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CHAPTER 1
INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Over the past forty years, an extensive body of clinical research has increased our knowledge of the physiological (Cahn & Polich, 2006; Delmonte, 1984), neurological (Davidson et al., 2003) and psychological effects (Baer, 2006; Kabat-Zinn et al., 1992) of meditation. However, a gap in our knowledge remains as to how the practice of meditation is subjectively experienced by individual practitioners *as they meditate*.

The purpose of this study is to explore with a group of novice meditators how meditation is subjectively experienced. The information will expand the knowledge base that has already been established by the scientific community. This information could also be of relevance to healthcare professionals and the general public as the practice of meditation becomes an accepted means of effectively managing stress and promoting general well-being.

An increasing number of healthcare centres in the United States, like the University of Massachusetts Medical Center for example, now offer meditation as part of an integrated program of care. Both the National Institute of Health and the Centers for Disease Control and Prevention in the United States cite on their websites extensive complementary and alternative medicine studies. The recently published results of the 2012 Health Interview Survey indicate that as many as 18 million

adult Americans used meditation as a complementary health approach over the past 12 months (Clarke, Black, Stussman, Barnes, & Nahin, 2015). A similar trend appears to be occurring across Europe (Van der Watt, Laugharne, & Janca, 2008).

As the use of meditation for therapeutic purposes increases, the infrastructure of alternative and complementary medicine is changing. The Ontario Government in Canada now pays for group meditation sessions through the provincial health insurance plan. A recent journal article goes as far as suggesting that "Clinical Meditation Teacher" is becoming a new category of employment for professionals working within the healthcare field (Schaub, 2011).

This qualitative, multiphase research study examines the subjective experience of meditation using a phenomenological approach, and measures the stress-reduction effects of a short-term meditation program. This study explores the phenomenon of meditation through focus groups and interviews. A questionnaire, the Perceived Stress Scale or PSS-14 (Cohen, Kamarck, & Mermelstein, 1983) is used as a pre-study and post-study data collection method to measure changes in perceived stress across the study period.

1.2 CONTEXT OF THE STUDY

Early clinical research studies carefully established the physiological substrates of the meditative state. Data were gathered with regard to heart rate, breathing rate, blood pressure, skin resistance, and muscle tone. A review of the psychophysiological correlates of meditation was published by Robert Woolfolk as early as 1975 (Woolfolk, 1975).

Measurements from EEG studies have detailed the brain's electrical activity and shown increased coherence and synchrony during meditation (Jevning & O'Halloran, 1984). The biochemical changes that take place during meditation have also been measured (Delmonte, 1984). More recently, advanced neuroimaging techniques have allowed neuroscientists to document the areas of the brain activated during meditation (Cahn & Polich, 2006; Lazar et al., 2000).

Neuroplastic changes in the brain as a result of the practice of meditation have also been documented (Holzel et al., 2011). Differences in the brain functioning of experienced meditators as opposed to novice meditators have also been established (Siegel, 2007).

The contribution of regular meditation practice to general health and well-being has been well documented (Grossman, Niemann, Schmidt, & Walach, 2004). Meditation has proven to have therapeutic efficacy in a wide range of clinical disorders. Regular practise has been associated with improved immune function (Bakke, Purtzer, & Newton, 2002; Davidson et al., 2003; Solberg, Halvorsen, & Holen, 2000), and reduced hypertension (Barnes, Treiber & Davis, 2001). It has also been shown to have psychobiological effects that may be recruited by the body's natural healing process to enhance the rate of healing (Kabat-Zinn et al., 1998). The anxiety-reducing effects of meditation have lead to its use as a complementary therapy in heart disease (Tacon, McComb, Caldera, & Randolph, 2003), and cancer treatment (Tacon, 2003). Promising results have been achieved in the management of chronic pain (Morone, Lynch, Greco, Tindle, & Weiner, 2008).

Meditation has also been found to be effective in the treatment of a number of psychological disorders including depression (Segal, Williams, & Teasdale, 2002). In particular, the practice of meditation has been associated with reductions in the physiological and psychological effects of anxiety and stress when partnered with cognitive behaviour therapy (Baer, 2003). The primary therapeutic value of meditation has been shown to be its stress-reducing effects (Kabat-Zinn et al., 1992).

The ancient Eastern spiritual practice of meditation has become a modern Western therapeutic intervention. Stripping the practice of meditation from its religious roots and submitting it to vigorous scientific investigation has caused a paradigm shift, from meditation being perceived as a mysterious religious activity to meditation being an acknowledged, mundane, physical and mental health-supporting activity. The Maharishi Mahesh Yogi, a major change agent in the field of meditation who

introduced Transcendental Meditation to the West during the 1960s, notes that meditation is beneficial to health in two ways: it is both preventative and curative (Maharishi Mahesh Yogi, 2001).

The present study has been conducted with a pragmatic approach. How is meditation experienced and how might that information be used to broaden the practise of meditation? With the growing interest in, and adoption of, the practice of meditation by the general public, there is an opportunity to further demystify the practice and promote meditation as a lifestyle-based activity that serves a health-enhancing function. Meditation could have a place – along with a balanced diet, regular exercise and sufficient sleep – in a comprehensive healthy lifestyle package of behaviours, promoted to maintain mental and physical health and well-being. The practice of a pleasant, inexpensive activity to effectively manage stress could be of value in the complementary and alternative healthcare field, especially given rising healthcare costs (Sobel, 2000a, 2000b), the ever-growing complexities of healthcare delivery (Mayosi & Benatar, 2014), and the well-established negative impact of stress on health (Solberg et al., 2000).

While the extensive body of meditation research has increased our knowledge of the physical and psychological effects of meditation, there remains a gap in our knowledge as to how the practice of meditation is subjectively experienced by the individual practitioner *as they meditate*. We do not know if the subjective experience of meditation is common to all meditators.

Meditation by its nature is an intensely private, solitary activity. Meditators sit in silence, focused inwards, with their attention on their own internal, private space. Even if meditation takes place within a meditation group, it is generally accepted (and in fact expected) that meditators will arrive quietly, practise in silence, and then leave quietly. It is not an activity that encourages interpersonal contact or communication. It is not an activity readily shared with others. We discuss the benefits and outcomes of meditation practice while the experience itself remains an enigma.

The existing research has carefully detailed what goes on in the body and the brain during meditation, as well as the important therapeutic effects of meditation, but few studies exist of the subjective experience of meditation, or *how it feels* to meditate.

There have been some attempts to fill the gap. One of the earliest scientific papers in this regard was written by Roger Walsh (Walsh, 1977, 1978). Walsh, now a renowned meditation investigator, wrote an extensive self-reflective paper documenting his own experience of meditation over a two-year period. The paper was published in two parts (Walsh 1977, 1978).

An early phenomenological study (Kornfield, 1979) gathered the individual reports of meditators. This study is an early demonstration of the use of thematic analysis in meditation research, but no reference is made to the term “thematic analysis” or “qualitative research”. The paucity of phenomenological studies of meditation may well be as a result of the slow acceptance of qualitative research methods by the scientific community. Qualitative research methodologies that capture *lived experience* are now more readily accepted, allowing us a broader scientific net to capture phenomenological data.

Another early study attempted to capture the subjective experience of meditators (Venkatesh, Raju, Shivani, Tompkins, & Meti, 1997). However, this was a quantitative study using a pre-constructed questionnaire to gather data on participants' experiences. The research participants were constrained in their responses, having to fit their subjective experiences into the structured confines of a questionnaire. They were not given the opportunity to tell their own story in their own words.

Three recent research studies used qualitative research methods to gather the effects of meditation on the lives of meditators. The impact of meditation on chronic pain (Morone et al., 2008), the experience of light perception during the practice of meditation by yogis (Prakash, Haq, Prakash, Sarkhel, & Kumar, 2009),

and the effect of regular meditation on intimate relationships (Pruitt & McCollum, 2010), are studies indicative of a growing application of qualitative research methods and their usefulness in capturing subjective experience in the area of meditation research.

1.3 PROBLEM STATEMENT

In order to promote meditation as a lifestyle-based activity that effectively reduces stress for improved mental and physical health and well-being, we need to understand how individual practitioners subjectively experience the meditation process.

1.4 STATEMENT OF PURPOSE

The purpose of this qualitative research study is to explore the subjective experience of the phenomenon of meditation with a group of novice meditators participating in a short-term meditation program.

Data will be collected through focus groups and interviews. Pre- and post-testing with the PSS-14 (Refer to Appendix D on page 231) will measure the effectiveness of this short-term program in reducing perceived stress.

The information collected in this study will extend the existing scientific knowledge base and inform healthcare professionals working with patients who could benefit from the therapeutic effects of meditation. This information could also be of assistance to members of the general public who may be considering the introduction of meditation as a health-enhancing activity in their own lives.

1.5 RESEARCH QUESTIONS

Creswell (2007, p. 108) writes: "I recommend that a researcher reduce her or his entire study to a single overarching question and several subquestions." Taking Creswell's advice, the single overarching question in this study is:

1. How is meditation subjectively experienced by the meditator *as they meditate*? (or How does meditation feel?)

The subquestions in this study are:

2. Is there a common meditation experience that all meditators experience in the same way?
3. Do all meditators subjectively experience relaxation in the same way during meditation?
4. What words do meditators use to describe their experience?
5. Can a short-term meditation program effectively reduce perceived stress in young adults attempting to cope with the stressors of college life?

1.6 RESEARCH APPROACH

This qualitative research study explores the subjective experience of meditation with a group of college students who responded to a call for research participants at the college where the researcher is a teacher. The participants were divided into four groups based on their individual time schedules. Each group took part in four once-a-week guided meditation sessions. Each session was immediately followed by a focus group. The focus groups were audio recorded for later transcription.

Individual debriefing interviews were conducted at the end of the study once all the meditation sessions and focus groups had been completed. The debriefing interviews were also audio recorded for later transcription.

The components of this multiphase study are shown below in Figure 1.1.

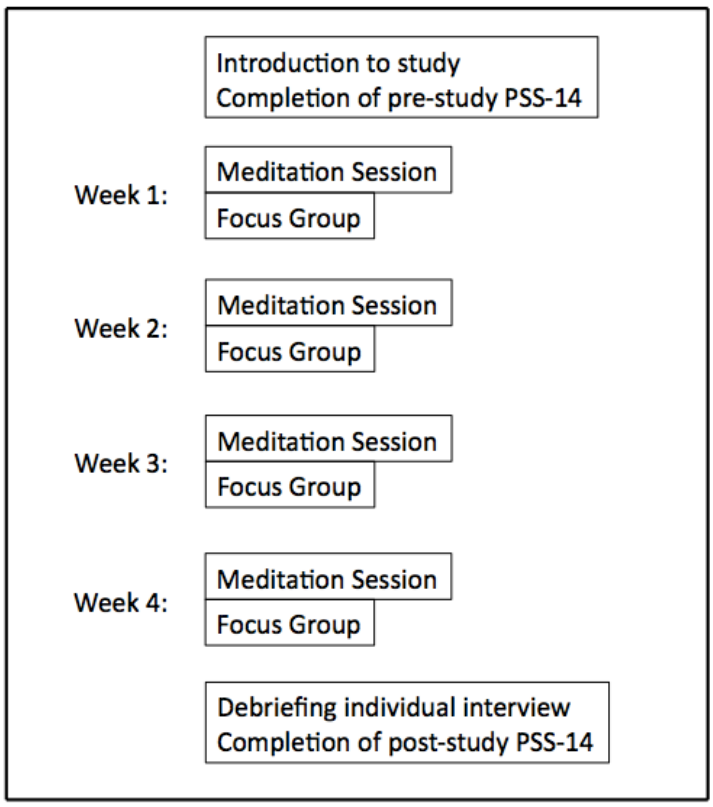

Figure 1.1 The components of the study

The focus groups and individual interviews were transcribed by the researcher and were analysed for emerging themes. The multi-session design of this research study, with the addition of the debriefing exit interviews, provides for the triangulation of data, strengthening the rigour and trustworthiness of the results.

The assessment of perceived stress was measured by pre-study and post-study testing using the Perceived Stress Scale (PSS-14). The PSS-14 is a pre-constructed paper-and-pencil test. The change scores on the pre-study and post-study tests were later analysed for significance using quantitative statistical analysis.

1.7 RATIONALE AND SIGNIFICANCE

In an age of increasing societal stress and mounting healthcare costs, meditation is proving to be an effective stress-reducer and therapeutic intervention. The data concerning the reduced healthcare costs of meditators are promising (Herron, 2011; Herron & Hillis, 2000) and could have implications for healthcare policy in the future.

There is a strong case emerging for the active and organised promotion of meditation to the general population. If this is to be done in a responsible manner with full disclosure, there will need to be answers to such questions as *"What does meditation feel like?"* or *"What can I expect to experience during meditation?"* For healthcare professionals and other promoters of meditation to respond to these questions without having to depend on their own personal experiences or anecdotal evidence to inform their responses, research data systematically gathered from individual meditators, in their own words, is required. The *lived experience* of meditation is vital information. A paucity of research data in this regard exists at the present time. This study has been conducted to help address this matter.

1.8 THE RESEARCHER

In general, the qualitative researcher "is considered by many within the field of qualitative inquiry to be the primary *instrument* of the endeavour" (Saldana, 2011, p. 22). The qualitative researcher not only manages the project, but also filters and shapes the research enterprise through their relationship with the research topic and the research participants. Caution is therefore required to bracket or set aside one's judgment and personal experience, especially in phenomenological research where the objective is to ensure that "everything is perceived freshly, as if for the first time" (Moustakas, 1994, p. 34) so that the phenomenon under investigation "is described in its totality, in a fresh and open way" (Moustakas, 1994, p. 34).

The researcher of the present study is a long-term meditator and is well acquainted with the practice of meditation. Meditation is an integral part of the researcher's life. Initial training was in Transcendental Meditation or TM, a Hindu mantra-based meditation technique. Later, training was received in the TM-Sidhis. The TM-Sidhis are a set of advanced meditation techniques that promote increased coordination between mind and body, culminating in Yogic Flying, a technique that induces increased brainwave coherence.

After many years of meditation practice using the TM technique, the researcher received training in Mindfulness Meditation, a Buddhist meditation technique that focuses attention on the natural rhythm of the breath. This was followed later by completion of a training program for healthcare professionals in Mindfulness-Based Stress Reduction (MBSR), a stress-reduction program originally conceived by Dr. Jon Kabat-Zinn of the University of Massachusetts Medical School and now widely used in healthcare settings. The MBSR program incorporates Mindfulness Meditation in a package of personal training skills that shifts the mindset and behaviour of participants to living with moment-to-moment awareness, systematically "developing new kinds of control and wisdom in [their] lives" (Kabat-Zinn, 1990, p. 2). MBSR is gaining wide application in healthcare settings for its therapeutic effects. There are MBSR programs running across North America, the UK, Europe, Australia and South Africa. MBSR has been the focus of numerous research studies (Grossman et al., 2004).

The researcher also has a background in clinical psychology with a special interest in mind-body interactions. Besides the present study's contribution to the existing scientific knowledge base, this study also serves to extend the researcher's own knowledge of the experience of meditation, enhancing understanding of the meditation process and improving teaching skills as a meditation teacher.

The researcher teaches psychology and communications courses at the college that provided the site for the practical portion of this study.

1.9 ASSUMPTIONS

This study has been conducted based on certain assumptions**.** Firstly, it is assumed that, as human beings, we all have the neuropsychological attributes required to allow us to experience meditation. Secondly, it is assumed that we have the capacity to monitor and note quite subtle changes in our conscious experience. Thirdly, it is assumed that it is possible to provide verbal reports of these subtle changes, and that we can communicate a description of these changes to others in words.

1.10 LIMITATIONS

The participants in this study are novice meditators. While this offers a valuable view of experience at the entry point to meditation practice (i.e. before regular practice has been established) the results will not be generalisable, without further investigation, to the experience of medium- and long-term meditators.

Secondly, the study was conducted over a four-week period. While saturation of the collected data was achieved within the study period, it is not known if a longer study may have captured different meditation experiences with a longer duration of practice.

Thirdly, participants were encouraged to meditate between group sessions. However, the researcher could not control whether or not participants made time within their busy schedules to practise meditation on their own between group sessions. In fact, as the study progressed, participants mentioned that they struggled to find time in their busy schedules to meditate between group sessions.

1.11 DEFINITIONS OF KEY TERMS

Mantra – a sound, usually with no meaning, that is repeatedly invoked to facilitate entry into the quiet state of meditation.

Meditation – an activity during which the practitioner sits quietly with eyes closed and attention is turned inwards producing a state of contemplation or reflection.

Meditation retreat – time away from everyday life when meditators join with others to deepen their meditation practice in a group setting, often under intensive conditions.

Mindfulness – the moment-to-moment awareness of now.

Mindfulness Meditation – meditation practice with the attention on the natural rhythm of the breath.

Mindfulness-Based Stress Reduction (MBSR) – an 8-week program devised by Dr. Jon Kabat-Zinn that includes a number of personal awareness and stress-reduction strategies including mindfulness meditation.

Transcendental Meditation (TM) – a Hindu mantra-based form of meditation.

1.12 ORGANISATION OF THIS REPORT

The purpose of the study, the problem being investigated and the research questions have been laid out here, in Chapter 1. In Chapter 2, the theoretical foundations and current research literature related to this study will be reviewed. The research methodology used to gather and analyse the research data will be presented in Chapter 3. In Chapter 4, the study's findings will be reported. A discussion of the study's findings will be provided in Chapter 5. Chapter 6 will conclude this report with the answers to the research questions according to the study's findings.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

This study will explore the subjective experience of meditation as *lived* experience with a group of novice meditators participating in a short-term meditation program. In this chapter, the theoretical foundations of this study will be discussed. The broader context begins with the presentation of a model of consciousness and a proposal as to how a modified version of this model can be used to represent the meditation process. The discussion will then extend to the neurophysiological substrates of meditation as a mind-body activity and to the health benefits of meditation practice. The existing phenomenological research on meditation will then be reviewed. Qualitative studies on the therapeutic effects and self-transforming aspects of meditation will be discussed with a focus on the Mindfulness-Based Stress Reduction program. The chapter ends with a consideration of meditation as an altered state of consciousness. This is followed by a brief review of how the current study seeks to expand our current knowledge and understanding.

2.2 A MODEL OF CONSCIOUSNESS

As a field of investigation, consciousness poses particular challenges in that investigators have to use consciousness to study consciousness or, even more challenging, to somehow step outside of consciousness in order to objectively

appraise, analyse and theorise about its nature (Blackmore, 2005). Meditation is a useful tool for the exploration of human consciousness and a method for expanding our understanding of the full range of human experience (Travis, 2011). According to Pekala (1991), “meditation is the process of turning consciousness upon itself to develop attentional control of the process and contents of consciousness" (p. 59).

A useful theory to explain the meditation process in relation to consciousness is the Global Workspace Model of Bernard Baars (1997). Baars uses the metaphor of a theatre to describe how consciousness functions. Of the use of metaphors in science, Baars writes: “[Metaphors] have a long and honourable history in science, as tools to help us make the leap from the known to the unknown” (Baars, 1997, p. 302). While by his own admission the theatre metaphor is too simple to explain something as complex as the functioning of consciousness (Baars, 2003) – and he cautions against the overly literal interpretation of metaphors in science – the “theatre of consciousness” is a very useful model to illustrate, in simple terms, the cognitive architecture of the mind.

The major components of the Global Workspace Model (Baars, 1997) include the theatre, the stage, the spotlight and the audience. These components function as a *working theatre*, creating a mind workspace with global access to the brain’s over 100 billion neurons (Baars, 1997). Here, consciousness exercises brain-wide coordination and control.

Baars (1997) writes: “The meaning of ‘consciousness’ intended here is best illustrated by your own experience. *Verifiable public report* is the key to scientific evidence, but *your experience here and now* is quite a good index to it” (p. 294, italics in original).

In Baars’ *working theatre*, the stage is a metaphor for working memory. “The entire stage of the theatre corresponds to ‘working memory’, the immediate memory system in which we talk to ourselves, visualize places and people, and plan actions” (Baars, 1997, p. 292). Working memory is necessary for information

processing. The audience seated in the darkened theatre represents long-term memory and a distributed network of local processors that have specialized knowledge. Along with other unconscious contextual systems, the audience (long-term memory) “shapes” (or gives meaning to) the events in the spotlight on the stage of working memory.

