The presentation will give a summary of current findings in the fields of mindfulness, neuroscience and teacher stress, and will include some short practical mindfulness practices. I will also summarise the different areas to be covered during the course, so that student teachers are fully aware of what the course will involve. After the presentation I would like to request interested students to come and see me for individual interviews. Before the initial interview, I will ask student teachers to sign a standard consent form so that they can become research participants.

Sincerely

Lucy Dixon-Clarke, PhD student

Teaching Practice Coordinator Consent Slip

I,_____, as (position)_____, understand the nature, requirements and benefits of the mindfulness study, and give my consent to allow it to take place with student teachers.

Signature _____ Date _____

APPENDIX E USE OF THE THREE PRACTICES OF TIBETAN BUDDHISM

	Focused attention	**Open presence**	**Compassion**
Tibetan practice	Shamatha/Shinay	Vipassana	Compassion
Intention	Stability of mind Calm-abiding	Wisdom, gained through accurate understanding of the true nature of identity and objects.	Development of intense feeling of loving kindness and non-referential compassion (to all beings equally).
Setting	Context: formal guidance from a teacher, study of Buddhist thought, range of devotional practices, observance of basic moral code of non-harm, compassion. Site: quiet place near food and water, few distractions, clean.		
Body posture	Straight spine, relaxed, sitting posture, eyes open.		
Object and Techniques	Focus on sensory object e.g visual object, or mental object e.g. visualised image. Sometimes brief focus on breath.	Objectless: Understanding that meta-awareness makes all cognitions of subject and object possible.	Initial focus on objects to generate compassion. Later cultivation of compassion and objectless awareness.
Flaws that hinder progress	Dullness (e.g. drowsiness) and excitement (e.g. distraction where mind wanders to other mental content or phenomena).	Grasping onto mental content as an object e.g. following a train of thought.	The 'near enemy' of pity can be mistaken for compassion.
Antidotes to the flaws	Mind notes distraction, then returns to object, change in physical space (e.g. more or less light, relaxing or tensing body)	Release grasping on objects while understanding they are not separate from awareness itself. Later release grasping onto sense of self/identity. Make less effort to meditate, as striving assumes a sense of 'I am meditating', which obscures the invariant feature of consciousness.	Contemplate on the near and far enemies of compassion. Puja practice on Chenrezig, the deity of compassion.
Stages of Development	Mental and physical well-being, reduced need for sleep, pleasurable sensations, such as lightness and pliancy of body and mind	Initial concentration on an object, then awareness of subjectivity to de-emphasise the object. Phenomenal access to the reflexive awareness that is invariant in cognition. Later de-emphasis of subjectivity to enhance reflexivity. Final movement to a point where the invariant aspect of awareness is fully	Compassion and open presence experienced together.

		realised.	
State	Tranquility and quiescence. Concentration – balance between stability and clarity	Insight into habitual tendencies i.e. how the subject habitually responds to objects	General state of well-being and aiding in counteracting challenging emotions such as anger or irritation.
Trait	Ability to concentrate, less susceptibility of being disturbed. Stability and intensity of concentration increased	Mind is sensitive and flexible, able to cultivate positive traits. Regulation of emotions possible with the ability to experience phenomena without objectifying them, and without sense of subjectivity i.e. bare awareness. State between sessions similar to meditation sessions Non-conceptual, cognitive awareness	Ability to transmit compassion to others, ie. Feel of greater sense of well-being and happiness. Also beneficial for other practices e.g. counteracting torpor or cultivating open presence (due to other centred).

APPENDIX F **TABLE OF THE THREE PRACTICES**

Key Focus	Specific Practices	Lived Experiences
Present moment focus and Calming	Settling and Grounding	A: I went into the zone and I was calm. H: There was some sense of feeling in the body, but mostly thinking. L: My mind was thinking about not thinking! B I was thinking of what I should be doing. M: I started thinking – my mind went into overdrive. Almost like the 'let's go to sleep mind' started happening. How can you shut the mind down? One thing leads to another thing, to another thing. I: I was just in the present, but random pictures come and go. R: I started falling asleep. We are hard-wired as doers, not people who sit around doing nothing. G: I find it really hard to let go of the stressful planning thoughts. K: The settling was very calming, my mind wandered a lot at the beginning, and then it was good as straight after I tried to read for a test and I was focused and everything. G: The night before the philosophy exam I tried to do the settling but gave up as my mind was running through what I was going to write. L: I started with settling and grounding. It was very powerful somehow, I had a lot of energy during the day. G: I did it a while ago before I started writing an essay, and I realised that I was so much more clear, I knew what I wanted to say, everything was organised in my mind, and I worked so fast I couldn't believe it so I can see how it is beneficial, but it's just to get over that mindset that I'm doing nothing. R: I had long breaks, watching trees out of the window of the kitchen watching the leaves, trying to be present just for once. It was quite scary to become fully, fully present, it's almost like you are floating in a way, you don't think about past or future, just focusing on what you can see around you. To me it felt quite weird, very unusual to be fully present. R: I find the breathing and counting very calming and soothing. I think when I feel tense, I lose control of my diaphragm and I breathe faster than I need to. K: The first time I did it I was very calm and ok, but the second time my mind was racing with all the things I should be doing.
	Body Scan	H: I felt like I was on some sort of trip… everything was super-sensitive. It was weird! Whenever I think of my body it is in a negative light, but this was positive. B: I felt relaxed. E: I actually feel awake now. Very light. It was as if my mind transcended, fluffy, fluffy. A: I was just feeling pain in my back, I was trying to listen to your voice to calm me down. R: I felt more positive and focused in a good way. More calm and less scattered afterwards. While I was doing it, I was trying to focus on my body – I paid attention to the exercise. K: The first time I did the body scan, I was very restless – my toe was itchy. This morning, it was very calming and I didn't wander at all. G: The body scan I found very useful and completely relaxing. I had a headache when I tried it and I was concentrating on different parts of the body and when I finished it, the headache was completely gone, so I was very impressed with that. L: It was beautiful! When we started my toes felt too cold, but as we moved up and went back down, I started feeling more relaxed. I: It's hard to stay here when you are lying down and want to sleep. It requires a conscious effort to get yourself out of that wanting to sleep. I think we are all really tired. G: I had a really awesome body scan experience, I realised that normally I am looking from the top and scanning through, but I did one that was very internal and I felt everything, very weird, and out of this world feeling. I was quite proud of myself for that one. I tried again last night and it didn't work.
	Walking meditation	H: I had a lot going on in my head, but kept bringing it back. I found it quite calming to have that system of the breath with the walking. It was like a trance. A: It was nice being aligned with my breathing and my walking, coz when I walk I want to go from here to there. B: I was off thinking, but breathing in and out brought me back. A: I like the breathing and walking, that's when I'm mindful. That's when I'm aware of my breathing and my steps. I enjoy that the most and have been doing that every single day. I: I find it easier. It's as if you have something to focus on that's a bit more tangible. It's

		easier to focus on the present moment by feeling those movements as opposed to just sitting and not moving at all where you just have your breath and your heartbeat. M: I almost got wrapped into what I was doing, and there was nothing else going on. I was walking and that was it. I've had that experience very rarely throughout my entire life.
	Mindful movement	L: I enjoyed the body stretching. I love it! It is sweet for me, like I can taste it. I feel free most of the time when I do it. G: Yoga, I love. I find it a lot easier to focus my mind if I am doing something, than if I am just sitting.
	Daily life practices	G: In the garden, very calm and peaceful, focused on what I was seeing, what was going on around me. I love my garden. I didn't realise that I'd been doing it in a mindful way until last week. I didn't realise it was a calming thing for me. I: In the car, I was becoming aware of my body and then all the people around me. On my drive home there are so many homeless people, on every second robot, even here, and I started feeling very heartfelt for them. I always have before, but more intensely. I was trying to be a lot more present and allowing myself to connect to them. In the past I say sorry and push it away. I: Eating as well, I was trying to taste the syrup, I really enjoyed it. I didn't finish all of it as I realised I was full, but usually I would, and it made me realise that we often overeat. G: The other afternoon I was baking, and I was so focused and in the moment, focusing on my breathing, and loving it and I found that a lot more, not useful, but I enjoy the feeling more than sitting down for ½ hour and doing my mindfulness. I'm finding with the everyday things I'm loving it, cooking, taking walks, that I'm enjoying a lot. K: When we ate, I was mindful of what I was eating, so I haven't done the practices, but I have been mindful of where I was. It tasted better because generally we are in a rush. K: In general, in everyday, I don't really feel it except when showering or bathing. I take my time and enjoy it.
Compassion	Felt sense of kindness	H: It was very difficult. Not so hard to think about a memory when someone was kind to me, but a little bit more difficult to think about when I was kind to someone else. A: It felt good, if felt nice, I found myself smiling. It was like I was floating and I watched it taking place. That was nice. I felt it in my body, in my heart. B: This exercise is trying to motivate me to forgive him, to think otherwise. At least I benefitted with this. N: I could see the incident but I could not feel it, even with the kindness I did to somebody. C: I felt so excited, I also feel like I can do good for someone else. E: It feels like a privilege to be able to something for someone. E: It really made me happy. I felt a sense of peace and felt ok. H: I tried to do the kindness practice again, but I find it extremely difficult as a lot of feelings of guilt come out of it. I could be more kind to myself, to other people, there are people far worse off for me. R: When someone is kind to me, I feel like I have had a lucky break. My body feels relaxed afterwards. K: I felt kindness to the taxi driver who let me pull in. It felt like my spine went straighter and I felt calmer and the light was brighter than it was before. Giving kindness, I was very irritated with this colleague of mind, who needed help, and instead of not doing anything, I helped her, but I felt heavier and upset as I realised by helping her, I was not helping myself. G: I think of a glow, almost like a golden colour. I feel warm inside and happy and a huge grin.
	Self-compassion Break	E: …trying to be kind to myself, and then stop trying to find a way to solve the problem. You don't have to pre-empt what's going to happen. Be kind to myself, not try to figure out or trouble shoot. For me, I tried not to build a story in my mind. K: When you acknowledge it, it felt lighter, like everything is going away. There's no resolution, like what should I do to the situation to solve it, but it makes you feel lighter. There's a sense that there may be a solution some day. G: I love the hugging sensation, I think that works and that felt good. Then I felt something in my heart. It felt a bit sore, not sore, but I could feel it, and then after a while, it felt warm, a bit of a release. L: The emotions were in my mind, but when I was giving myself the hug, it felt maybe I needed someone to hug me. It felt supportive.
Insight	RAIN	A: I was very angry, and I said, let me feel this anger. Let me feel it. But it is uncomfortable