The spotlight is a metaphor for focal consciousness or in-the-moment conscious experience. Baars (1997) writes: “Focal consciousness acts as a ‘bright spot’ on the stage, directed there by the selective ‘spotlight’ of attention” (p. 292). He continues: “Information from the bright spot is globally distributed through the theatre, to two classes of complex unconscious processors: those in the darkened theatre, the audience, mainly receive information from the bright spot; while, behind the scenes, unconscious contextual systems shape events in the bright spot” (Baars, 1997, p. 292). See Figure 2.1 for a view of the components of Baars’ theatre of consciousness metaphor.

Difficult to define, consciousness has proven to be a challenging subject for scientific research because it cannot be seen, touched or directly measured, but rather has to be experienced. The difficulties in the scientific exploration of consciousness have been further exacerbated by the lack of agreement on a definition of terms. ‘Consciousness’, ‘awareness’, ‘attention’ and ‘mind’ are terms that are often used interchangeably, even by the same author in the same document. Consciousness in Baars’ (1997) model could as easily be labelled awareness, and consciousness and the mind seem to be the same concept.

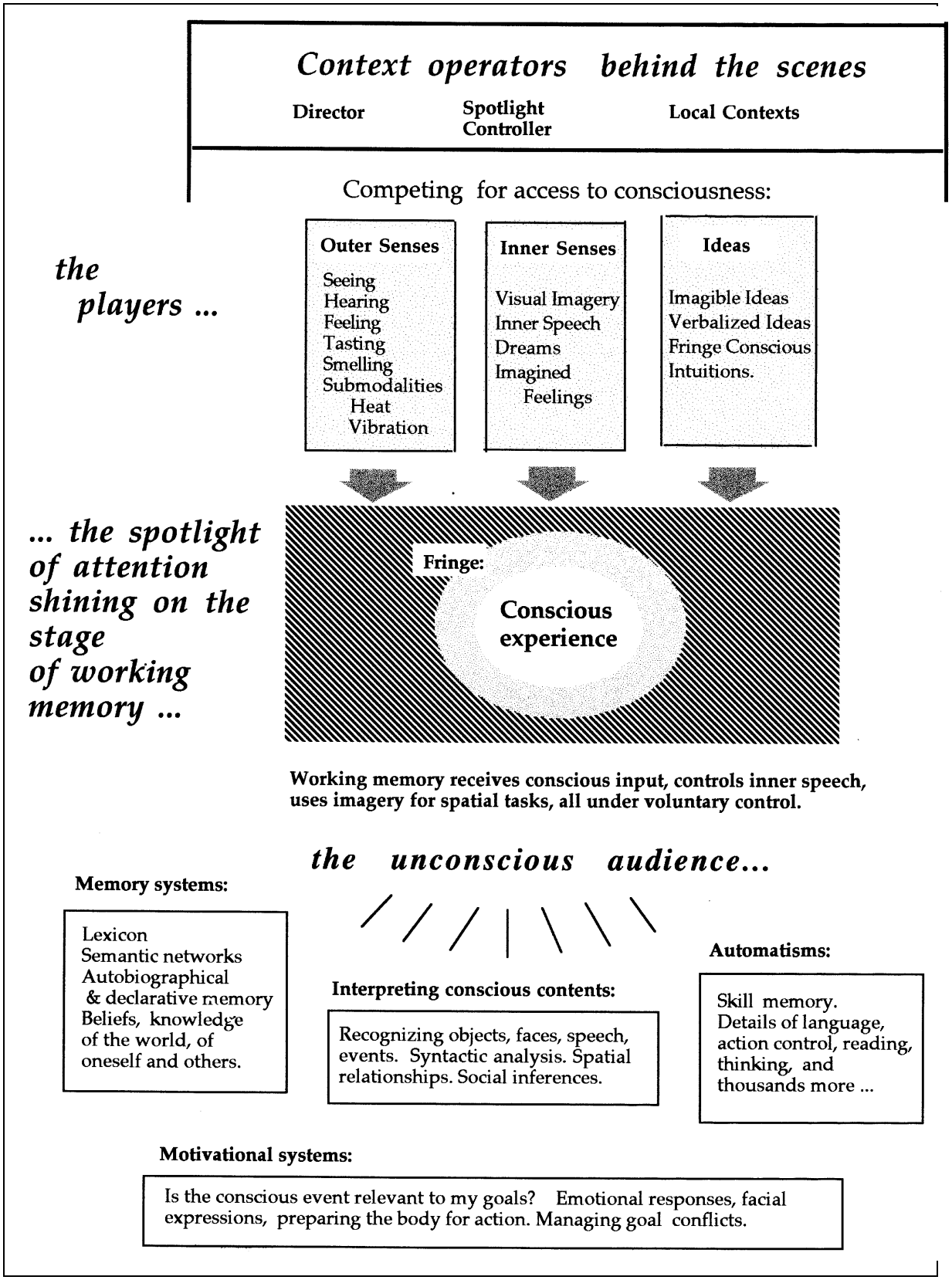

Figure 2.1 Baars' theatre metaphor for conscious experience (Baars,1997, p. 300).

However, this well-regarded model provides the following benefits as a representation of the meditation process (see Figure 2.2):

1. “The theatre” as a metaphor for the mind of the meditator
2. “The stage” as the conscious contents of the mind with distracting thoughts, perceptions and sensations experienced during meditation vying for the attention of the spotlight
3. “The spotlight” of focused attention that the meditator learns to control through regular practise, slowly becoming better at controlling the spotlight, focusing attention for longer periods of time on the meditative device (the breath or a mantra)
4. “The director” (the meditator) who has control of the spotlight, and takes on the powers of "self as observer" (Baars, 1997, p. 306) and with the help of the audience becomes aware when attention has strayed to thoughts, perceptions and sensations, and is then alerted to bring attention back to the meditative device to continue the meditation session.

2.3 THE MEDITATION PROCESS

Meditation is an iterative process. Taking place in the theatre of the mind, the director (the meditator) shines the spotlight of focused attention on the meditative device, which in turn helps to quieten the mind. The meditative device is generally the rhythm of the breath or the repetition of a mantra. Contents of the mind (thoughts, perceptions, sensations) wander across the stage and vie for the spotlight of focused attention, acting as distractions and drawing attention away from the meditative device. The distraction may prove successful with the spotlight moving away from the meditative device to focus on the thoughts or sensations.

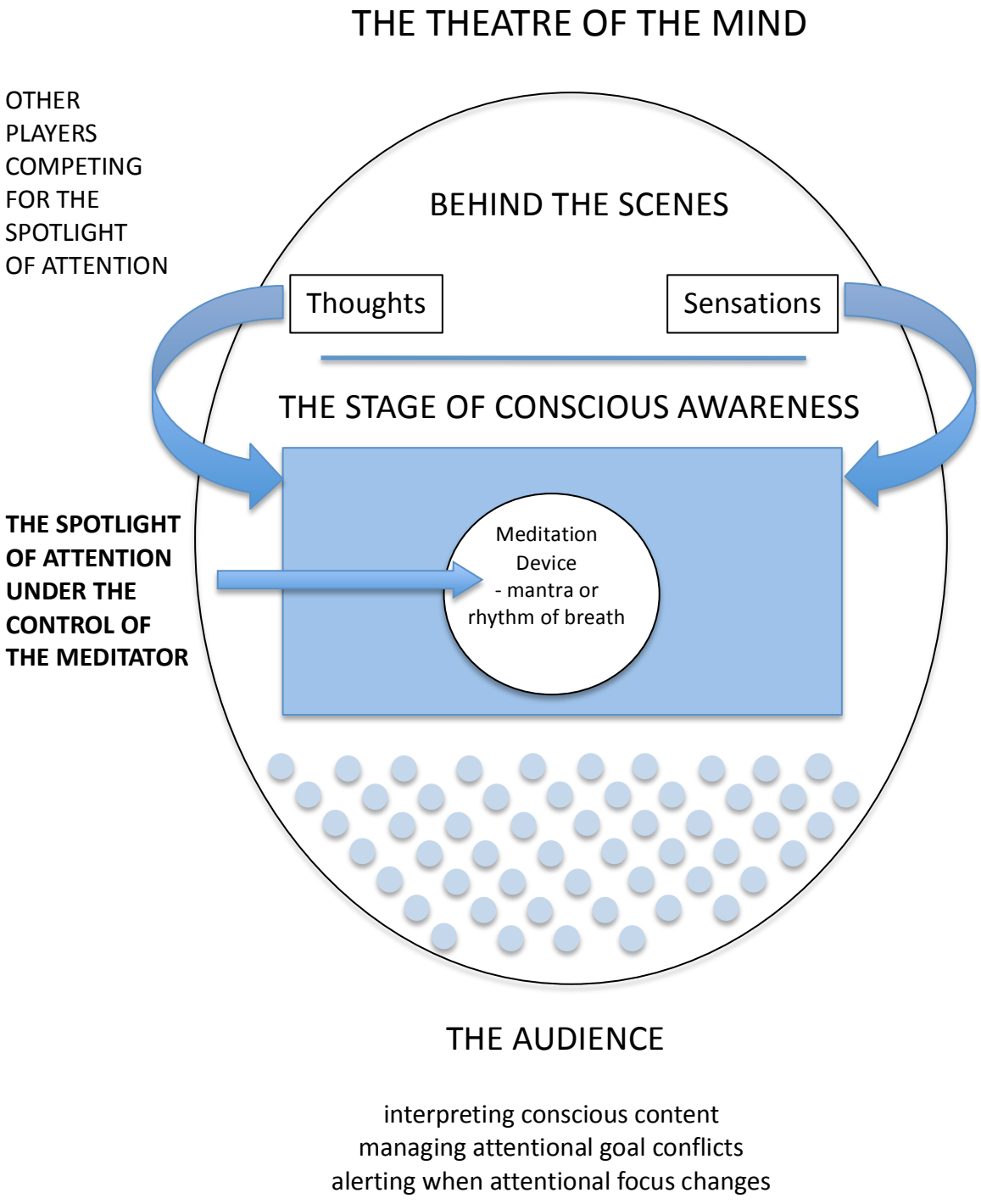

Figure 2.2. An adaptation of Baars' model of the theatre of consciousness (Baars, 1997) indicating the cognitive component of the meditation experience.

When the director (the meditator) becomes aware that the spotlight has moved away from the meditative device, the director then moves the spotlight back to focus attention on the meditative device. This process is repeated over and over again, with a progressive quieting of the mind over the time of the meditation session, along with a deepening of the physical state of relaxation that accompanies the meditative process.

Meditation is not an information-processing activity. That is not the goal. The goal is quite the opposite, to empty the mind of all information-processing activity. However, paying attention to *where one is paying attention* demands constant processing of attention-placing information: "What am I doing with my attention? Where is my attention now? Let me take my attention back to my mantra or breath."

Meditation is primarily an attention-regulating experience (Cahn & Polich, 2006; Lutz, Slagter, Dunne, & Davidson, 2008). Each meditation session can be considered an attentional training exercise. The director in the theatre of the mind model becomes adept at noticing when the spotlight of attention has been distracted by thoughts, or groups of thoughts (or loops of thoughts, i.e. one thought leading to another and then another), and the director (the meditator) is then responsible for shining the spotlight back onto the breath or the mantra to continue the meditation session for a progressively quiescent mind and a more relaxed physical state.

2.4 MEDITATION AND THE PARASYMPATHETIC NERVOUS SYSTEM

Meditation is a mind-body activity under control of the autonomic nervous system. However, it is primarily a parasympathetic state (Rubia, 2009; Takahashi et al., 2005). Although EEG studies indicate occasional sympathetic bursts at certain points during meditation (Travis & Pearson, 2000), the deeply relaxed state entered during meditation is due to parasympathetic dominance. This parasympathetic state may be considered to be at the opposite end of the autonomic spectrum when compared to the heightened sympathetic state that

marks the experience of the flight-or-fight response to stressful events (Jacobs, 2001). Table 2.1 indicates the physiological functions of the sympathetic and parasympathetic divisions of the autonomic nervous system.

Table 2.1

The Physiological Effects of the Sympathetic and Parasympathetic Divisions of the Autonomic Nervous System

SYMPATHETIC *Fight-or-flight* *The stress response*		PARASYMPATHETIC *Calming effect* *The relaxation response*
Pupils dilate	EYES	Pupils constrict
Dry	MOUTH	Salivation
Goose bumps	SKIN	No goose bumps
Dilation	LUNGS	Constriction
Increases	HEART RATE	Decreases
Activation	ADRENAL GLANDS	Deactivation
To muscles	BLOOD	To internal organs
Sweaty	PALMS	Dry
Inhibited	DIGESTION	Stimulated
Climax	SEXUAL FUNCTION	Arousal

Adapted from Plotnik (1999, p. 81).

Meditation has been described as a hypometabolic state (Beary & Benson, 1974; Jevning, Wallace & Beidebach, 1992). The physiological substrates of the hypometabolic state produced by meditation are as a result of parasympathetic dominance. These physiological markers have been established by a number of researchers over the past 40 years and are summarised by Holzel et al. (2011): slowing of the heart rate, reduced blood pressure, slowing of breathing rate, decreased cortisol levels, decreased muscle tension, and skin conductance changes indicating a reduction of stress effects on the body. The parasympathetic state of meditation can mitigate the heightened physical and psychological effects of stress (Cahn & Polich, 2006). In fact, stress reduction has become a hallmark of the therapeutic effects of meditation (Rubia, 2009).

The stress response is produced by the engagement of the sympathetic nervous system (McEwen, 2000). The physiological markers of the stress state are essentially the opposite of the meditative state. While acute stress states can be functional, complementing and even helping to promote peak performance, chronic stress can be damaging, affecting psychological and physical well-being (McEwen, 2000). Chronic stress can have negative effects on health. McEwen (2000) writes: "The hormones and other physiological agents that mediate the effects of stress on the body have protective and adaptive effects in the short run and yet can accelerate pathophysiology when they are over-produced or mismanaged" (p. 172).

Meditation is an effective method of managing stress. The parasympathetic effects that mediate the relaxed state during meditation appear to enhance physical health. Improved immune system functioning (Bakke et al., 2002; Davidson et al., 2003; Solberg et al., 2000), reductions in anxiety (Tacon et al., 2003), likely as a result of decreased cortisol levels (Rubia, 2009), have all been associated with the meditative state and its benefits to overall health and well-being.

In an overview of the cost-effectiveness of mind-body interventions, Sobel (2000a) appealed for mind-body medicine, including meditation, to be a part of evidence-based, quality healthcare. As an example, Sobel (2000b) writes: "A recent study of patients with heart disease found that relaxation, lowering hostility, and helping people change the way they look at life's challenges can reduce their risk of having further heart problems by 75% compared to people given only usual medical care and medications. Reducing stress proved even more beneficial than getting exercise" (p. 398).

Reducing stress through the use of mind-body interventions like meditation could have financial benefits. The reduced utilisation of medical care by meditation practitioners was heralded in an early study by Orme-Johnson (1987). Orme-Johnson called for further research to "clarify the ability of this promising technology of health enhancement to prevent disease and to reduce medical care

costs" (Orme-Johnson, 1987, p. 505). Similar views have been expressed by other researchers (Diehl & Eisenberg, 2000; Kabat-Zinn, 2000; Sobel, 2000a, 2000b). Herron and Hillis (2000) showed a reduction of 14% in payments to physicians in Quebec, Canada, over a 6-year period by patients who practised meditation. In another more recent longitudinal study, Herron (2011) examined physician costs in relation to high-cost patients. Herron's findings showed reduced physician costs over a 5-year period for a group of high-cost patients who were meditators compared with a group of high-cost patients who did not meditate (Herron, 2011).

Uptake has been slow for health authorities to acknowledge the usefulness of a low-cost stress-management tool to reduce healthcare costs. While health promotion opportunities could encourage meditation as a component of a healthy lifestyle, the infrastructure required to have skilled meditation teachers readily available to assist patients is yet to be created. In response to this, Schaub (2011) calls for health professionals to fill the gap as clinical meditation teachers in order to "establish confidence in a new class of providers for insurance plans to use with the health care paradigm of emphasizing preventative and self-care behaviors to reduce health care costs" (p. 148). This idea, though viable, poses future challenges as it will take time for clinicians to develop a regular meditation practice and build competence in the area of clinical meditation.

2.5 QUALITATIVE STUDIES OF MEDITATION

A number of qualitative studies of meditation will now be reviewed, starting with studies that explore the phenomenology of the meditation experience. The review then extends to qualitative studies that have examined certain aspects of the meditation process, including the Mindfulness-Based Stress Reduction (MBSR) program. It should be noted that while these MBSR studies employ qualitative methodologies and extend our scientific knowledge of meditation, they offer little in terms of understanding the experience of meditators *as they meditate*.

2.5.1 The Phenomenology of Meditation : A Single Case Study (Walsh, 1977, 1978)

An early account of the subjective experience of meditation was produced by Roger Walsh (Walsh, 1977, 1978). In what is essentially a "first order narrative" (Elliot in Creswell, 2007, p. 119), Walsh writes about his own experiences as a meditator. The account covers a two-year period and includes his attendance of a number of meditation retreats. It was published in two parts (Walsh, 1977, 1978).

Walsh (1977, 1978) has produced a piece of narrative research in which he sets himself as the research subject. He writes that the purpose of his efforts in producing this autobiographical account of his meditation experiences was "to share these explorations with the hope that they may prove helpful for other beginning meditators, since there is surprisingly little in-depth writing on initial meditative experiences" (Walsh, 1977, p. 152). Walsh wrote those words more than 35 years ago. Few research studies have served to fill the knowledge gap that he identified.

Walsh (1977, 1978) presents a detailed account, documenting his experiences from the beginning of his meditation practice of half an hour a day, to more extreme experiences while attending intensive meditation retreats. "These retreats comprised about 18-20 hours daily of continuous walking and sitting meditation performed in total silence and without eye contact, reading or writing" (Walsh, 1977, p. 151).

Some of the experiences he shares are unusual and extreme. For example, at the start of his first retreat experience, undertaken about one year after commencing his sitting meditation practice, he writes: "Within three hours, I literally felt as if I had ingested a stimulant, and by six hours there were significant psychedelic effects" (Walsh, 1977, p. 160).

As a medical professional with extensive experience in behavioural science research, Walsh (1977, 1978) makes a concerted effort to link his experiences

during meditation to his own experiences during psychotherapy and to psychological theory. While the documentation of Walsh's experiences is valuable, there are some inherent drawbacks. Firstly, it is limited in its scope as it is a single case study, recording the subjective experiences of the researcher himself. It is therefore limited in its generalisability to other meditation practitioners. Secondly, many of the experiences take place under retreat conditions, away from everyday life, and as such tend to be more intense, extreme and unusual. Thirdly, Walsh by his own admission is an analytical, intellectually curious person and his intensive study and reporting of the meditation process runs counter to the meditation process of detached, mindful observation of the ebb and flow of conscious phenomena encountered during meditation (Kabat-Zinn, 1990). The result is a highly detailed and perhaps over-intellectualised report process that often shrouds the meditation experience.

2.5.2 The Phenomenology of Meditation : A Retreat Group Study (Kornfield, 1979)

A phenomenological study conducted by Jack Kornfield in 1979, and published shortly after the Walsh articles, investigated the experiences of a large group of students attending intensive meditation retreats. One hundred students attending two-week retreats and 63 students attending three-month retreats acted as research participants.

The retreat format was intensive with a daily schedule that included 7 to 9 sessions of sitting meditation for 45 minutes to an hour, plus 4 or 5 periods of mindful walking for 30 to 40 minutes on a daily basis. Written information on individual experiences was gathered by way of questionnaires completed after each meditation session. In addition, research participants were interviewed by a meditation teacher every two days to discuss their experiences. The participants' responses were written down by the interviewer *after* the meeting for later analysis. The completeness of information gathered in this manner and the objectivity involved in the data collection could be held in question.

The study included a control group of students at a Buddhist school who practised meditation regularly for one to two hours per day. The results showed clear differences between the control group and the retreat students with fewer extreme or unusual experiences in the control group, leading the author to conclude that the study showed "the vast array of experiences comes from the retreat practice itself – the intensive meditative exercises combined with a disciplined silent retreat setting" (Kornfield, 1979, p. 56).

While the experiences documented in this study are valuable, they cannot be generalised to meditation practitioners practising in the context of their everyday lives. The research data was divided into somatic, visual, perceptual (including olfactory and auditory) and cognitive experiences. Many of these experiences are unusual. The study does provide very useful experiential data of individual practitioners in the form of short, edited quotes. These findings will be discussed later in relation to the findings of the current study.

It should be noted that the Kornfield (1979) study was conducted during the mid-1970s, at a time when the medical community – especially the psychiatric community – was hostile to mystical practices and cautioned the public of the risks involved in meditation practice. Kornfield (1979) refers to the Group on the Advancement of Psychiatry 1976 Report describing the risks of psychosis and other mental disorders to individuals partaking in the practice of meditation. Kornfield (1979) expressed his view that the scientific community needed to gather phenomenological data "on the early stages of meditation practice and to familiarize Western psychologists with the range of patterns of experience commonly noted by beginning meditators" (p. 41) in order to better inform the medical community and the public at large.

2.5.3 The Phenomenology of Meditation : Deep States (Gifford-May & Thompson, 1994)

Of all the studies reviewed here that are labelled by their authors as studies in the phenomenology of meditation, Gifford-May and Thompson (1994) are the only authors to present their study within a solid framework of phenomenological theory and use terminology associated with the phenomenological approach in writing about their methods of data collection and data analysis. They chose the phenomenological approach over the use of questionnaires as they reasoned that, due to "the often cited ineffability of the meditation experience, research outcomes might be improved by eliciting a full and precise description of the experience" (Gifford-May & Thompson, 1994, p. 119) directly from their research participants.

Gifford-May and Thompson (1994) investigated the phenomenology of deep states of meditation with a group of 10 seasoned meditators. The range of meditation experience was 3 to 25 years, that is, all medium-term to long-term meditators. The research participants used meditation techniques from a variety of meditation traditions. Data collection was by individual interview. Each interview was unstructured and 45-60 minutes in length. The interviews were audio recorded.

Gifford-May and Thompson (1994) identified three constituents of the experience of deep states of meditation from the descriptions provided by the research participants: 1) transcendence beyond the normal physical and mental boundaries of the self; 2) a different sense of reality; and 3) positive emotion. The only invariant constituent reported by all the research participants was "transcendence". It was the one constituent that all research participants reported experiencing.

The value of this study is the fairly rich experiential descriptions that Gifford-May and Thompson (1994) provide in their report. The quotes from their research participants allow the reader to appreciate the complex and unusual subjective experiences of deep states of meditation. The quotes also allow for a comparison of experiential data between research studies.

Gifford-May and Thompson (1994) end their report with recommendations for future research. They talk of a "complex range of experiences" that may "reflect different levels of experience" (Gifford-May & Thompson, 1994, p. 136). They suggest that a future study investigate the experiences of different groups of meditators, according to length of practice, from a phenomenological perspective.

2.5.4 The Phenomenology of Meditation : Pure Consciousness (Travis & Pearson, 2000)

Travis and Pearson (2000) conducted a phenomenological study that exclusively investigated the experience of meditators practising Transcendental Meditation (TM). The researchers point out the value of using a single meditation technique to control for research outcomes. The study included 52 meditators with an average of 5.4 years of meditation experience ranging from a few months to over 30 years.

The purpose of the study was to explore how meditation can help access the inner structures of subjective experience during meditation and expand our understanding of the phenomenon of consciousness (Travis & Pearson, 2000). In particular, the researchers sought to explore the experience of “pure consciousness” during meditation.

> Pure consciousness is “pure” in the sense that it is free from the processes and contents of knowing. It is a state of “consciousness” in that the knower is conscious through the experience, and can, afterwards, describe it. The “content” of pure consciousness is self-awareness (whereas) the contents of normal waking experiences are outer objects or inner thoughts and feelings.
>
> Pure consciousness is a direct experience of the natural structure of human experience during systematic meditation practice. Examining this direct experience of pure consciousness could deepen our understanding of the phenomenon of consciousness. (Travis & Pearson, 2000, p. 79)

The researchers asked their participants the following question: “Please describe the fine details of your deepest experiences during practice of the Transcendental Meditation technique. Please describe them in your own words, just as if you were describing the experience of eating a strawberry, its sweetness, juiciness, etc.”

(Travis & Pearson, 2000, p. 80). Participants were encouraged to report extensive details of their subjective experiences in written notes completed in a group setting. The data were analysed for recurring themes. Three major themes emerged. These themes are listed below with the percentage of participants who reported these themes in their responses.

Absence of space, time, or body sense	68%
Peaceful	32%
Unbounded	20%

Little more than this is presented of the details of the research participants' subjective experiences during meditation. However, the researchers propose that the meditative experience provides access to "pure consciousness", a state that is quite distinct from other states of consciousness, being both subjectively and physiologically different from the states of normal waking, sleeping and dreaming.

Travis and Pearson (2000) suggest that "pure consciousness" underlies all other states of consciousness and can be identified at the junction points between waking, sleeping and dreaming. Using an ocean metaphor, they propose that "pure consciousness" is like an ocean with the waves on the ocean giving rise to different conscious experiences. During meditation, gaps between thoughts, when the mind is quiet, can allow access to this state of "pure consciousness". The reader is offered only this one example of a research participant's description of experiencing "pure consciousness":

> A couple of times per week I experience deep, unbounded silence, during which I am completely aware and awake, but no thoughts are present. There is no awareness of where I am, or the passage of time. I feel completely whole and at peace. (Travis & Pearson, 2000, p. 81)

See Figure 2.3 below for an illustration of meditation as a mind-body experience and the attainment of pure consciousness during meditation.

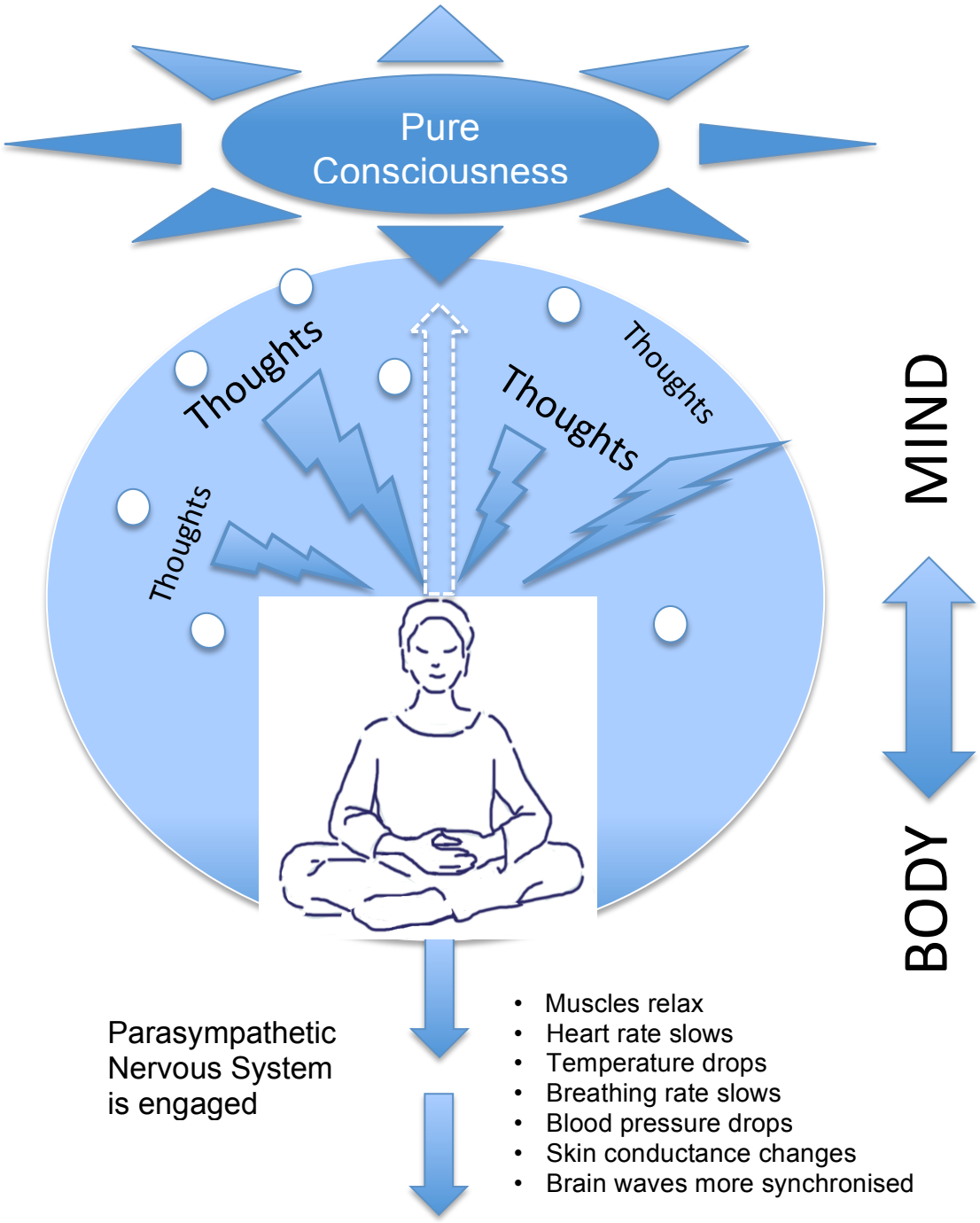

Figure 2.3 An illustration of meditation as a mind-body activity of parasympathetic dominance with concomitant physiological changes associated with the practice of meditation. A representation of thought processes and the experience of pure consciousness are included. Illustration produced by the author of this study.

2.5.5 The Phenomenology of Meditation : Light Perception (Prakash et al., 2009)

Responding directly to the dearth of literature on the phenomenology of meditation, Prakash et al. (2009) conducted a study that examined the experiences of a group of meditators who had regular inner-light perception during closed-eyes meditation. The purpose of the study was to gather subjective data, specifically on perceiving "some sort of luminance" (Prakash et al., 2009, p. 125) because of the divine value or mystical attributes often given to the experience of luminance during meditation.

Using an interpretative phenomenological analysis approach, the researchers conducted semi-structured interviews with a group of 12 yogis. Seven of the 12 yogis were engaged in everyday lives while 5 were living as sages in an ashram, or religious hermitage. The 12 participants were carefully selected from a much larger group of potential participants because they reported having had repeated experiences of seeing light during meditation.

The question posed to the yogis was open-ended: "Can you describe your experiences associated with light perception during meditative procedures?" (Prakash et al., 2009, p. 127). The yogis were then given the opportunity to fully express themselves, occasionally being prompted further with additional questioning to elicit more information. The data the researchers gathered covered descriptions of light perception experiences, the participants' interpretations of the light experiences, and the impact of the experience on the meditator.

The interviews were audio recorded and transcribed. Selected verbatim responses of the participants' responses are presented in the published report with some discussion around four major themes: 1) the *nature* of the light that is perceived during meditation; 2) detailed descriptions of the *personal experience* of the light; 3) explanations of the *source* of the light; 4) the *change in outlook and orientation* to the world as a result of the light-perceiving experiences.

Generally, participants described being filled with an all-pervasive, boundless light that they described as “soft” and “smooth” (Prakash et al., 2009, p. 129). The experience was intensely pleasurable, transcending thought, time and space. Personal identity fell away in experiencing the light, leading to a detachment from the body and the physical world.

The source of the light was experienced as existing within the meditator. Meditation was believed to be the spark that allowed the meditator to experience different forms of subtle energies within their own selves. For some participants, the light was a mystical and spiritual phenomenon. “The light is divine...it’s god” (Prakash et al, 2009, p. 134). A number of participants spoke of the light being God revealing himself to them.

The value of this work is its idiographic content allowing us to encounter through language the personal experience of meditation. However, it is limited to a particular aspect of the meditation experience, that is, light perception. The research participants are long-term meditators and because the experience of light during meditation tends to occur more often during the meditation practice of long-term meditators, it offers limited information in terms of the meditation experience per se, and in particular is not generalisable to the experiences of beginner meditators.

It is unclear if the light perceived during meditation by the participants in this study is comparable to the “pure consciousness” experience in the Travis and Pearson (2000) study. It is possible that similar meditative states were under investigation by the authors of both studies.

Here is an example of a response from one of the participants in the Prakash et al. (2009) study:

> In that state, there is no thought...Actually, in awake state there is no moment without thought. Every second we keep thinking, and every thought is associated with a sense of tension. But when you reach that state of meditation, there remains no thought. So there remains no tension. It is the state of complete peace impossible to achieve without reaching a state of meditation. Further in that peaceful state, you are given the joy of god in the form of light...its [*sic*] pure joy. Nothing else...just pure joy. (p. 131)

Future phenomenological studies will hopefully promote further understanding of the subjective nature of similar meditation experiences.

2.5.6 A Qualitative Study Investigating the Effects of Meditation on Relationships (Pruitt & McCollum, 2010)

Pruitt and McCollum (2010) conducted a qualitative study that examined the outcomes or effects of long-term meditation practice on personal relationships. They interviewed seven adept meditators who had practised meditation for 10 to 33 years. The meditation practised included a mixture of meditation techniques – Vipassana or insight meditation, mindfulness meditation and the contemplative practice of centring prayer. The purpose of the study was to investigate the traits that develop over time with ongoing long-term meditation practice. The participants were interviewed either by phone or in person. Data were gathered by semi-structured interview.

The following themes emerged from participants' responses to questions about the personal traits they believed had been developed through long-term meditation practice:

1. Awareness – "being open to a wide range of sensory and emotional experience within the present moment" (Pruitt & McCollum, 2010, p. 138).

2. Disidentification from emotions and thoughts – allowing participants to "explore thoughts and emotions, and to be curious about them, rather than being driven or defined by them" (Pruitt & McCollum, 2010, p. 139).
3. Acceptance – "the willingness to see oneself and life as it is, without trying to change the experience of the present moment" (Pruitt & McCollum, 2010, p. 140).
4. Compassion and loving kindness – "the development of a quality of loving kindness, a universal and unselfish love that extends to oneself, to friends and family, and ultimately to all people" (Pruitt & McCollum, 2010, p. 141).

Participants were then asked how these traits had affected their close relationships. The common themes that emerged were:

1. Being less reactive to emotional stimuli in relating to others as a result of increased awareness of self and others, resulting in being more compassionate, patient and calm with others. This awareness allowed them to overcome "knee-jerk reactions" and be "less reactive" in relationships (Pruitt & McCollum, 2010, p. 143).
2. An increased sense of freedom and safety in relationships developing from the acceptance of self and others, which allowed them to feel "comfortable enough to lower their customary defence, revealing to others who they really are" (Pruitt & McCollum, 2010, p. 145).

Additional themes indicated that participants had developed a sense of interconnectedness or unity with others, a spiritual insight into being one with all beings and with the universe. This in turn had lead to the strengthening of both intimacy and independence in their relationships. In spite of the small sample size and the lack of consistency of the meditative techniques practised by the participants, this study is valuable in exploring the interpersonal changes reflected in the daily lives of meditators over time.

This study is reviewed here to underscore the following challenges in meditation research:

1. The use of different meditation techniques in meditation research, even in the same study, has been noted by researchers as being the reason for limitations in the direct comparison of the effects of meditation in different research studies (Lutz et al., 2008).
2. The different experience levels of participants may also confound results, particularly when novice or relatively inexperienced meditators are included with long-term meditators (Cahn & Polich, 2006).

2.5.7 Qualitative Studies Investigating the Outcomes of Mindfulness-Based Programs

The Mindfulness-Based Stress Reduction (MBSR) program was conceived by Dr. Jon Kabat-Zinn at the Stress Reduction Clinic at the University of Massachusetts Medical Center (Kabat-Zinn, 1990; Santorelli, 2000). Originally created to serve sufferers of difficult-to-treat chronic conditions, it is now widely used with promising therapeutic outcomes. The MBSR program is a manualised program that includes a package of cognitive tools. A hallmark of the program is mindfulness meditation (Kabat-Zinn, 1990; Santorelli, 2000).

Participants meet once a week for eight weeks. Mindfulness is a core aspect of the program. The training increases the participants' awareness of the conscious experience of the present moment. It also sensitizes the participants to their emotional and physical sensory experiences. In addition to discussions about interpersonal communication, intrapersonal communication and personal relationships, the program promotes cognitive and behavioural restructuring with the development of mindfulness as an attitude for perceiving moment-to-moment waking life (Kabat-Zinn, 1990).

The MBSR program includes training in mindfulness meditation with attention focussed on the natural rhythm of breathing. Participants become increasingly

aware of distracting thoughts and emotions that arise spontaneously during meditation, and practise a detached acknowledgement of those thoughts and feelings.

Components of the program include: 1) a body scan meditation that produces increased awareness of the body and physical sensations; 2) gentle yoga exercises that aid relaxation, both physically and mentally, to promote well-being; 3) mindful walking; 4) a weekend “retreat” during which participants spend a day in silence, not making eye contact with others, while practising aspects of the training (Kabat-Zinn, 1990, Santorelli, 2000).

Besides practising an attitude of moment-to-moment mindfulness in their everyday lives, participants are encouraged to practise mindfulness meditation on a daily basis by themselves at home with the help of a CD that guides them through a mindfulness meditation session. Participants are encouraged to gradually extend the length of their meditation sessions on their own between weekly group sessions, and are given the opportunity during their group sessions to discuss their individual meditation experiences (Kabat-Zinn, 1990).

The MBSR program has spawned a sister program entitled Mindfulness-Based Cognitive Therapy (MBCT) which has produced positive therapeutic outcomes for sufferers of anxiety and depression (Baer, 2006; Segal et al., 2002). While the two programs have much in common, there are aspects that are different. MBCT has a stronger cognitive component than MBSR, which has a stronger physical component.

Mindfulness-based treatment programs have sparked considerable research activity over the past 30 years. The research activity has not been limited to the therapeutic outcomes of the programs, although this has been an important forcus, but has also encouraged the investigation of the psychological, physiological and neurological domains of meditation.

2.5.7.1 A meta-ethnography of qualitative studies on mindfulness-based programs (Malpass et al., 2012)

A meta-ethnography of qualitative studies of patient experiences of mindfulness-based approaches was published fairly recently (Malpass et al., 2012). It was compiled primarily to synthesise existing qualitative research studies that sought to measure the therapeutic effects of MBSR and MBCT on a diverse group of clinical conditions.

This meta-ethnography investigated and synthesised the therapeutic processes reported in 14 qualitative studies. The clinical populations covered in these qualitative studies included cancer survivors, victims of terminal cancer, chronic pain sufferers, HIV-positive youths, cardiac rehabilitation patients, Parkinson's Disease sufferers as well as a number of groups of patients suffering from depression.

These studies investigated the experiences of patients participating in MBSR and MBCT programs with a view to evaluating and synthesising the therapeutic outcomes of the program. MBSR and MBCT are both manualised treatment programs with much in common in execution. This meta-ethnography sought also to synthesise patient experiences across studies and to better understand the therapeutic processes at work in the two treatment approaches (Malpass et al., 2012).

Perhaps the most interesting aspect of this meta-ethnography is the identification of the psychological shifts that take place in participants across programs and across conditions, from maladaptive coping strategies to a new experience of the self in relation to their illness. A shift in identity takes place and an adjustment in response to illness follows. A shift in attitude also takes place allowing participants to be more present-focused and more accepting of change (Malpass et al., 2012).

While these shifts in identity and attitude may occur in the short-term for these particular participants as they proceed through these treatment programs, it is

possible that similar shifts occur inevitably over time in those who practise meditation on a regular basis.

2.5.7.1.1 A qualitative study of MBSR and chronic pain (Morone et al., 2008)

One of the studies included in the meta-ethnography discussed above is a study that uses grounded theory to explore the experience of chronic pain in patients attending a regular 8-week MBSR program (Morone et al., 2008). The participants were older adults (mean age: 74.3 years) who were struggling with chronic low back pain due to a number of different conditions.

The researchers analysed the narratives of diary entries of the participants. The diary entries were written on a daily basis and allowed the researchers to gather valuable information on patients' subjective experience of pain. It also allowed for the close monitoring of physical and psychological changes in relation to pain that were experienced over the course of the program.

The data elements requested from the patient participants were: time spent meditating; benefits or problems encountered with meditation practice; and a general comments section. The data were analysed and coded for emerging themes. Six themes emerged from the data but only four themes were discussed in the paper as the four themes, in particular, reflected health outcomes: pain reduction; improvement in attentional skills; improved sleep; achieving well-being. The focus of this study was on pain, the experience of pain during meditation, and pain relief as a result of meditation. There is little information provided with regard to the subjective experience of meditation per se.