		- the pressing feeling on my chest is uncomfortable. I was resisting it at the same time. My mind was just playing with me. I want to feel it; I don't want to feel it at the same time. The sensation that I'm feeling is too intense. And then this joke came along, and I started laughing and I forgot about it and I was more relaxed. H: It is difficult not to let it overpower you. B: Most of the time, when I think about bad things, they don't even knock, they just barge in. So I've been thinking how do I deal with it... At times, when something bad has happened to you, you have to be kind to yourself first before you can deal with it. I: I was thinking of being frustrated with him, but realised there are so many other emotions underlying that. Like sadness, confusion and disappointment more than anger and frustration, which is how it expresses itself. Being aware of that can help to deal with it a bit better. R: The Rain procedure was very useful to let go of regrets of things I feel bad about, or things that have happened to you, as they don't define you. G: I practised the Rain – I didn't practice it mindfully, I talked it through with my Gran and at the end of it, I felt better. I was explaining it to her on how you would deal with it mindfully.
	Reflection	H: I found that writing down stuff is helping me a lot as well, focusing my attention and making me aware of what I'm feeling. The awareness is really growing a lot. A: I see the difference in myself in how I react to things compared to how I used to react to things. My intention was to learn about focusing, and it ended up learning so much more than focusing.
Combined	Sitting Practices (Settling, Grounding, Resting and Support of Sound or Breath)	A: I think it's quite soothing. I felt very relaxed, sleepy, but I kept my eyes open as I knew if I closed them I'd fall asleep. This time I relaxed and listened to the sound and trying not to think about the sound. I: You get moments when you feel like nothing is going through your mind. Then when you start talking about letting your thoughts go, I realise how much I have actually been thinking and I hadn't realised before. Not because I was actively engaging with them, but they were there subversively. It's quite interesting. I wasn't as engaged with them as I usually am, following them along and jumping around, there was just something sitting there. G: The resting state for a while was something amazing, complete calmness, I don't know how to describe it, but amazing. The sounds, I found it quite easy to switch off from where they were coming from, and listen to them as a sound. I found them very comforting as well, I like the background noise. M: It gets easier and then more difficult. You'll have a stage when your mind does diddly-squat, and then goes into overdrive, and then diddly-squat again. You can have thoughts, they are there but you don't do anything with them. It just carries on, my brain gets bored of doing nothing, it needs to do something to keep awake. It's almost just how my mind works sometimes – it can shut down, but it doesn't want to shut down. M: You sit down and do your little practice and it doesn't do what you were hoping for it to do, but you get there. I guess it changes depending on what you aim to get out, if you don't get it, you tend to get a bit negative towards it. I: I feel like it has helped me get better a lot quicker. When I was sick, I wasn't focusing on being sick, but more focusing on awareness of my body and feeling like I was getting better.
	3-minute Breathing Space	B: You feel like you have slept for 4 hours and woken up again, forgetting everything that had troubled you. G: I also find, when you come out of it, I feel reenergised, not more tired than I was. I feel it is more difficult for me to get to a calm and relaxed state in such a short period of time. The other practice, I have more time to focus on my breathing. In the 3-minutes, I'm still busy counting. M: It's almost easier to do because it's shorter. Short, sweet, to the point and you can keep focused on. G: I was having a bad day and I had a huge argument so I tried to try the 3-minute breathing space, and I was standing there breathing and trying to get myself calmed down, but I couldn't find the compassion so I think I need to work on that a bit, but it did make me feel better, physically, but my mind's working overtime. I still need to try and find that acceptance. L: I got addicted to 3 minute breathing – it's beautiful.