2.5.7.1.2 A qualitative study of MBSR and psychological change (Kerr, Josyula, & Littenberg, 2011)

A study by Kerr, Josyula and Littenberg (2011) seeks to fill the research gap of qualitative research studies exploring the process of change that participants of the MBSR program encounter at various points during the course of the 8-week

program. Their findings are not exclusively of the practice of meditation but of the effects of the program offerings as a whole.

The study comprised of a small cohort of 8 healthy females who were elicited by posters and an online site (Craigslist Boston) to participate in the 8-week MBSR program and complete daily diary entries of their experiences. Six of the initial 8 respondents completed the study and produced sufficient written material to be included in the study.

The researchers used grounded theory to analyse the personal diarised data about the participants' experiences at varying points during the MBSR program in an effort to identify key themes and concepts. The purpose was to produce theories related to the process of change that occurs during the MBSR program. Much of the information provided by the participants included somatic, cognitive and emotional descriptions.

As the program progressed, the quality of the descriptions changed, showing greater clarity and detail over the course of the program. In particular, diary entries showed the emergence of an "observing self". The research data were then re-analysed to investigate the development of a cognitive process that may indicate perceptual shifts resulting in a more detached, less reactive mode of perceiving phenomena during meditation, such as physical pain and emotional distress.

Kerr et al. (2011) refer to the development of "an observing attitude". They write: "What this study suggests is that progress in MBSR mainly reflects changes in the ways participants describe and relate to their own inner experiences" (Kerr et al., 2001, p. 91).

The emergence of an "observing self" is discussed in a number of other researchers' works in relation to meditative practices. Cahn and Polich (2006) refer to the development of an internal "witnessing observer" (p. 181) that is attentive yet non-attached, capable of transcending mental content. Raffone and Srinivasan (2010) write of the cultivation of "self-observation awareness" (p. 5) that

is self-reflective in nature. Baars (1997) wrote of the importance of access to the "observing self" (p. 306) in relation to consciousness and our ability to gather the information that constitutes experience.

It should be noted here that the emergence and cultivation of an "observing self" could explain the more detached, less reactive (Lutz et al., 2008; Pruitt & McCollum, 2010) approach to living that is often reported by meditators. It may also explain the success of mindfulness meditation in sufferers of chronic pain who report a different perception of, and relationship with, their chronic pain (Kornfield, 1979; Morone et al., 2008). For example, "I notice the pain in my lower back" and "I am able to explore the outer edges of the pain in my hip" rather than "I am in pain and the pain is severe".

2.5.8 A Qualitative Study of Challenges for Novice Meditators (Sears, Kraus, Carlough, & Treat, 2011)

In an effort to investigate subjective aspects of the meditation experience in novice meditators, Sears, Kraus, Carlough and Treat (2011) analysed the written responses of a group of college students. The students were participants in weekly mindfulness meditation sessions conducted over a 12-week period. The main purpose of this study was to examine the benefits and doubts participants had about the practice of meditation.

Each week participants responded in writing to the following questions: 1) "In the past week, a benefit of meditation I've experienced has been..." and 2) "In the past week, a doubt I've had about meditation has been..." (Sears et al., 2011, p. 169).

A content analysis of the written responses was undertaken and coded for emerging themes. Coding categories used for benefits included attention, clarity of thought, changes in quality of thought, increases in calmness, decreases in anxiety, increases in energy and spirituality. Coding categories for doubts included

concerns around maintaining focus, physical issues, finding time to meditate, finding motivation to meditate, correctness of practice and doubts about whether meditation really works.

The researchers comment on the value of their study by pointing out that meditators generally have doubts about the practice of meditation even though they may experience benefits. The researchers question the generalisability of their findings to all meditators as their research participants were novice meditators.

This study adds to an important body of research that explores the difficulties or challenges that meditators experience. It is widely acknowledged that meditation is simple but not easy (Kabat-Zinn, 1990). However, the use of the term 'doubts' in relation to the range of difficulties and/or concerns that participants experienced in this study is somewhat confusing and does not quite fit much of the research data that was uncovered. For example, categories created from the ‘doubts’ data included “difficulty maintaining cognitive focus”, and “physical issues” such as exploring different seating positions to get more comfortable during meditation. These are common challenges experienced by all meditators, not just beginner meditators. Perhaps the term ‘challenges’ rather than ‘doubts’ with regard to the practice of meditation would have been more appropriate.

2.6 MEDITATION AS AN ALTERED STATE OF CONSCIOUSNESS

Charles Tart has written extensively on consciousness and altered states of consciousness. He edited an early collection of work entitled “Altered States of Consciousness” (Tart, 1969) that included the writings of a number of experts who shared their views on the topic. In the introduction to the collection, he grapples with a suitable definition for an altered state of consciousness, referring to both qualitative and quantitative shifts in mental functioning. By the time he wrote his 1972 paper (Tart, 1972), in which he appeals to Western science to investigate altered states of consciousness, Tart was able to define an altered state of consciousness more clearly as “a qualitative alteration in the overall pattern of

mental functioning, such that the experiencer feels his consciousness is radically different from the way it functions ordinarily" (Tart, 1972, p. 16).

Arnold Ludwig, in an essay in Tart's 1969 collection, goes further. Ludwig (1969) describes an altered state of consciousness (ASC) as: "any mental state(s), induced by various physiological, psychological, or pharmacological manoeuvres or agents, which *can be recognized subjectively by the individual himself*...as representing *a sufficient deviation in subjective experience* or psychological functioning from certain general norms for that individual during alert, waking consciousness" (p. 10, emphasis added).

A number of the methods Ludwig categorises for inducing ASC's pertain to meditation:

1. Reduction of exteroceptive stimulation and/or motor activity, such as sitting quietly with eyes closed (Ludwig, 1969, p. 12)
2. Increased alertness or mental involvement, such as "attending to one's amplified breath sounds" (Ludwig, 1969, p. 12)
3. Relaxation of critical faculties, such as "a passive state of mind in which goal-directed thinking is minimal" (Hinkle in Ludwig, 1969, p. 12)
4. Presence of somatopsychological factors, such as "mental states primarily resulting from alterations in body chemistry or neurophysiology" (Ludwig, 1969, p. 12)

Ludwig (1969) lists general characteristics of altered states of consciousness:

1. Alterations in thinking (disturbances in concentration, attention, memory)
2. Disturbed sense of time
3. Feelings of loss of personal control
4. Change in emotional expression
5. Distortions in body image
6. Perceptual distortions
7. Change in meaning or significance of subjective experiences

8. Sense of the ineffable
9. Feelings of rejuvenation

To evaluate if meditation qualifies as an altered state according to a schema such as that produced by Ludwig (1969) would require the investigation of the subjective experiences of meditators *as they meditate*. Kornfield (1979) concluded that meditation was *not* an altered state of consciousness. Rather, he stated that meditation "can be seen as a series of mental exercises designed to effect certain changes in how a person sees or relates to the world" (Kornfield, 1979, p. 51). Kornfield (1979) felt that the meditative state produced was directly linked to the meditation technique employed and could not be generalised across techniques. However, Kornfield (1979) did not evaluate the findings in his study against a schema for altered states of consciousness like the one produced by Ludwig (1969). Kornfield (1979) contradicts himself in the same paper referring to "altered states" in relation to meditation several times.

Travis and Pearson (2000) also did not consider meditation to be an altered state of consciousness. Rather, they saw meditation as an activity that allowed the meditator to experience "pure consciousness", which they described as a fourth state of consciousness, different from waking, sleeping and dreaming.

The experience of bliss states has been closely associated with meditation (Cahn & Polich, 2006; Rubia, 2009; Walsh, 1977, 1978). The episodes of light perception during meditation investigated in the Prakash et al. (2009) study may be associated with bliss. An examination of the responses of participants in that study would suggest that the intensely pleasurable and joyful experiences during episodes of light perception would indicate a relationship between the visual and emotional aspects of the light perception experience. It is also possible that "pure consciousness" (Gelderloos, Hermans, Ahlscrom & Jacoby, 1990; Travis & Pearson, 2000) may also, in the experience of some meditators, be associated with blissful sensations and emotions as "the mind transcends the experience of the subtlest state of thought and arrives at the source of thought" (Maharishi in Gelderloos et al., 1990, p. 179).

The experience of bliss has been described as a mystical state, when one has a sense of unity with all of creation, and being in communion with the Divine. The capacity of the human mind to experience mystical states while involved in activities other than meditation has been documented, for example, when encountering the beauty of nature. A description of a mystical experience reported by a clergyman standing one night upon a hilltop, is recounted by William James (2002):

> My soul opened up, as it were, into the Infinite, and there was a rushing together of the two worlds, the inner and the outer...The ordinary sense of things around me faded...nothing but an ineffable joy and exultation remained (pp. 76-77).

Similar experiences have been reported by those meditating during extreme retreat conditions (Walsh, 1978; Kornfield, 1979). In fact, Kornfield (1979) reports on the common occurrence of experiences of bliss and rapture in his research participants, usually those taking part in 3-month long retreats who reported periods of increased concentration.

Further research is required to investigate the complex nature of meditation and its association with altered states of consciousness.

2.7 THE RATIONALE FOR THIS STUDY

The phenomenological studies of Walsh (1977, 1978), Kornfield (1979), Gifford-May and Thompson (1994), Travis and Pearson (2000) and Prakash et al. (2009) are all valuable studies that investigate meditation as *lived* experience. However, these studies have drawbacks that limit the generalisability of their findings, especially to novice meditators. The beginner stage of meditation practice is of particular importance as all meditators need to move through this early stage if they are to continue on to regular meditation practice.

Walsh (1977, 1978), a behavioural scientist, provides a ‘self as subject’ narrative. While his work offers the scientific field of meditation study an important start to phenomenological research, it is a single case study. Some of his reported experiences are quite extreme as they were the products of the intensive conditions of meditation retreats. Kornfield (1979) provides valuable experiential information for a large participant group but, once again, like much of Walsh’s 1977 and 1978 work, the research data gathered was experienced under extreme retreat conditions.

Gifford-May and Thompson (1994) provide a study set within a strong phenomenological framework. They provide rich data of the subjective experiences of their research participants. However, their study examines "deep states" of meditation, rather than offering a broad investigation of the meditation experience.

Travis and Pearson (2000) and Prakash et al. (2009) examine specific aspects of advanced meditation experiences. Travis and Pearson (2000) investigates the experience of "pure consciousness" while Prakash et al. (2009) investigates "the perception of light" during meditation. Their research participants are mostly long-term meditators. None of these phenomenological studies examine the subjective experiences that can be generalised to novice meditators practising meditation in the context of their everyday lives.

In spite of early calls for the collection of phenomenological research data with respect to meditation by Walsh (1978), Kornfield (1979) and Gifford-May and Thompson (1994), there continues to be a dearth of research literature (Prakash et al., 2009). The current study will address this gap in our knowledge and understanding of the subjective experience of meditation with regard to novice meditators.

The methodology of the present study is presented in the next chapter.

CHAPTER 3
METHODOLOGY

3.1 INTRODUCTION

This qualitative research study explores the subjective experiences of novice meditators *as they meditate*. The overarching aim of this chapter is to describe the methodology used to conduct this investigation. As discussed in Chapter 2, a review of the research literature indicates that a gap exists in our understanding of how novice meditators experience the phenomenon of meditation as lived experience. This study thus focuses on this issue in order to expand our understanding of the phenomenon of meditation by answering the following research questions:

1) How is meditation subjectively experienced by novice meditators *as they meditate*? 2) Is there a common meditation experience that all meditators experience in the same way? 3) Do all meditators subjectively experience relaxation in the same way during meditation? 4) What words do meditators use to describe their experience? 5) Can the short-term practise of meditation effectively reduce perceived stress in young adult novice meditators attempting to cope with the stressors of college life?

This chapter is presented in three parts. Part 1 (theory) covers the theoretical foundations on which this study rests. Part 2 (praxis) covers detailed step-by-step methodological procedures undertaken to conduct this study. Part 3 (quality assurance) describes the standards and criteria observed to build rigour and trustworthiness into this study. A description of the theoretical foundations of this study follows next.

3.2 PART 1: THEORY

3.2.1 Deciding on an Appropriate Paradigm

In this section, the theoretical foundations of this research study are discussed. A distinction will be drawn between *qualitative research* and *quantitative research*. The term *paradigm* is then defined and the differences between major research paradigms – positivist, postpositivist, critical theory, naturalism and naturalistic inquiry (or constructivism) – are examined. The discussion is then narrowed down to the naturalistic paradigm, with an outline of the five axioms and six postures, with reference to Guba and Lincoln's early work (Guba & Lincoln, 1982; Lincoln & Guba, 1985). Four qualitative research approaches according to Creswell (2007) are then described to support the selection of phenomenology as the most appropriate approach for this research study. Descriptions of the quantitative and qualitative paradigms follow next.

3.2.1.1 Quantitative research

Hamilton (1994) traces the beginnings of the quantitative research field to the 1600s and to the work of Rene Descartes. According to Hamilton (1994, p. 62), Descartes "argued that natural philosophy should be refocused around the 'certainty and self-evidence' of mathematics". Quantitative research therefore has its roots in Cartesian mathematics and the hypothetico-deductive reasoning of the scientific method, according to Hamilton (1994) and Marshall (1996).

Quantitative research is associated with empirical data gathered under experimental conditions that may involve the manipulation and control of the research subjects as well as the research setting (Guba & Lincoln, 1982). It has long proven its effectiveness with the so-called "hard sciences" or life sciences, such as physics and chemistry (Guba & Lincoln, 1994). However, it has been less effective with the "soft sciences", or social sciences (Guba & Lincoln, 1994), in capturing the complex and subtle social and cultural influences on human behaviour and human experience (Gage, 1989).

Quantitative research is a broad category of research approaches and methods that primarily use numerical data to measure and explain phenomena (Neuman & Robson, 2009). Data are collected through pre-constructed standardised measures with strict procedures governing the data collection process. Concepts are in the form of variables and the nature of the relationship of these variables to one another is explored through statistical means (Kerlinger, 1973). The use of statistics transforms the numerical data to numerical descriptors that serve to prove or disprove a particular theory, which, according to Neuman and Robson (2009), is largely causal. The replicability of the research results is thus assumed.

Quantitative research, with its empirical methods of observation and measurement, the imposition of a priori theories, and a dependency on pre-constructed instruments (Guba & Lincoln, 1982), does not provide the tools to successfully explore the depths, nor assist in understanding the subjective experience, of meditation. The complex nature of this inquiry constitutes what Moustakas (1994) refers to as “studies in human experiences that are not approachable through quantitative approaches” (p. 21).

3.2.1.2 Qualitative research

Qualitative research encompasses a field of inquiry with a complex working history in the social sciences stretching back over the past one hundred years (Denzin & Lincoln, 1994). The philosophical beginnings of qualitative research can be traced to the late 18th century, to the work of Immanuel Kant and his "Critique of Pure Reason" which was published in 1781 (Hamilton, 1994). Kant proposed an epistemology based on the human mind's capacity to actively make sense of sensory perception (Lavine, 1984) and fashion the products of perception into coordinated thoughts and ideas (Durant, 1926/2009). Kant "opened the door to epistemologies that allowed, if not celebrated, inside-the-head processes" (Hamilton, 1994, p.63). These "inside-the-head" processes (Hamilton, 1994, p. 63), in "correlating our experience into knowledge" (Durant, 1926/2009, p. 203), are central to the construction of meaning and understanding (Hamilton, 1994).

These internal processes are at the core of the subjective nature of qualitative research, as opposed to the objective empirical stance of the quantitative tradition (Hamilton, 1994).

Qualitative research has gained much favour since the late 1970s (Morgan, 2007). In fact, "the past two decades have seen a rise in the legitimacy of qualitative research" (Morgan, 2007, p. 53) in reaction to dissatisfaction with the dominant quantitative paradigm (Morgan, 2007). Qualitative research is now an accepted methodology for the social sciences (Merriam, 2002), encompassing a variety of research approaches and research methods by which research participants provide evidence of their personal experiences within natural settings (Denzin & Lincoln, 1994). Qualitative research, therefore, primarily uses languaged data, as opposed to the quantified data of quantitative research practices (Polkinghorne, 2005).

Qualitative research is suitable for this study because of the nature of the primary inquiry process, that is, the subjective experience of meditation as lived experience. According to Creswell (2007), it is appropriate to use qualitative research when "a problem or issue needs to be *explored*" (p. 39, emphasis added), and he adds: "We also conduct qualitative research because we need a *complex*, detailed understanding of the issue" (p. 40, italics in original). According to Polkinghorne (2005), "qualitative research is inquiry aimed at describing and clarifying human experience as it appears in people's lives" (p. 137). The need to understand and describe the complex phenomenon of meditation determined the decision to use a qualitative approach for exploring the human experience of meditation from the personal perspective of the meditator.

3.2.2 Research Paradigms

The term ‘paradigm’ was introduced to the research field by Thomas Kuhn in his foundational work, "*The Structure of the Scientific Revolutions*", originally published in 1962 (Morgan, 2007). The term ‘paradigm’ was understood as a general concept and its meaning "included a group of researchers having a common education and an agreement on 'exemplars' of high quality research or thinking" (Johnson & Onwuegbuzie, 2004, p. 24). However, Kuhn is reported to have used the term 'paradigm' in more than 20 different ways (Masterman in Morgan, 2007), which makes it "all too easy for social scientists to talk about paradigms and mean entirely different things" (Morgan, 2007, p. 50).

For Johnson and Onwuegbuzie (2004, p. 24), "a research paradigm refers to a research culture", while Stanfield (1994) describes paradigms as cultural foundations for the sciences and the humanities. "As cultural foundations, paradigms are the guides to more explicit intellectual activities, most fundamentally, theory construction, methodological strategizing, data interpretation and knowledge dissemination" (Stanfield, 1994, p. 182).

Paradigms are complex theoretical structures that influence or guide how researchers do their work. They influence how researchers select the questions they study and the methods they use to study them (Morgan, 2007). Guba and Lincoln (1982) define a research paradigm as "a pattern or model of how inquiry may be conducted" (p. 233), and Stanfield (1994) describes a research paradigm as "a cognitive road map" (p. 181).

Creswell (2007) equates a paradigm with a worldview. Denzin and Lincoln (1994) write that research paradigms “represent belief systems that attach the user to a particular worldview" (p. 2). They extend this description of research paradigms, as "overarching philosophical systems denoting particular ontologies, epistemologies, and methodologies” (Denzin & Lincoln, 1994, p. 2).

The concept of research paradigms has attracted a great deal of interest and has been the source of much debate amongst social scientists (Morgan, 2007). Guba and Lincoln (Guba, 1981; Guba & Lincoln, 1982, 1994; Lincoln & Guba, 1985) have actively promoted the paradigm debate, distinguishing paradigms on the basis of ontological, epistemological and methodological differences (Guba & Lincoln, 1994). For Guba and Lincoln, paradigms are a serious matter. They maintain that "paradigm issues are crucial; no inquirer ought to go about the business of inquiry without being clear about just what paradigm informs and guides his or her approach" (Guba & Lincoln, 1994, p. 116).

Naturalistic inquiry is the paradigm that informs and guides this study. However, for the sake of clarity, positivism, postpositivism, critical theory, and naturalism are briefly described below. A more extensive discussion of naturalistic inquiry then follows.

3.2.2.1 Positivism

Positivism has become synonymous with quantitative research. Positivism is the dominant research paradigm, particularly for the natural sciences (Morgan, 2007). It is the paradigm of the scientific method, and is reductionistic and deterministic (Creswell, 2007). The aim of positivism is explanation (Guba & Lincoln, 1994) with the ultimate goal being the prediction and control of phenomena (Guba & Lincoln, 1994). Positivism embraces a single reality and an absolute, objective truth. It is based on the Cartesian notion of duality, of body and mind being separate. The researcher is seen as an objective, independent observer. Investigative procedures are empirical and usually use quantitative methods (Guba & Lincoln, 1994).

3.2.2.2 Postpositivism

Postpositivism is closely related to positivism, and is a development which Lincoln and Guba (1985, p. 29) refer to as "a reaction to the failings of positivism", mainly as a result of the acknowledgement that human intellectual mechanisms are flawed

(Guba & Lincoln, 1994). Postpositivists therefore accept multiple perspectives of a single reality that can only be imperfectly apprehended. The notion of an objective truth is generally retained. Like positivism, the postpositivist approach is empirical, reductionistic and logical. Unlike positivism that verifies research hypotheses, postpositivism acts to falsify hypotheses (Guba & Lincoln, 1994). Statistical methods of analysis continue to be emphasised, as do a priori theories. Objectivity is valued, as well as systematic and analytical research procedures (Guba & Lincoln, 1994).

3.2.2.3 Critical theory

The aim of critical theory is "the critique and transformation of the social, political, cultural, economic, ethnic, and gender structures that constrain and exploit humankind" (Guba & Lincoln, 1994, p. 113). Offering a voice to the disenfranchised, critical theory takes a historical perspective of political and social reality. It is value-based and subjective in its epistemology, and its methodology is based on dialogue between the investigator and the investigated (Guba & Lincoln, 1994). "Advocacy and activism are key concepts" (Guba & Lincoln, 1994, p. 113) that aim to transform human circumstances through the promotion of greater understanding and the prospect of new possibilities (Creswell, 2007).

3.2.2.4 Naturalism

Naturalism is a philosophical doctrine that places all of reality under the dominion of the laws of nature (Cordero & Galparsoro, 2013). The beginnings of naturalism predate Plato and Aristotle. The principles of naturalism were established to understand and explain reality by the methods of science, rather than by religion, superstition, myth or dogma (Lightbody, 2013). The supernatural and the metaphysical realms are usually discounted as they are not accessible to investigation by scientific methods. Naturalism is closely aligned with positivism, with empiricism and the scientific method as the basis of knowledge (Jacobs, 2014). Human life and the mind, as part of evolutionary biology and as part of nature, are seen to operate on the same principles that govern other natural

phenomena (Cordero & Galparsoro, 2013). As a collection of cognitive processes resulting from mechanisms within the nervous system, the mind may be reducible to natural laws (Quintanilla, 2013). However, difficulties arise when attempting to understand and explain imperceptible processes, like consciousness and the human spirit (Stumpf, 1977) and the subjective aspects of human experience (Lightbody, 2013).

A more detailed discussion of naturalistic inquiry, the research paradigm that informs and guides this study, follows next.

3.2.3 Naturalistic Inquiry

The research paradigm that forms the philosophical underpinnings for the current study is naturalistic inquiry. The ontological, epistemological and methodological premises of the naturalistic paradigm will be discussed here based mainly on Guba and Lincoln's early 1982 work.

According to Guba and Lincoln (1982), naturalistic inquiry is more than simply a research model that distinguishes inquiry carried out in a natural setting with qualitative research methods – as opposed to positivism that is experimental and uses quantitative methods. Rather, these research paradigms are axiomatic systems characterized by differing sets of assumptions that influence the research inquiry (Guba & Lincoln, 1982).

Guba and Lincoln provide five axioms that form the foundation of naturalistic inquiry (Guba & Lincoln, 1982; Lincoln & Guba, 1985) and these axioms are discussed next.

3.2.3.1 The five axioms of naturalistic inquiry

Axioms may be defined as "the basic building blocks of [a] conceptual or theoretical structure or system" (Guba & Lincoln, 1982, p. 236). These five axioms are not negotiable for the researcher who works within the naturalistic paradigm.

They are integral to adopting and working within the naturalistic paradigm (Guba & Lincon, 1982; Lincoln & Guba, 1985). The five axioms of naturalistic inquiry are listed in Table 3.1.

Table 3.1

The Five Axioms of Naturalistic Inquiry

Axiom	Premise
1. The Nature of Reality	Ontology – relativism
2. Knower-Known Relationship	Epistemology – interactive
3. Nature of Truth Statements	No absolute truth – truth is relative; "working hypotheses" are constructed, emerging from the data
4. Attribution	Action from ongoing shaping of inquiry components
5. Values	Value-based with value-resonance between theory, praxis and methods

Adapted from Guba & Lincon, 1982; Lincoln & Guba, 1985.

Each of the five axioms of naturalistic inquiry are outlined below.

3.2.3.1.1 Axiom 1: The nature of reality

The ontological premise of the naturalistic paradigm is relativism (Guba, 1992). There is not one objective reality out there to be measured and defined as in the positivistic view, but rather "multiple socially constructed realities" (Guba, 1992, p.18). These multiple socially constructed realities are intellectual conceptions based on individual experiences within a cultural context (Guba & Lincoln, 1994). "Inquiry into these multiple realities will inevitably diverge...so that prediction and control are unlikely outcomes, although some level of understanding (*verstehen*) can be achieved" (Guba & Lincoln, 1982, p. 238).

Verstehen is the understanding of the meaning of social phenomena from the individual's perspective (Schwandt, 1994). The term was introduced to the field of social inquiry in an attempt to synthesise scientific objectivity and subjective

experience by a line of German philosophers, Wilhelm Dilthey, Max Weber, and Alfred Schutz (Schwandt, 1994).

Smith (1983) defines *verstehen* as follows:

> Verstehen is a difficult concept to grasp and has, over the years, suffered from imprecise definitions. A very basic definition centers on the attempt to achieve a sense of the meaning that others give to their own situations through an interpretive understanding of their language, art, gestures and politics. To understand in this way further implies that one knows what another is experiencing by engaging in a recreation of those experiences in oneself. At its core, the essence of understanding is to put oneself in the place of the other. (p. 12)

For Carroll and Rothe (2010), *verstehen* is the subjective understanding and personal interpretation of one's own experiences that gives rise to qualitative data gathering. It requires the investigator to reconstruct an individual's prevailing sense of reality (Carroll & Rothe, 2010).

3.2.3.1.2 Axiom 2: The inquirer-object relationship (the knower and known)

Working within the naturalistic paradigm, the relationship between the investigator and the research participant is intimate, interactive and inseparable (Lincoln & Guba, 1985). The investigator influences the research participant and vice versa: "Just as the inquirer may shape the respondent's behavior, so may the respondent shape the inquirer's behavior" (Guba & Lincoln, 1982, p. 240).

The investigator also has an influence on the research outcome (Guba & Lincoln, 1982). The interactivity of the investigator, the respondent and the inquiry process, which is inevitable in behavioural research according to naturalists, is embraced in naturalistic inquiry. In fact, the investigator becomes "a 'smart' instrument, honing in on relevant facts and ideas by virtue of his or her sensitivity, responsiveness, and adaptability" (Guba & Lincoln, 1982, p. 240). In the words of John Dewey, the knower becomes "an organic part of the situation that is being investigated" (Gordon, 2009, p. 50).

3.2.3.1.3 Axiom 3: The nature of truth statements

There can be no definitive truth statements in the behavioural sciences when the focus of inquiry is "what is going on in the minds of people" (Guba & Lincoln, 1982, p. 242). Truth statements as an outcome of naturalistic inquiry are by their nature idiographic, and take into account both similarities and differences in personal experience (Guba & Lincoln, 1982). Rather than being able to reveal absolute truth, working within naturalistic inquiry promotes the generation of "working hypotheses". These "working hypotheses" are induced from "the individual case", and broad generalisations are not possible (Guba & Lincoln, 1982).

3.2.3.1.4 Axiom 4: Attribution/explanation of action

The attribution of cause and effect is not an outcome of naturalistic inquiry. Rather, there is "mutual simultaneous shaping, so that it is impossible to distinguish causes from effects" (Lincoln & Guba, 1985, p. 37). For the naturalistic inquirer, the concept of constructed realities supports the concept of *constructed causality* (Guba & Lincoln, 1982). "Action can be understood...as having emerged from the constant interplay of its shapers, all of which are themselves part of the action, indistinguishable from it, and shaping and being shaped simultaneously" (Guba & Lincoln, 1982, p. 242).

The current study focuses on the idiographic accounts of individuals' experiences of the phenomenon of meditation by examining the complexities of aspects of their experiences, which are time- and context-based. The intent of this study is to discover connections between complex aspects of the phenomenon of meditation in order to expand our understanding of the phenomenon of meditation.

3.2.3.1.5 Axiom 5: The role of values in inquiry

The work of the naturalistic inquirer is bound by the values inherent in each aspect of the inquiry: in the nature of the inquiry, in the selection of the research paradigm, and in the multiple decisions that are made at each step of the research process

(Guba & Lincoln, 1982). According to Lincoln and Guba (1985, p. 37), "what to study, how to study it, and even how to interpret the research data" are aspects of inquiry that are "value-bound". In this study, value effects are addressed in an effort to establish "value-resonance" (Guba & Lincoln, 1982, p. 243) in the choice of research paradigm, and the selected research methods for data collection, analysis and interpretation.

In summary, working within the naturalistic paradigm positions the current study on a foundation of:

1. Ontological relativism;
2. An epistemology based on an interactive relationship between the knower and the known, that is, the inquirer, the research participants, and the inquiry itself;
3. Truth statements as "working hypotheses", reflecting similarities and differences in individual cases and idiographic in nature;
4. Attribution having no defined causality as such, with action (rather than cause and effect) emerging from the constant interplay of all aspects of the inquiry that act as co-shapers;
5. Value-resonance being established between theory, praxis and research methods.

3.2.3.2 The six postures of naturalistic inquiry

Guba and Lincoln (1982) lay out characteristic postures (attitudes or positions) that practitioners who work within the naturalistic orientation are likely to adopt. Whereas the five axioms described above are essential for working within the naturalistic paradigm, the postures can be compromised (Guba & Lincoln, 1982). Each posture is in line with the practice of the paradigm. They support and reinforce each other (Lincoln & Guba, 1985).

Refer to Table 3.2 for the six postures of naturalistic inquiry that are adhered to in this study. The six postures are briefly outlined below.

Table 3.2

The Six Postures of Naturalistic Inquiry

Postures	Practices
1. Preferred methods	Both quantitative and qualitative methods
2. Source of theory	Arises from the data
3. Knowledge types	Tacit knowledge – intuition, apprehensions, "vibes"
4. Instruments	Humans-as-instruments, insightful, flexible, responsive, holistic
5. Design	Design emerges as the inquiry proceeds
6. Setting	Natural settings, must observe facts as they normally occur

Constructed from Guba & Lincoln, 1982.

3.2.3.2.1 Posture 1: Preferred methods used

Practitioners working within the naturalistic tradition often use both quantitative and qualitative methods. However, "qualitative methods are richer and can deal with phenomena not easily translatable into numbers" (Guba & Lincoln, 1982, p. 244). Qualitative research methods primarily make use of languaged data (Polkinghorne, 2005) and these methods are "normally preferred by humans using themselves as prime data collection instruments" (Guba & Lincoln, 1982, p. 244), which is the case in this research study which explores the subjective experience of meditation. Therefore, qualitative methods are primarily used in this study.

3.2.3.2.2 Posture 2: Source of the theory derived from data

Practitioners of naturalistic inquiry are guided by the research problem. It is not the theory that guides the inquiry but rather the nature of the inquiry that drives the theory (Guba & Lincoln, 1982). Theory "is more powerful when it arises from the data rather than being imposed on them" (Guba & Lincoln, 1982, p.244). Theory emerges during inquiry (Lincoln & Guba, 1985) and is developed based on the

facts rather than looking for facts to accord with, or fit, a theory (Guba & Lincoln, 1982).

In this study, theory emerges from the data without seeking to fit the data to any a priori theory or theories, which is synonymous with the grounded theory approach.

3.2.3.2.3 Posture 3: Types of knowledge used in this inquiry

Naturalistic inquiry embraces the human-as-instrument perspective (Guba & Lincoln, 1982; Lincoln & Guba, 1985). The human investigator is "the prime data collection instrument" (Guba & Lincoln, 1982, p. 245). Using the investigator as the instrument of inquiry also acknowledges the value and legitimacy of "tacit knowledge" in research practice. Tacit knowledge includes "intuitions, apprehensions, 'vibes' - which, although not expressible at any given moment, nevertheless occur to inquirers by virtue of their training and, especially, their experience" (Guba & Lincoln, 1982, p. 245).

3.2.3.2.4 Posture 4: Instruments used for data collection

Guba and Lincoln (1982) address the issue of humans-as-instruments in research as follows:

> The naturalist prefers humans-as-instruments for reasons such as their greater insightfulness, their flexibility, their responsiveness, the holistic emphasis they can provide, their ability to utilize tacit knowledge, and their ability to process and ascribe meaning to data simultaneously with their acquisition. (p. 245)

However, the naturalistic embrace of humanness (Guba & Lincoln, 1982) does not limit instruments for data collection to qualitative research methods alone. The use of both qualitative and quantitative research methods is acceptable, according to Lincoln and Guba (1985). In this study, qualitative methods are primarily used as they are deemed most suitable for exploring the phenomenon of meditation. This study is thus a qualitative study in which the investigator acts as the instrument of inquiry.

3.2.3.2.5 Posture 5: Research design

The research design for naturalistic investigations is not established prior to data collection. There is, however, planning for broad contingencies without rigid structure, allowing for the design to emerge as the inquiry proceeds (Lincoln & Guba, 1985). The benefits of humans-as-instruments as noted above, that is, their insightfulness, flexibility and responsiveness (Guba & Lincoln, 1982), along with their ability to process and ascribe meaning to data as data are acquired, allows for flexibility and ongoing responsiveness to the data (Lincoln & Guba, 1985). There is no predefined research design structure that is required to be adhered to that may limit the inquiry process. The practitioner of naturalistic inquiry is able to "opt for an emergent (rolling, cascading, unfolding) design" (Guba & Lincoln, 1982, p. 245) that is shaped by the data as the inquiry proceeds.

The short-term meditation program at the centre of this study provides the framework for most of the data collection. However, the structure is not rigid, with the focus groups and interviews allowing for flexibility in the research design as the data emerge.

3.2.3.2.6 Posture 6: Research setting

The naturalistic inquirer uses natural settings (Guba & Lincoln, 1982). The use of natural or real life settings allows the investigator to observe research participants in the setting in which the experience occurs (Guba & Lincoln, 1982). In naturalistic inquiry, meaning and understanding are both time- and context-based (Lincoln & Guba, 1985). Experimental laboratories where the environment can be manipulated and controlled are therefore set aside and real life situations are advocated. "Only in such [real life] settings can the naturalist arrive at reasonable formulations and [personal] interpretations [of the data]. If theory is to be properly grounded, the naturalist must observe the facts as they normally occur" (Guba & Lincoln, 1982, p. 245).

3.2.3.3 Constructivism

Guba and Lincoln changed the name of the paradigm for which they are such strong proponents from naturalistic inquiry to constructivism (Guba & Lincoln, 1994), deciding to use the term as it was generally used in psychology (Lincoln, 1995). Guba and Lincoln's work secured a strong position for constructivism within the family of research paradigms, profoundly influencing the theoretical foundations of social science research (Creswell, 2007; Greene, 1994). In so doing, they also helped provide qualitative research with increasing legitimacy and authority (Creswell & Plano-Clark, 2006; Morgan, 2007).

Constructivism has been embraced by many theorists in the social sciences, and in the field of education in particular (Gordon, 2009). "Constructivism has come to dominate education debates about learning...[where] constructivists literally apply metaphors of building or construction to learning and inquiry" (Kivinen & Ristela, 2003, p. 363). Constructivism has also been useful from an epistemological perspective, assisting in the understanding of how we learn and how we create knowledge (Perkins, 1999). This has particular relevance to this study as there is a learning aspect to the acquiring of the new and subtle skills involved in meditating, which has also been referred to as 'training the mind' (Trungpa, 2003).

3.2.4 Research Approaches for This Qualitative Inquiry

The most common approaches for qualitative research within the naturalistic paradigm consist of case studies, grounded theory, narratives, and phenomenology (Creswell, 2007).

Since the research approach an investigator selects essentially shapes the design and procedures of a study (Creswell, 2007), the phenomenological approach (Creswell, 2007; Giorgi, 2007; Keen, 1975; Moustakas, 1994; Saldana, 2011) seems to be the most suitable research approach for this study. However, narratives, grounded theory and case studies are used in conjunction with the phenomenological approach for gathering data. This is explained by Sandelowski

(2000) as follows: "Any one qualitative approach can have the look, sound, or feel of other approaches...Indeed, qualitative work is produced not from any 'pure' use of a method, but from the use of methods that are variously textured, toned, and hued" (p. 337).

The approaches that influenced this research study are described here in the following order: the narrative approach, the grounded theory approach, the case study approach, and the phenomenological approach.

3.2.4.1 The narrative approach

The narrative approach is a mode of inquiry in which the focus is on the stories that people tell (Creswell, 2007). It is through people's stories that the researcher gains an understanding of individuals' experiences (Lemley & Mitchell, 2012). A narrative is the personal account of an event, or series of events, in chronological order (Creswell, 2007). It is generally considered an atheoretical description of experience in a *natural history* (using time as a framework for events) or *realist tale* (a concrete detailing of events) approach (Neuman & Robson, 2009).

Gubrium and Holstein (2008) provide a history of the narrative approach with reference to Vladimir Propp's early 20th century writings. Propp pointed out that the structure of Russian folk tales was common to all storytelling. This initiated the scholarly analysis of the internal organization and content of stories in the fields of linguistics, the humanities and the social sciences (Gubrium & Holstein, 2008). Donald Polkinghorne, a practising psychotherapist, talks of "narrative knowledge" (in Gubrium & Holstein, 2008), pointing out that mental health practitioners in the applied social sciences attempt to understand their clients through their individual narratives, by attending to the content, structure and function of the stories they tell. Our narratives are therefore profoundly meaningful in the way in which we understand our lives.

Narratives are collected from research participants usually through the recounting of experiences in spoken or written texts (Creswell, 2007). It is through the

complexities and the context of the experience, through the *storying process* (Gubrium & Holstein, 2008), that the researcher is able to collect details of the experience. Narratives are essentially the presentation of research data without any analysis. However, ultimately narratives allow researchers to use their expertise and leave the data to "speak for themselves" (Neuman & Robson, 2009). Lemley and Mitchell (2012) also emphasise the value of narratives when used appropriately, such as "the importance of individual and collective narratives in giving traditionally marginalized communities the ability to tell their stories" (p. 239). Narratives have also been coupled with ethnography to extend the research range "from the narrative itself to the context of its production" and in so doing, capturing "the contextual influences and dynamics that shape [a] narrative" (Gubrium & Holstein, 2008, p. 262).

While the use of narratives provides interesting personal stories from the research participants in this particular study, with regard to their experience of meditation, it is not the only appropriate research method. The present investigation involves the capturing of the phenomenon of meditation through lived experience, which involves the structured chronicling of meditation events.

3.2.4.2 The grounded theory approach

Grounded theory is a qualitative research method that involves collecting and analysing data in order to develop theories of social behaviour (Charmaz, 2008; Neuman & Robson, 2009). This method goes beyond research data description to generate or discover the abstract analytical schema of a process, action or interaction (Creswell, 2007) necessary for theory development.

Grounded theory was developed by Barney Glaser and Anselm Strauss and published in "The Discovery of Grounded Theory" in 1967 (Charmaz, 2008). Initially, its application was for research in the field of sociology but it has now established itself with broad appeal in the fields of nursing, education and psychology (Creswell, 2007).

Grounded theory "uses a systematic set of procedures to develop an inductively derived theory about a phenomenon" (Strauss & Corbin in Neuman & Robson, 2009). The essential element of grounded theory is that theory is "grounded" in the data from the field, and is therefore based on the evidence available, rather than theory imposed a priori on the data (Creswell, 2007).

The method begins with a systematic, inductive approach to data collection (Charmaz, 2008), usually through observations and interviews. This is the start of what Thornberg and Charmaz (2012) call an iterative process, and Creswell (2007) calls "a 'zigzag' process: out to the field to collect the data, back to the office to analyze the data" (p. 64). There is a *constant comparative method* of data analysis (Merriam, 2002). "Units of data deemed meaningful by the researcher are compared with each other in order to generate tentative categories and properties, the basic elements of grounded theory" (Merriam, 2002, p. 143). "Categories are the 'cornerstones' of developing theory. They provide the means by which the theory can be integrated" (Strauss & Corbin in Merriam, 2002, p. 143).

The forming of categories is aided by coding the data: open or initial coding, axial coding from which central or core codes emerge (Creswell, 2007), and focused or selective coding (Charmaz, 2008) which leads to tentative categories. As Charmaz (2008) writes: "The grounded theory method integrates and streamlines data collection by constructing systematic comparisons throughout inquiry of data with data, data with code, code with code, code with category, and category with category" (p. 162). Once core categories have been established, the linking and integration necessary for theory development can take place. This procedure is facilitated by ongoing *memoing* (Creswell, 2007), an essential data analysis activity (Charmaz, 2008) in the writing up of ideas to fuel the theory development process.

As the focus of the current study is on meditation as lived experience with regard to the phenomenon of meditation, grounded theory offers an approach for gathering data from lived experiences.

3.2.4.3 The case study approach

Case study research is an approach used for the in-depth investigation of a case, an example or instance of a complex event, an issue or a situation (Merriam, 2002; Moore, Lapan & Quartaroli, 2012). The purpose of case study research is to uncover deeper understanding and new meaning of how people interact with various components of the situation under investigation (Moore et al., 2012).

The origin of the modern case study comes from work in the fields of anthropology and sociology (Creswell, 2007). Today it is used in a number of applied sciences (Merriam, 2002) such as psychology, law, medicine (Creswell, 2007), and business (Maylor & Blackmon, 2005) where research findings can have practical applications. The knowledge gained from a particular case study can be transferred to the wider field. As Merriam (2002) says of the value of case study research: "What we learn in a particular case can be transferred to similar situations" (p.179).

"The case study is an intensive description and analysis of...a social unit such as an individual, group, institution or community" (Merriam, 2002, p. 8). The case is a bounded, integrated system (Creswell, 2007; Merriam, 2002), "a specific, complex, functioning thing" as Stake describes it (in Merriam, 2002, p. 178). It is the researcher who establishes the boundaries of the system, depending on the aspects of the system that are selected for the investigation (Merriam, 2002). Deciding on the boundaries of the system can be challenging (Creswell, 2007). "This bounding of the case includes identifying the aspects to be studied using research questions, the time frame to be included, and the exact physical locations that are part of the research" (Moore et al., 2012, p. 245).

There is purposeful selection of the case "because it exhibits characteristics that are of interest to the researcher" (Merriam, 2002, p. 179). Merriam (2002) continues: "The selection depends upon what you want to learn and the significance that knowledge might have for extending theory or improving practice" (p. 179).

Data collection is detailed and in-depth, involving numerous sources of information including observations, interviews, surveys, and other related documents (Creswell, 2007). The objective is to gather information about the nature of the case, its historical background, the physical setting, other relevant information regarding the context, such as economic or political circumstances, information from other cases through which the particular case under investigation can be distinguished, along with access to "informants through whom the case can be known" (Stake, 2005, p. 447). The investigation can take the form of a single case study, multiple case studies, multiple site case studies, and comparative case studies (Moore et al., 2012).

Data analysis procedures are common to most qualitative research (Moore et al., 2012). Analysis takes place through coding, to sort and organise the data (Moore et al., 2012), followed by the setting up of categories (Stake, 2005). The researcher remains alert to preconceived notions and biases, and contradictions that may emerge from the data (Moore et al., 2012). Constant comparison of the data is required in the search for similarities and differences (Moore et al., 2012) that help shape the data.

Case study research provides an in-depth investigation of human interaction with components of a complex situation within a specific context bound by time and place. It thus offers another method for approaching this investigation of a specific group of research participants taking part in a short-term meditation program on a college campus, with the research focus on revealing the essence of the phenomenon of meditation through *lived* experience.

3.2.4.4 The phenomenological approach

Phenomenology is a school of philosophy (Lavine, 1984), a research paradigm (Keen, 1975), as well as a research method (Creswell, 2007). As a research paradigm, phenomenology has much in common with naturalistic inquiry. In fact, naturalistic inquiry has often been termed phenomenology (Lincoln & Guba, 1985). The ontological premise of phenomenology is relativistic, encompassing multiple

subjective views of reality (Creswell, 2007). From an epistemological standpoint, phenomenology is interactive, with the researcher being shaped by, and giving shape to, what is researched (Wertz, 2005).

The term *phenomenology* was first used by Immanuel Kant in 1764 (Priest, 2003). The word comes from the Greek *phenomena* or "thing as it appears" and *logos* or "study" (Barrett, 1990). Phenomenology is therefore the study of things as they appear to human consciousness rather than the thing-in-itself or *noumenon*, as Kant termed the object as it exists separate from human perception or experience (Durant, 1926/2009). Schopenhauer, quoted in Durant (1926/2009), says: "Kant's greatest merit is the distinction of the phenomenon from the thing-in-itself" (p. 207). Durant (1926/2009) continues: "The great achievement of Kant is to have shown, once for all, that the external world is known to us only as sensation; and that the mind is no mere helpless *tabula rasa*, the inactive victim of sensation, but a positive agent, selecting and reconstructing experience as experience arrives" (p. 217).

Building on Kant's work on consciousness, the foundations of phenomenology were laid by the German philosopher, Georg Wilhelm Friedrich Hegel (Durant, 1926/2009). Hegel wrote *The Phenomenology of Spirit,* which was first published in 1807. In the original German, the title is *Phänomenologie des Geistes*, with Geist having the dual meaning of both mind and spirit in German. In fact, different authors have translated Hegel's book as *The Phenomenology of Spirit* and *The Phenomenology of Mind.*

Hegel was hoping to uncover the laws by which human experience could be understood by the same laws as those that govern the natural world (Barrett, 1990). Hegel "wished to enclose reality in a completely rational structure" (Barrett, 1990, p. 39). What he in fact helped to expose was how human experience cannot only be understood as being subject to natural laws or the laws of mathematics. Even natural laws as we conceive them are imperfect as they are established through human endeavour and human measurement filtered through human senses (Barrett, 1990). "We are experiencers, giving meaning and receiving

meaning. The processes and structures that we investigate in others' experiences are essentially the same processes and structures that do the investigating" (Keen, 1975, p. 33). Lavine (1984) adds: "Only an analysis of the activity and structure of consciousness can provide an understanding of the phenomena we experience since consciousness itself constitutes them" (Lavine, 1984, p. 394). The establishment of phenomenology as a school of philosophy addressed the phenomena of human experience as products of "the variety of activities and conceptual structures of human consciousness" (Lavine, 1984, p. 393).

The profound influence of phenomenology on the human sciences, on sociology, political science, education and psychology is fairly recent (Wertz, 2005). Much of its influence has been achieved since the First World War as a result of the work of Edmund Husserl, a German philosopher and mathematician (Lavine, 1984). "Husserl broadened the concepts and methods of modern science to include the study of consciousness [and] formulated scientific methods that are uniquely fashioned to assist psychological researchers in the investigation of human experience and behaviour" (Wertz, 2005, p. 167). This is achieved through "studying the ways in which the individual subject perceives himself, others, and the world, rather than looking at him only in terms of his behaviour, or statistically, or as defined by a social system" (Lavine, 1984, p.396).

Concerned with grasping the essence of a phenomenon, Husserl's motto was "to the things themselves" (Barrett, 1990, p. 213) or, in the original German, "*Sachen selbst*" (Wertz, 2005, p. 168, italics in original). Rather than allowing preconceptions to obscure human experience, Husserl called for a turn to "a pure description of what is" (Barrett, 1990, p. 214) in order to capture human perceptions unencumbered by prejudgements.

In an effort to counter the laws of naturalism and pursue a suitable route for the scientific understanding of human consciousness, Husserl sought to reveal "absolute knowledge" through phenomenology (Jennings, 1986). Husserl introduced the term *Epoche*, for the provocative idea of clearing the mind completely of any previous knowledge or experience (Husserl, 2008). "If we adopt

the position-taking of the absolute *Epoche* required, we make use of no pre-established knowledge, [and] we hold each and every thing in abeyance" (Husserl, 2008, p. 189), in an effort to see phenomena completely fresh and anew (Wertz, 2005).

Husserl introduced or expanded upon concepts that are at the heart of phenomenology. One of the concepts Husserl advanced is *intentionality*, a concept Husserl adopted from his teacher, Brentano (Wertz, 2005). As Lavine (1984) notes with regard to the intentional nature of consciousness, consciousness is directed toward objects, it is consciousness-of something, consisting of intentional acts and intended objects. Husserl also introduced the concept of *Lebenswelt,* the life-world of personal experience, or "the world as experienced and lived by conscious beings" (Lavine, 1984, p. 396). "Conscious being is completely different from material being and cannot be explained in the same way" when the task is to "capture the radically experiential nature of human phenomena" (Cosgrove & McHugh, 2008, p. 76).

The phenomenological approach offers "general guidelines for the social scientist (rather than outlining exact steps that must be taken)" (Cosgrove & McHugh, 2008, p. 75). From a methodological standpoint, phenomenology exposes participants' experiences and reveals lived experience (Wertz, 2005). "The methodological question is: How can we make an event reveal itself in its many-layered meaning? In order to reveal the many meanings of an event, we must come to see clearly the experiences of the participants, whose intentions and perceptions *are* the event's meanings" (Keen, 1975, p. 33, emphasis in original).

What phenomenology provides as a research methodology for this particular study is a means to extract a description of an act of human consciousness, that is, the experience of meditation, and capture the subtle nuances of a complex, uncommon and unusual activity. Here, the research focus is on the phenomenon (Creswell, 2007). The phenomenon of meditation is set at the centre of the research. As the purpose of the research is to come to an awareness and understanding of how humans experience the phenomenon (Saldana, 2011), there

is a commitment “to descriptions of experiences, not explanations or analyses” (Moustakas, 1994, p. 58).

Languaged data in phenomenological studies are the descriptions of subjective experiences of phenomena that participants provide *in their own words.* The languaged data of phenomenological studies represent “the data of experience [which are] imperative in understanding human behaviour” (Moustakas, 1994, p. 21), with regard to the experience of the phenomenon being studied.

Phenomenology thus provides the means to expose the essence of the structures of the experience of meditation as they appear in human consciousness (Creswell, 2007; Laverty, 2003; Moustakas, 1994). It allows for the extraction of the lived experience of meditation, through the descriptions of the phenomenon from several first-person accounts (Creswell, 2007; Moustakas, 1994).

In summary, this qualitative research study aims to explore the subjective experiences of novice meditators *as they meditate*. The study is conducted in a naturalistic setting with the researcher employing the phenomenological approach in gathering the narratives of novice meditators. Descriptions of the conscious experiences during meditation are thus presented as closely as possible to what Husserl referred to as "pure descriptions of what is" (Barrett, 1990, p. 214), given that the attempt is to capture subtle human experiences (Gifford-May & Thompson, 1994; Walsh, 1977) imperfectly mediated through language (Hycner, 1985; Walsh, 1978).

The research design, data collection and data analysis procedures are discussed next, in the section on praxis.

3.3 PART 2 : PRAXIS

This section begins with how the selection process for research participants was conducted, along with the demographic data of the research sample. The research setting and the components of the study are then described followed by a detailed

description of each of the phases of the data collection process. This section ends with the procedures that were followed during the stages of analysing and synthesising the data.

3.3.1 Research Sample

Non-probability sampling, which is a common sampling method for qualitative research, is used for this study (Creswell, 2007; Neuman, 2000). In non-probability sampling, the emphasis is not on random sampling. Marshall (1996) writes: “A random sample provides the best opportunity to generalise the results to the population but is not the most effective way of developing an understanding of complex issues relating to human behaviour” (p. 523). Rather than gathering a "set of cases that is a mathematically accurate reproduction of the entire population" (Neuman, 2000, p. 241) as occurs in quantitative studies, qualitative sampling, as in this study, explores only a few cases in-depth with regard to a particular phenomenon, that is, meditation.

A call for volunteers took place on the college campus where the researcher is a teacher. The decision to recruit participants from the students on campus was based on the efficiency of convenience sampling as participants were readily available and all in the same place at the same time (Neuman, 2000).

The following methods were used to call for volunteers:

1. Recruitment posters were displayed on campus at strategic points with a high traffic volume (refer to Appendix A for a copy of the poster).
2. Emails were sent to past students of the researcher informing them of the study and asking them if they would be interested in taking part (refer to Appendix B for a copy of the email).

Volunteering for the study was based on: 1) self-identifying as experiencing stress in daily life; 2) being willing to take part in a short-term meditation program; 3) being willing to share the experience of meditation with others.

Interested students contacted the researcher by email for further information. Reasons for being excluded from the study included being a current student of the researcher, receiving current treatment for a psychological disorder, having a history of post-traumatic stress disorder, and/or having a previous diagnosis of a serious mental illness.

Twenty-one students were invited to attend a private pre-study meeting with the researcher. Nineteen students commenced the study. All participants were novice meditators. The term 'novice meditator' indicates someone who may have meditated on occasion in the past, but has not previously established a regular meditation practice. A regular meditation practice would be defined as practicing meditation on a consistent daily or weekly basis. Two of the participants had meditated in the past but none of the participants was engaged in regularly practising meditation before the study commenced.

The 19 research participants (10 males and 9 females) range in age from 18 to 46 years. The biographical details of the 19 participants are depicted in Table 3.3 below.

The participants were divided into four groups of 3-7 students based on their individual time schedules. Each group met at fixed times during the week. Each group meeting comprised a meditation training session that was immediately followed by a focus group during which participants shared their meditation experiences.

Of the 19 participants who started the study, 2 students dropped out. Seventeen students successfully completed the study. Successful completion of the study is defined here as attending a pre-study meeting with the researcher, attending at least three of the four meditation sessions and focus groups, as well as attending a post-study individual interview.

The research sample represents a small sub-group of a population of adults who, perceiving themselves as experiencing stress in their daily lives, are willing to try new experiences and/or methods to combat stress.

Table 3.3

Biographical Details of the 19 Research Participants in This Inquiry

Code	Gender	Age	First Language	Cultural Background	Country Of Birth	Religious Background
#1	Female	28	Russian	Russian	Russia	Christian
#2	Female	23	English	Canadian	Canada	Christian
#3	Female	31	English	Jamaican	Jamaica	Christian
#4	Female	31	Farsi	Iranian	Iran	Muslim
#5	Female	18	English/French	Canadian	Canada	Christian
#6	Female	25	English	Canadian	Canada	Christian
#7	Female	22	Korean	Korean	Korea	Christian
#8	Female	25	English	Trinidad	Trinidad	Hindu
#9	Female	42	English	Jamaican	Jamaica	Christian
#10	Male	20	English/French	Congo	Congo	Christian
#11	Male	46	Romanian	Romanian	Romania	Christian
#12	Male	28	Portuguese	Brazilian	Brazil	Christian
#13	Male	37	Hindi	Indian	India	Hindu
#14	Male	28	Spanish	Venezuelan	Venezuela	Christian
#15	Male	26	Igbo	Nigerian	Nigeria	Christian
#16	Male	21	Spanish	Mexican	Mexico	Christian
#17	Male	21	Punjabi/English	Indian	Canada	Sikh
#18	Male	18	English	Canadian	Canada	Christian
#19	Male	23	English	Canadian	Canada	Jewish

3.3.2 Research Setting

The study was conducted on campus where the students attend college and the researcher is a teacher. The research participants and the investigator are therefore familiar with the location. A room in the administrative wing of the college was available that offered attractive surroundings with comfortable chairs around a boardroom table. The room provided a quiet and private environment suitable for the practice of meditation.

3.3.3 Components of the Study

This study follows a multiphase data collection procedure that includes a number of different components. (See Figure 3.2.) Each component is described below followed by a detailed account in Section 3.3.4 of how each component is incorporated into the data collection process. The components in this study include: 1) a pre-study and post-study self-administration of the Perceived Stress Scale; 2) a short-term meditation program; 3) focus groups; and 4) individual interviews.

3.3.3.1 Pre-study and post-study administration of the Perceived Stress Scale (PSS-14)

It is reported in the scientific literature that the main therapeutic effect of meditation is its stress-reduction properties (Burns, Lee & Brown, 2011; Lane, Seskevich, & Pieper, 2007; Rubia, 2009). In order to ground this study in the scientific literature, this study examines whether the short-term practice of meditation can reduce levels of perceived stress in novice meditators. The Perceived Stress Scale (PSS-14) is used in this study as a pre-study and post-study measure to assess if any changes in perceived stress occur over the period of the meditation program.

The Perceived Stress Scale (PSS-14) is a pre-constructed paper-and-pencil test. It was developed to meet the need for "a psychometrically sound global measure of perceived stress" (Cohen et al., 1983, p. 385). The authors of the PSS-14 (Cohen et al., 1983) describe the scale as possessing "substantial reliability and validity" (p. 394). The PSS-14 has been shown to have satisfactory internal and external reliability with a coefficient alpha reliability of 0.84 and test-retest reliability of 0.85 (Cohen et al., 1983). The authors also report evidence of validity for the scale in better predicting stress-related psychological symptoms, physical symptoms, and health service utilization than commonly used life event scales (Cohen et al., 1983; Candrian, Farabaugh, Pizzagalli, Baer, & Fava, 2007).

The PSS-14 is a research instrument that has been used by a number of researchers (Burns et al., 2011; Candrian et al., 2007; Lane et al., 2007) who

required a self-administered “outcome measure of experienced levels of stress” (Cohen et al., 1983, p. 385). The scale has been translated into a number of different languages and has been used by social scientists across the world (Cohen, 2013). The scale is easy to understand and can be completed in just a few minutes by the participants themselves, usually without requiring any assistance.

The PSS-14 is a 14-item scale that is constructed to measure the respondent's perception of stress encountered in everyday life. Respondents score each item on a 5-point Likert scale with reference to how often they have felt or thought a certain way over the last month.

For example, one of the questions asked is: “Over the last month, how often have you felt that you were unable to control the important things in your life?” Another question is: "In the last month, how often have you felt nervous or 'stressed'?" (Cohen et al, 1983). The respondent's responses are then scored and quantified allowing for statistical analysis.

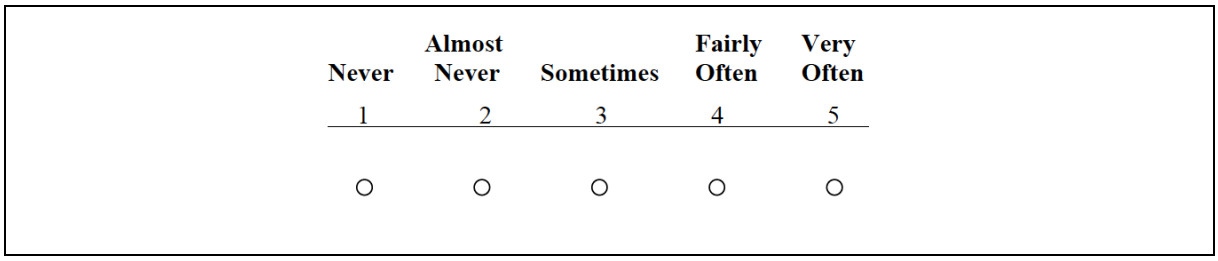

Figure 3.1 The 5-point Likert scale used on the PSS-14 to capture the frequency a respondent has experienced stress in relation to a given situation within the past month. From Cohen, Kamarck and Mermelstein (1983).

In this study, the Perceived Stress Scale also functions as a program evaluation tool. Differences in PSS-14 pre-study and post-study scores provide a measure of the effectiveness of the short-term meditation program in reducing perceived stress. The PSS-14 is included in Appendix D.

In order to evaluate possible changes in perceived stress resulting from participation in the meditation program, the Perceived Stress Scale is self-administered by each research participant during a pre-study meeting with the researcher and again during the individual interview that takes place after the study has ended.

3.3.3.2 Short-term meditation program

At the centre of this investigation is a short-term meditation program, which consists of a practical introduction to meditation. The purpose of the program is to introduce participants to the basics of meditation practice and develop awareness and increased sensitivity to their internal world, that is, their thoughts, emotions, sensations and perceptions (Judith, 2004).

It is common for meditation to be taught in a group setting. The Mindfulness-Based Stress Reduction program, for example, involves group training followed by a group discussion of what was experienced (Kabat-Zinn, 1990).

In this study, half-hour group meditation sessions are conducted weekly over a four-week period. Therefore, each participant attends a total of four meditation sessions over the course of the program.

Participants are given the opportunity for training and practice in a basic mindfulness meditation technique with the attention on the breath (Kabat-Zinn, 1990; Santorelli, 2000). Each meditation session is guided by the researcher.

3.3.3.3 Focus groups

Focus groups are the main source of data collection in this study. The richness of the data collected is dependent upon how much the participants share, compare and contrast (Polkinghorne, 2005) with regard to what they experience during meditation.

The researcher begins each focus group discussion by asking the participants to share their experiences (Wertz, 2005). Further questioning is used as needed to encourage highly descriptive experiential accounts and to ensure the capture of rich data (Kvale & Brinkmann, 2009). When necessary, probing questions (Kvale & Brinkmann, 2009) are asked to clarify what has been said or expand on a particular point (Webb, 2003). If participants do not readily volunteer information, the researcher offers participants the opportunity to contribute to the discussion by supporting participants to share their experiences with the group. The researcher closely manages the focus groups (Morgan, 1997) and the flow of information in the groups, with a view to establishing “an environment of safety and trust” (Laverty, 2003, p. 29) for all participants whilst creating a “permissive environment for the expression of personal and conflicting viewpoints on the topics in focus” (Kvale & Brinkmann, 2009, p. 150).

In this study, focus groups follow each meditation session to allow for immediacy and freshness of recall of the meditation experience. Morgan (1997) lists a number of "rules of thumb" for focus groups. He recommends 6-10 participants per group. However, Morgan (1996) acknowledges that research design decisions involving more structured or less structured discussions would be more likely to determine the size of the group. This study includes 3-7 participants per group and involves less structured discussions. These research design decisions produce data strongly suited to this investigation and ensure productive discussions (Morgan, 1996).

With regard to the number of focus groups, Morgan (1997) suggests 3-5 focus group meetings per project. This study includes 16 focus group meetings because of the structure of the 4-week meditation program with 4 focus groups per week. However, each research participant was involved in a maximum of 4 focus groups over the period of the study. Each focus group is 30-40 minutes in duration. The focus groups are audio recorded using a portable digital voice recorder for later transcription and analysis.

Focus groups are not traditional means for gathering phenomenological data. Usually, written documents or individual interviews are the data collection methods of choice (Creswell, 2007). Optional methods of data collection may have been, for example, to have research participants write about their experiences, as Travis and Pearson (2000) did in their “pure consciousness” study, or individual interviews as in the Gifford-May and Thompson (1994) study. However, an additional layer of data richness was captured as participants shared and compared their experiences in the focus group setting (Bradbury-Jones, Sambrook, & Irvine, 2009).

Focus groups are group interviews that Morgan (1996) defines as “a research technique that collects data through group interaction on a topic determined by the researcher” (p. 130). It is the social interaction aspect of focus groups that adds another dimension to the collection of research data. Participants interact with each other and with the researcher (Morgan, 1996). It is the interaction that is considered by some researchers to contaminate phenomenological data so that the structure of the phenomenon that is revealed is no longer a "pure description" of the experience (Webb & Kevern, 2001).

There has been an ongoing debate in the scientific literature, and in nursing research in particular, as to whether it is methodologically sound to collect phenomenological data using focus groups. Some researchers believe that focus groups and phenomenology are methodologically incompatible (Webb, 2003; Webb & Kevern, 2001) leading to the provocative question being raised in the literature as to whether the term “phenomenological focus group” is in fact an oxymoron (Bradbury-Jones et al., 2009). Phenomenological purists may even consider that the combining of phenomenology with focus groups is a “methodological crime” (Bradbury-Jones et al., 2009).

However, it is charged here that gathering data from focus groups in this particular research study improves the rigour of the study by increasing credibility (discussed in more depth later in this report). It is a valuable research design decision. As the participants grapple with describing their experience of this subtle, unusual and ineffable activity, the interactions among participants can be helpful to capture in

words the nuances of an experience that is difficult to describe (Gifford-May & Thompson, 1994).

It should also be noted that the focus of this research study and the responses provided by the participants involves relatively impersonal information. The focus is not on sensitive information. The focus is on the experience of the phenomenon of meditation. Focus groups provide the benefit of encouraging spontaneity and a safe environment for the expression of subjective experiences (Sim, 1998).

Focus groups require an active, alert moderator who takes care of participants who say too little and participants who talk too much (Morgan, 1996). The moderator needs to direct the discussion so that all participants' voices are heard. This demands that the moderator pays attention to "who's talking" (Hyden & Bulow, 2003). The researcher in the present study, acting as the focus group moderator, ensured that each participant in each group was given space to speak, going around the room when necessary, and offering each participant by name the opportunity to report on their experiences.

3.3.3.4 Individual exit interviews

Within one week of the final meditation session and focus group meeting, participants meet one-on-one with the researcher for a private 30-minute semi-structured interview. All individual interviews are audio recorded using a portable digital voice recorder for later transcription and analysis. The semi-structured interview script, used as a guide for the discussion in all individual interviews, is included as Appendix F.

The individual semi-structured interviews serve a number of purposes:

1. They provide an opportunity to gather additional information from all participants with regard to their meditation experiences that may not have been mentioned during the focus group meetings.

2. The individual interviews act as debriefing sessions (Tesch, 1977), wrapping up the study proceedings and providing participants with the opportunity to ask any remaining questions they may have about the study and the research proceedings, before exiting the study.
3. In this study, the individual interviews provide an opportunity for the participants to complete the post-study PSS-14.
4. The individual sessions also provide the researcher with the opportunity to formally thank each participant for participating in the study.

Overall, the individual interviews provide an exercise in exiting a study well (Tracy, 2010).

3.3.4 Data Collection

The collection of data in this research study is divided into six phases. Figure 3.2 illustrates these six phases and shows the research components and the sequential nature of the procedures that are followed.

3.3.4.1 Phases of data collection

As can be seen in Figure 3.2, there are six phases of data collection. Phase 1 is the sign-up phase, with participants meeting individually with the researcher and completing the pre-study PSS-14. Phase 2 to Phase 5 include meditation sessions which are immediately followed by focus groups. Phase 6 includes individual interviews and the completion of the post-study PSS-14. The focus groups and the individual interviews are audio recorded for later transcription and analysis. Each of the phases is described below.

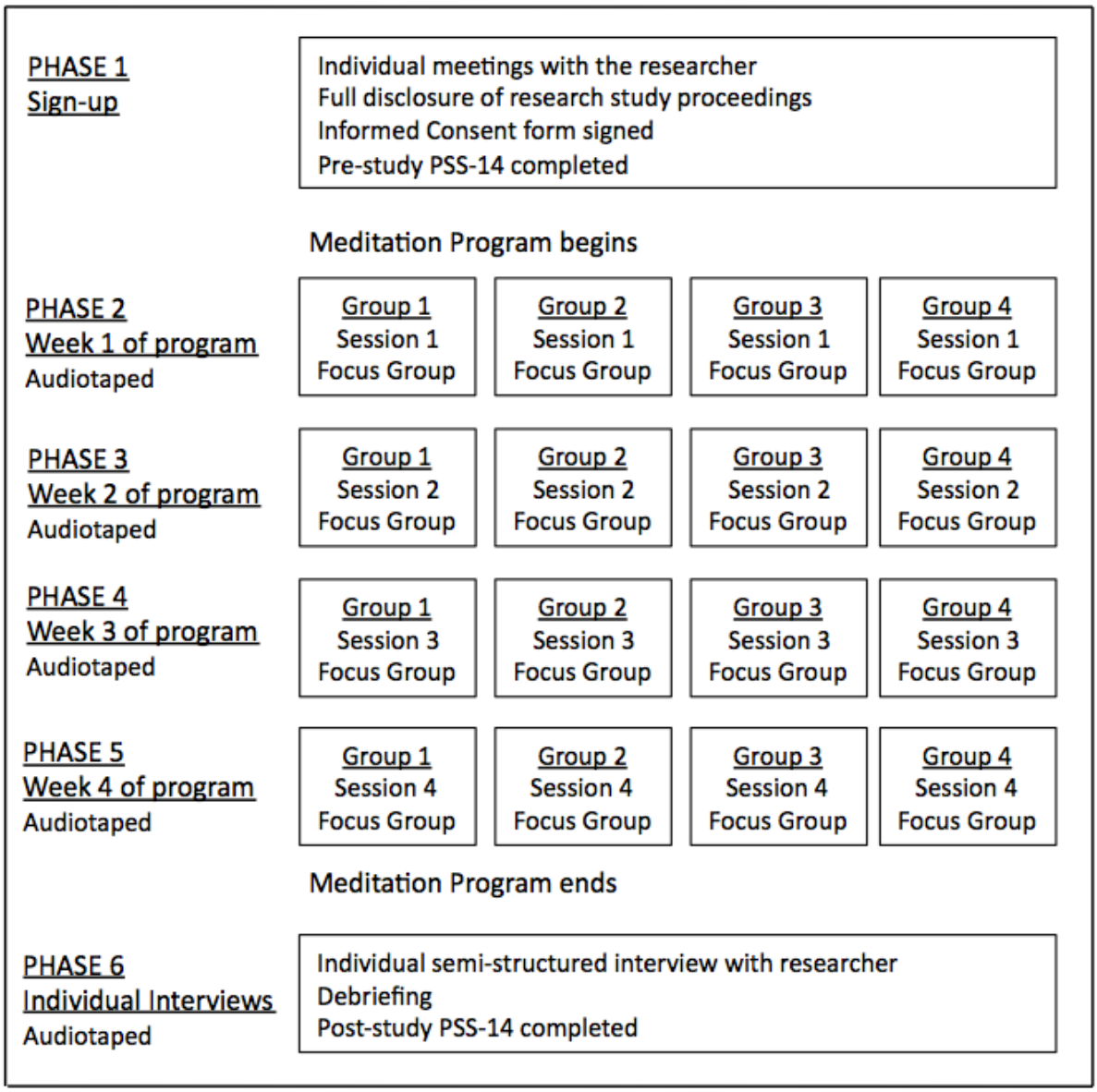

Figure 3.2 Components and phases of the data collection process.

3.3.4.1.1 Phase 1: Individual meetings with the researcher

The researcher meets with each participant individually for a pre-study information session. During this session, the participant's biographical information is gathered. The parameters of the study are discussed and the Informed Consent form is explained and signed by both the participant and the researcher. The participant completes the pre-study Perceived Stress Scale (PSS-14).

3.3.4.1.2 Phase 2: Week 1 of the meditation program

At the start of the first weekly meditation session, participants introduce themselves to each other and are given the opportunity to ask questions about the study directly of the researcher. The procedures that will be followed over the period of the study are clearly outlined.

The first meditation session is an introduction to meditation using a mindfulness meditation technique focusing the attention on the natural rhythm of the breath (Kabat-Zinn, 1990; Santorelli, 2000). The script used by the researcher to lead the meditation session is included in Appendix E. The first focus group follows this session during which participants share their experience of the meditation session.

3.3.4.1.3 Phases 3–5: Weeks 2–4 of the meditation program

Phases 3 to 5 of the data collection process follow a similar format. The researcher leads each group in a meditation session using a mindfulness meditation technique focusing attention on the natural rhythm of the breath (Kabat-Zinn, 1990; Santorelli, 2000). Each meditaton session is followed by a focus group during which participants share their experience of the meditation session.

3.3.4.1.4 Phase 6: Individual exit interviews

Within a week of completing all four sessions of the meditation program, each participant meets with the researcher individually for a 30-minute semi-structured interview. The script for the semi-structured interview is included as Appendix F. During the interview, each participant completes the post-study PSS-14.

3.3.5 Data Analysis and Synthesis

Phenomenological researchers are diverse in their application of the phenomenological method (Finlay, 2009), and a number of phenomenological approaches are practised: Descriptive Phenomenological Psychological Method (Giorgi, 2007) based on Husserl's work; Interpretive Phenomenological Analysis (Smith, 2010) influenced by the work of Heidegger; the transcendental phenomenological approach (Moustakas, 1994), a method also based on the work of Husserl; and other modified approaches (Priest, 2003; Hycner, 1985). Priest (2003, pp. 58-59) presents a comparison of steps taken by six different phenomenological researchers in the analysis of data that shows the lack of uniformity in procedure. It is thus clear that the phenomenological method as currently practised in the social sciences has little uniformity.

Keen (1975) cautions that in phenomenological psychology, research techniques are open-ended and suggestive, partly because of its relative youth as a philosophy and as a psychology. "Unlike other methodologies, phenomenology cannot be reduced to a 'cookbook' set of instructions. It is more an approach, an attitude, an investigative posture with a certain set of goals" (Keen, 1975, p. 41). Keen (1975) continues: "Almost by definition, to use the same method on two different problems violates the phenomenological attitude – the attitude that seeks to meet phenomena on their own terms and not to press them into the mold of preconceptions" (p. 41). This remains true of current phenomenological research practices (Finlay, 2009). This research study aims to achieve an attitude that "seeks to meet phenomena on their own terms" (Keen, 1975, p. 41).

According to Finlay (2009), what counts as "phenomenology" with regard to methods in psychology includes "rich descriptions of the lifeworld or lived experience" (p. 8), and the use of the phenomenological attitude by the researcher, at least in the early stages of analysis. Giorgi (2012) also regards the phenomenological attitude as imperative, and includes as imperative the search for descriptive meaning units in capturing the essence of the phenomenon. Finlay

(2009) has this to add: "Any research which does not have at its core the description of 'things in their appearing', focusing on experience as lived, cannot be considered phenomenological" (p. 9).

In this study, the work of Giorgi (2012), Hycner (1985), and Moustakas (1994) serve as guides for the earlier stages of the analysis when a more formal phenomenological process is followed. However, because of the large amount of data and the nature of the data (short descriptions of in-the-moment experiences rather than lengthy discourse), an extended data analysis procedure is deemed necessary. This decision is motivated by a commitment to rigour as well as a commitment to thoroughly check and re-check the accuracy of the findings against the raw data in relation to the research questions.

Detailed steps in the data analysis process are described below.

3.3.5.1 Step 1: Transcription

The researcher transcribes the audio recordings of the focus groups and individual interviews. The transcription process is aided by computer software called ExpressScribe™. ExpressScribe™ is designed specifically to assist with the transcription of audio recordings.

Once the transcriptions are complete and hard copies are printed, the formal analysis process begins with the researcher practicing the phenomenological reduction.

3.3.5.2 Step 2: Phenomenological reduction

The phenomenological reduction is part of what Moustakas (1994) terms the *Epoche* process following Husserl's writings:

> The researcher engages in disciplined and systematic efforts to set aside prejudgements regarding the phenomenon being investigated...[to be] free of preconceptions, beliefs, and knowledge of the phenomenon from prior experience and professional studies – to be completely open, receptive, and naive in listening to and hearing research participants describe their experience of the phenomenon being investigated. (Moustakas, 1994, p. 22)

The phenomenological reduction includes bracketing (holding in abeyance) one's preconceptions, biases, and so forth, and assuming the phenomenological attitude (Giorgi, 2012). Bracketing previous experience was particularly important in this study, given the researcher's extensive experience of the phenomenon. The phenomenological attitude involves "a special sensitivity to the phenomenon being researched" (Giorgi, 2012, p. 5), to be "open to the other and to attempt to see the world freshly, in a different way" (Finlay, 2009, p. 12). Wertz (2005) describes the phenomenological attitude as a highly empathic attitude of wonder during which the investigator leaves their own world behind as they enter the world of the research participant. The phenomenological attitude is important throughout the research process (Finlay, 2009) and was practised in this study during data collection as well as during data analysis.

3.3.5.3 Step 3: Read through the data

After assuming the phenomenological attitude, the next step involves reading through the data slowly and carefully "to get a sense of the whole" (Giorgi, 2012).

3.3.5.4 Step 4: Reread the data creating meaning units

This step involves going back to the beginning and identifying meaning units as they emerge from the data (Giorgi, 2012). This entails highlighting terms and

cross-referencing phrases that stand out, either because patterns or preliminary meaning units begin to emerge from the data, or because of the unusual and noteworthy nature of the experiences reported (Saldana, 2009).

3.3.5.5 Step 5: Cluster the meaning units into themes

Several read-throughs of the data as a whole, as well as the rereading of shorter, selected portions of more complex data, are carried out. There is extensive note-taking. Meaning units are clustered into themes in the search for the key constituents of the experience of the phenomenon.

3.3.5.6 Step 6: Reflection

A period of reflection follows during which the researcher reflects on the data, to see "the things in their appearing" (Finlay, 2009, p. 9) and what they are revealing about the phenomenon. This is a form of phenomenological "imaginative variation" (Giorgi, 2012; Moustakas, 1994). It involves thinking about the data from different viewpoints whilst drawing on the intuition of the researcher (Moustakas, 1994). It also includes self-reflection, "bringing [the researcher's] experience to the foreground and reflexively exploring their own embodied subjectivity" (Finlay, 2009, p. 12). Theories begin to formulate around the data.

Given the large amounts of data, it is at this stage that an additional view of the data is sought. Computer software is used to add a confirmatory level of analysis.

3.3.5.7 Step 7: Electronic coding with HyperResearch™

The transcriptions are entered into qualitative research coding software called HyperResearch™. HyperResearch™ is designed to aid the electronic coding and retrieval of data, and to assist in conducting data analyses. Electronic coding, that is, the electronic assigning of codes to the meanings units and themes established earlier, requires an additional careful and detailed reading of the transcripts, further enhancing the researcher’s intimacy with the data. Using the software is

particularly helpful in organising the data (Brod, Tesler, & Christensen, 2009). Electronic coding also provides the opportunity to review the emergent constituents and to check if any data have been missed in the earlier manual attempts.

Brod et al. (2009) describe computer software used in qualitative research as “data management instruments that assist analysis rather than analyze qualitative data” (p. 1270).

Brod et al. (2009) note:

> Computer software programs can help the coder by facilitating data preparation, organization and management, but it is the researcher who identifies and defines the conceptual categories, determines the meaningfulness of the codes and interprets the theoretical significance of the data. (p. 1270)

3.3.5.8 Step 8: Tabletop categorisation

The electronic codes are printed out, cut apart and spread across a flat surface in a hands-on tabletop sorting session to confirm the key constituents of the phenomenon and their relationship to each other. The spatial arrangement allows for "touching the data [to help] better discover and understand such organizational concepts as hierarchy, process, interrelationship…and structure" (Saldana, 2009, p. 189). This step aids the process of imaginative variation, assessing the essential structures of the phenomenon and uncovering the essence of the phenomenon under investigation. The key constituents of the phenomenon are then related back to the raw data and the research questions.

3.3.5.9 Step 9: Data summary table

With the aid of the structure created from the tabletop arrangement, a data summary table is constructed linking the experiential data from each participant to the final data categories. This quantified method illustrates the commonality of aspects of the meditation experience by tabling participants' reports of aspects of the experience of the phenomenon. It also provides a review of the "essential

structure of the phenomenon" (Giorgi, 2012), identifying core and supplementary facets of the meditation experience. This step provides a very useful check of the outcome of imaginative variation as it helps to assess the essential aspects of the phenomenon under investigation. If the "elimination of an aspect causes the phenomenon to collapse, then that aspect is essential" (Giorgi, 2007, p. 64). This step aids the process of assessing the essential structures of the phenomenon and the non-essential structures in uncovering the essence of the phenomenon under investigation.

3.3.5.10 Step 10: PSS-14 analysis with SPSS®

The use of the PSS-14 serves as a pre-study and post-study measure to assess the outcome of this study with regards to perceived stress reduction. It should be noted that this measure is not an instrument to gather data about meditation. Rather, it is an instrument used here to examine changes in the perceived stress of the participants over the four-week study period.

The PSS-14 items are scored according to the method provided by Cohen et al. (1983). The scores are then entered into SPSS® which is a statistical program for the social sciences. Paired samples t-tests are calculated in order to detect if changes in the pre-study (T^1) and post-study (T^2) participant scores are significant (Herron, 2011; Jacobs et al., 2011). The results of this quantitative method are then related back to the research findings with regard to reductions in stress mentioned in the literature. The PSS-14 results are used to extend the breadth of this study's findings.

3.4 PART 3: QUALITY ASSURANCE

This section covers the procedures that are followed to assure the quality of the research process in this study. The term *quality assurance* is used here in the sense of trustworthiness, that the knowledge generated by this study can be trusted (Merriam, 2002). The first part of this section covers trustworthiness and rigour. The second part covers ethics.

3.4.1 Trustworthiness and Rigour

In this section, trustworthiness and rigour are discussed with regard to qualitative research. The four aspects of trustworthiness in naturalistic inquiry as proposed by Guba (1981) are described. Following the description of the four aspects of trustworthiness, details are provided of the steps taken to promote trustworthiness and rigour in this study.

3.4.1.1 Trustworthiness criteria in qualitative research

The criteria of validity and reliability used in quantitative research provide a standard for determining trustworthiness and scientific rigour that is not easily transferable to qualitative research methods (Golafshani, 2003; Mays & Pope, 1995; Shenton, 2004). Guba (1981) proposed four criteria for qualitative research that correspond to the aspects of scientific rigour in quantitative research. The four criteria for qualitative research are credibility, transferability, dependability, and confirmability (Guba, 1981, Guba & Lincoln, 1982; Lincoln & Guba, 1985). These criteria correspond to internal and external validity, generalisability, reliability, replicability, and objectivity in quantitative research.

Table 3.4 below lists these criteria in relation to the four aspects of trustworthiness (Guba, 1981).

Table 3.4

Scientific and Naturalist Terms for the Four Aspects of Trustworthiness

Aspects of Trustworthiness	Scientific Terms	Naturalistic Terms
Truth Value	Internal Validity	Credibility
Applicability	External Validity Generalisability	Transferability
Consistency	Reliability Replicability	Dependability
Neutrality	Objectivity	Confirmability

From Guba, 1981, p. 80.

Guba's (1981) terminology has had broad appeal (Creswell, 2007; Krefting, 1991; Shenton, 2004) but it has not been universally accepted. Some qualitative researchers have proposed alternative criteria (Merriam, 2002; Tracy, 2010). Lincoln (1995) nominates additional criteria while acknowledging Guba's criteria as being foundational. Other writers have expressed the view that the established scientific terminology should be retained for qualitative research (Morse, Barrett, Mayan, Olson, & Spiers, 2002). Nevertheless, Guba's (1981) criteria provide a guide for building rigour and promoting trustworthiness in this study. Each trustworthiness criterion is briefly described below followed by the provisions that are made to ensure trustworthiness in this study.

3.4.1.1.1 Truth value

The first aspect of trustworthiness is truth value (Guba, 1981). It reflects the extent to which the findings reflect the truth and calls for knowledge of the real world and how the findings reflect the real world. The scientific term for this aspect is internal validity and a key question would be: "To what extent are you measuring what you want to measure?" or "To what extent does what you are measuring reflect the truth?" (Kerlinger, 1973; Neuman & Robson, 2009).

The naturalistic term for this aspect is credibility (Guba, 1981). This aspect demonstrates that "a true picture of the phenomenon" (Shenton, 2004, p. 63) is under investigation and has been presented. A key question would be: "How can one establish confidence in the 'truth' of the findings of a particular inquiry for the respondents with which and the context in which the inquiry was carried out?" (Guba & Lincoln, 1982, p. 246).

3.4.1.1.2 Applicability

The second aspect of trustworthiness is applicability (Guba, 1981). It reflects the extent to which the research findings can be applied to the population at large. The scientific term for this aspect is external validity or generalisability. A key question would be: "To what extent can you generalise your findings to the rest of the world?" (Guba & Lincoln, 1982, p. 246) or, as Neuman and Robson (2009) ask, "if something happens in a lab, can it [be] generalize[d] to the 'real' world?" (p. 119).

The naturalistic term is transferability (Guba, 1981). Transferability addresses the extent to which the research findings can be transferred to other participants in similar situations. Sampling in qualitative inquiry is seldom random but is often purposeful in selecting participants who have experienced the phenomenon under investigation, therefore transferability is aided through fully reporting contextual information (Shenton, 2004). A key question would be: "How can one determine the degree to which the findings of a particular inquiry may have applicability in other contexts or with other respondents?" (Guba & Lincoln, 1982, p. 246).

3.4.1.1.3 Consistency

The third aspect of trustworthiness is consistency (Guba, 1981). The scientific term is reliability. This aspect addresses the consistency of findings over time. It is an important factor with regard to the measuring instrument that is used in an investigation. This aspect has to do with the extent to which the results are replicable. A key question would be: If we re-measure the same set of objects with

the same instrument at a different time, will we get the same results? This would demonstrate "consistency of test scores over time" (Downie & Heath, 1970, p. 101).

While reliability is most often an aspect related to a measuring instrument, the close relationship of validity to reliability is noted: "A measuring instrument is *valid* if it measures what it is supposed to measure" (Jordaan, Jordaan, & Nieuwoudt, 1975, p. 896, emphasis added). In fact, "validity is a direct function of reliability" (Guba, 1981, p. 81). In other words, "reliability is a precondition of validity" (Guba, 1981, p. 81).

The naturalistic term offered for the aspect of consistency is dependability (Guba, 1981). A key question would be: "How can one determine whether the findings of an inquiry would be consistently repeated if the inquiry were replicated with the same (or similar) respondents in the same (or a similar) context?" (Guba & Lincoln, 1982, p. 246).

3.4.1.1.4 Neutrality

The fourth aspect of trustworthiness is neutrality (Guba, 1981). The scientific term is objectivity. This aspect reflects the extent to which the research findings are free from researcher bias (Guba, 1981). The naturalistic term for this aspect is confirmability**.** A key concern would be the ability to demonstrate that the research findings emerge from the data and are not a reflection of the investigator's personal agenda or biases (Shenton, 2004).

3.4.1.2 Provisions made to build rigour and trustworthiness

This section covers the provisions that the researcher made in this study to build rigour and promote trustworthiness so that these "research findings...are worth paying attention to" (Lincoln & Guba, 1985, p. 290). The provisions are listed in Table 3.5 followed by detailed descriptions of how the provisions are made.

Table 3.5

Provisions Made in This Study to Address the Four Criteria for Trustworthiness

Quality Criterion	Provisions Made by Researcher
Credibility	Prolonged engagement Persistent observation Triangulation Member checking Establishing structural corroboration or coherence Negative case analysis Practising reflexivity Collecting thick descriptive data Adoption of appropriate research methods and procedures
Transferability	Sampling techniques Thick descriptive data Time sampling
Dependability	Overlapping methods In-depth methodological description Audit trail
Confirmability	Triangulation Audit trail Practising reflexivity

Adapted from Krefting (1991) and Shenton (2004).

3.4.1.2.1 Credibility

"How can one establish confidence in the 'truth' of the findings of a particular inquiry for the respondents with which, and the context in which the inquiry was carried out?" (Guba & Lincoln, 1982, p. 246).

Each of the provisions made to promote credibility, as listed in Table 3.5, are discussed below.

3.4.1.2.1.1 Prolonged engagement

The researcher has been a teacher at the college that was the site for the practical components of this study for many years and is therefore familiar with the culture of the research setting (Creswell, 2007; Shenton, 2004). Prolonged engagement is a recommended strategy for building rigour as an understanding of the culture provides for better understanding of the research setting (Lincoln & Guba, 1985).

Familiarity of the culture of the setting, developed over an extensive period of time, allows for the building of trust (Creswell, 2007; Lincoln & Guba, 1985) and rapport (Lincoln & Guba, 1985). The building of trust is a developmental process to be engaged in throughout the research process to demonstrate "that the interests of the respondents will be honored as much as those of the investigator" (Lincoln & Guba, 1985, p. 303). The result is the collection of more credible data with fewer distortions (Lincoln & Guba, 1985). More than half of the research participants were past students of the researcher with established relationships of trust and rapport with the researcher.

Prolonged engagement was also exercised in the four-week long meditation program. Rather than just a single session during which participants practised meditation and then discussed their experience on one occasion only, the research design called for multiple contacts over a four-week period of commitment to the study by both the participants and the researcher.

3.4.1.2.1.2 Persistent observation

"If prolonged engagement provides scope, persistent observation provides depth" (Lincoln & Guba, 1985, p. 304). This criterion for building credibility is demonstrated through the amount of time spent with the research participants. Rather than gathering data from a single meditation session, multiple sessions are conducted. Merriam (2002) writes: "It is recommended that the researcher be submerged or engaged in the data collection phase over a long enough period to ensure an in-depth understanding of the phenomenon" (p. 26).

Persistent observation allows the investigator "to identify those characteristics and elements in the situation that are most relevant to the problem or issue being pursued and focusing on them in detail" (Lincoln & Guba, 1985, p. 304). The research design permits repeated contact with the participants allowing for the identification of "the 'pervasive qualities' involved – those things that really count...to the point where...factors are understood in a nonsuperficial' way" (Lincoln & Guba, 1985, p. 304).

3.4.1.2.1.3 Triangulation

One of the most widely accepted strategies for building rigour and trustworthiness into the research process is triangulation (Guba, 1981; Lincoln & Guba, 1985; Creswell, 2007; Krefting, 1991; Shenton, 2004; Tracy, 2010).

According to Krefting (1991), "Triangulation is a powerful strategy for enhancing the quality of the research, particularly credibility. It is based on the idea of convergence of *multiple perspectives* for mutual confirmation of data to ensure that all aspects of a phenomenon have been investigated" (p. 219, emphasis added).

In this study, triangulation occurs through the multiple perspectives provided by the research participants, as well as the use of different methods of data collection (Guba & Lincoln, 1982; Johnson, Onwuegbuzie, & Turner, 2007; Krefting, 1991). Four groups of participants take part in this study with each group convening on four separate occasions to experience the phenomenon under investigation. Each participant's experience of meditation essentially acts as a form of triangulation of data for their own particular experience, and the data from each focus group acts as a form of triangulation of data with the other focus groups.

Also, focus groups following each meditation session provide a data collection opportunity that differs from the individual exit interviews. These methods serve to provide different "slices of data" (Krefting, 1991) about the phenomenon of meditation in order to achieve a more integrated view of the phenomenon.

3.4.1.2.1.4 Member checking

Member checking is the return of analysed data to the source of the data, the informants, so that it can be verified, corrected, amended or extended (Lincoln & Guba, 1985). While Lincoln and Guba (1985) consider member checking to be "the most crucial technique for establishing credibility" (p. 314), the practice has met with some resistance from a number of researchers (Morse et al., 2002; Giorgi, 2012; Sandelowski, 1993).

Guba (1981) distinguishes between member checking *during* the study and member checking *after* the study is done, when analysis and reporting are in progress. As far as member checking during a study is concerned, Sandelowski (1993) writes: "Member validation is an ongoing process throughout the life of a qualitative project. Researchers informally engage in member validation every time they seek clarification for or elaboration of meaning and intention from the people they interview" (p. 4).

Member checking was an ongoing process during data collection in this study, in order to confirm and clarify the understanding of participants' experiences. This was a particularly important process in this study because of the subtle nature of the experience of meditation. The unusual nature of the experience was often difficult for participants to describe in their own words. It required patience on the part of the participants as well as the researcher to clarify and confirm what was said, as in Gifford-May and Thompson (1994). Member checking as an ongoing process during data collection builds credibility through the capturing of accurate and trustworthy data. Credibility was built further into the data collection process through the individual interviews that provide additional opportunities for checking back with participants for clarification and confirmation.

After data collection was complete, and during the data analysis and reporting process, member checking did not take place in this study. According to Morse et al. (2002), member checking after data collection is not a verification strategy. "Several methodologists...have warned against the tendency to define verification in terms of whether readers, participants, or potential users of the research judge *the analysis* to be correct, stating that it is actually more often a threat to validity" (Morse et al., 2002, p. 16, emphasis added).

Sandelowski (1993) agrees that returning the findings to the participants for their approval and verification can be a threat to validity, as does Giorgi (2006). "Whether or not the individual participant agrees with the findings is beside the point. There is a confusion here of goals: this is knowledge for the discipline, not for the individual [participant]" (Giorgi, 2006, p. 358).

Member checking with the research findings in phenomenological studies remains controversial. Some researchers support it (Hycner, 1985), while others eschew it (Giorgi, 2006; Webb, 2003).

3.4.1.2.1.5 Establishing structural corroboration or coherence

Establishing structural corroboration or coherence is a practice proposed by Guba (1981) in order to build credibility. It is practised after the study is completed and involves "testing every datum and interpretation against all others to be certain that there are no internal conflicts or contradictions" (Guba, 1981, p. 85). If there are any apparent conflicts or contradictions, the investigator is required to adequately account for these (Guba, 1981).

In the present study, establishing structural coherence was an integral part of the data analysis. While the data analysis process involved the search for similarities and patterns, differences and contradictions were revealed at the same time. These were accounted for and interpreted accordingly. Making sure that there are no unexplained inconsistencies in the research data strengthens the results of the study (Krefting, 1991). In reporting the final outcomes of this study, coherence is demonstrated in the logical structure in which the argument has been presented, so that it is "all of a piece" (Guba, 1981, p. 86).

3.4.1.2.1.6 Negative case analysis

Following the uncovering and acknowledgement of inconsistent data, negative cases presented themselves in participants for whom the experience of meditation was "deviant" (Guba, 1981), in that their experience of the phenomenon was somewhat different to that of the other participants. This information has been presented and accounted for in the theoretical explanation of the lived experience of the phenomenon of meditation so that the conclusions of the study are fully explanatory (Lincoln & Guba, 1985).

3.4.1.2.1.7 Practising reflexivity

A method for establishing credibility and trust in "the human-as-instrument" is the use of a reflexive journal (Lincoln & Guba, 1985). The journal used in this study includes details of the investigator's thoughts including concerns about and reflections on the data collection process. Also included are extensive notes on the analysis of the data, as well as notes on expected and surprisingly unexpected emerging data. The reflexive commentary includes information concerning "*self*...and *method"* (Lincoln & Guba, 1985, p. 327, emphasis in original) throughout the investigation process. "With respect to the self, the reflexive journal might be thought of as providing the same kind of data about the *human* instrument that is often provided about the paper-and-pencil instruments used in conventional studies" (Lincoln & Guba, 1985, p. 327, emphasis in original). The use of a reflexive journal is proposed by Lincoln and Guba (1985) as a technique for building trustworthiness in the areas of credibility, transferability, dependability and confirmability.

3.4.1.2.1.8 Collecting thick descriptive data

Guba (1981) and Lincoln and Guba (1985) propose collecting and reporting thick descriptions of the research data as a method for building transferability. However, Shenton (2004) includes the collection of thick descriptions as an important provision to ensure credibility. It "helps to convey the actual situations that have been investigated and...to determine the extent to which the overall findings 'ring true'" (Shenton, 2004, p. 69). Tracy (2010) also includes the importance of collecting thick descriptions of the phenomenon as a technique to promote credibility. Capturing and reporting the rich complexities of the data allows the reader to extract their own meaning and reach their own conclusions about the investigation (Tracy, 2010). In reporting, there needs to be "sufficient [use] of the original evidence presented systematically...to satisfy the sceptical reader of the relation between the interpretation [of the results] and the evidence" (Mays & Pope, 1995, p. 112).

The capturing of thick descriptions of the experience of the phenomenon was central to this study. As mentioned above, the experiencing of subtle states and verbally expressing those experiences was sometimes challenging for the participants. In addition to giving the participants the opportunity to fully express themselves, exercising patience, prompting and asking probing questions (Kvale & Brinkmann, 2009) were used whenever appropriate to clarify and confirm meaning. The capturing of thick descriptions aids the analysis of the data to reveal patterns in the data.

3.4.1.2.1.9 Adoption of appropriate research methods and procedures

The use of appropriate research methods has been presented by a number of authors as necessary to ensure trustworthiness (Merriam, 2002; Creswell, 2007; Shenton, 2004; Tracy, 2010). Perhaps of all the strategies presented here, this may be considered the most obvious yet essential factor in providing broad-based support for conducting quality research. The overall quality of the research is inevitably influenced by: the choice of a research topic that is of current social value (Tracy, 2010); the purpose of the study grounded in the literature (Merriam, 2002); an examination of previous research to frame the findings (Shenton, 2004); an appropriate research design (Merriam, 2002); rigorous data collection and data analysis methods (Creswell, 2007); transparency at all stages of the research (Tracy, 2010); ethical conduct of the investigator (Merriam, 2002); and detailed and engaging reporting (Creswell, 2007). The adoption of these rigorous and appropriate procedures in this study support and promote all four aspects of trustworthiness.

3.4.1.2.2 Transferability

"How can one determine the degree to which the findings of a particular inquiry may have applicability in other contexts or with other respondents?" (Guba & Lincoln, 1982, p. 246).

3.4.1.2.2.1 Sampling techniques

The ability to generalise the findings from a research study group to other individuals or groups within the general population is influenced by the sampling techniques used (Krefting, 1991). Being able to generalise findings is not a central tenet of qualitative inquiry (Guba, 1981). Because of the context-based and time-based nature of human behaviour, Guba and Lincoln (1982) question whether true generalisation can ever apply.

However, to allow for the possibility of generalisation in certain situations or in certain contexts, Guba and Lincoln (1982) propose purposive sampling to aid transferability. Sampling in naturalistic inquiry "is *not* intended to be representative or typical...but rather *is* intended to maximize the range of information uncovered" (Guba, 1981, p. 86, emphasis in original). Merriam (2002) also notes the value of diversity in the sample selection as a strategy to aid transferability, allowing a wider range of application for the findings.

The sampling strategy used in this study was convenience sampling (Creswell, 2007) as the research sample was drawn from the student body of the college where the researcher is a teacher. The research sample was easily accessible and all participants self-selected for involvement in the study because they were experiencing stress in their daily lives and were interested in learning more about the phenomenon. The research sample displayed diversity with regard to gender, age, cultural background, and home language. Also, this multicultural group represented people born on five different continents: Africa, Asia, Europe, North America, and South America.

3.4.1.2.2.2 Thick descriptive data

The collection of thick descriptive data is included as a means to build credibility (as discussed in *3.4.1.2.1.8* above) as well as transferability. Guba (1981) includes the *collection* of thick descriptive data as well as the *development* of thick descriptive data as techniques for the promotion of transferability. The primary reason for this is the establishing of context (Guba, 1981; Lincoln & Guba, 1985) to assist the reader or consumer of the research "to test the degree of fittingness" (Guba, 1981, p. 86) to other situations. "It is the reader who has to ask, what is there in this study that I can apply to my own situation, and what clearly does not apply?" (Firestone in Merriam, 2002, p. 29). Detailed descriptions of the experience of the phenomenon, along with the provision of rich background data to establish context, allows comparisons to be made (Shenton, 2004).

The investigator of this study was committed to the collection and reporting of thick descriptions of the research data to permit the reader to transfer these findings to their own situation or other settings that may fit the research results.

3.4.1.2.2.3 Time sampling

Time sampling, a form of triangulation (Krefting, 1991), is used to enhance credibility as well as transferability (Krefting, 1991). Each participant took part in four weekly meditation sessions over a four-week period. This allowed for the capturing of the experience of the phenomenon of meditation for each participant at four different times, permitting a comparison of experiences across sessions.

By widening the lens through which the data are viewed, transferability is strengthened. The more varied data collected through this strategy of time sampling not only allows for the uncovering of what is typical and what is atypical (Krefting, 1991), but the reporting of the richer, more varied data allows for additional opportunities to assess "fit" between the data and the reader (Guba, 1981) by providing more knowledge about the lived experience of the phenomenon.

3.4.1.2.3 Dependability

"How can one determine whether the findings of an inquiry would be consistently repeated if the inquiry were replicated with the same (or similar) respondents in the same (or a similar) context?" (Guba & Lincoln, 1982, p. 246).

Overlapping methods, in-depth methodological description and an audit trail were deemed essential for strengthening dependability. They are each discussed in turn below.

3.4.1.2.3.1 Overlapping methods

One of the strategies proposed by Guba (1981) to support data stability, or consistency of data over time (Kerlinger, 1973), is the use of overlapping methods. This procedure is a form of triangulation (Guba, 1981) and involves two methods of data collection used in tandem where the weakness of one method is complemented by the other method (Guba, 1981). If using different methods in tandem produces similar results, the case for stability is strengthened (Guba, 1981). "This so-called 'multiple-operations' inquiry simultaneously undergirds the case for credibility *and* stability" (Guba, 1981, p. 86, emphasis added).

In this study, focus groups and individual interviews were used in tandem in order to complement each other (Shenton, 2004). Participants who were perhaps reluctant to openly share certain experiences or state their views while in the company of others during the focus groups (Morgan, 1997) were given the opportunity, in a confidential one-on-one interview with the investigator, to share their experiences and views in a private setting (Kvale & Brinkmann, 2009).

3.4.1.2.3.2 In-depth methodological description

This report includes an in-depth and extensive description of the research methods followed in the execution of this study. The details of the processes or research

methods, along with the details of the products or research outcomes, provide the necessary information for the replication of this study.

3.4.1.2.3.3 Audit trail

An audit trail is a collection of records used to examine the processes and products of the inquiry (Lincoln & Guba, 1985). It confirms both credibility and dependability (Guba, 1981; Krefting, 1991). A highly detailed audit trail sets out what procedures need to be repeated for the inquiry to be replicated (Guba, 1981). An audit trail "allows any observer to trace the course of the research step-by-step via the decisions made and procedures described" (Shenton, 2004, p. 72).

An audit trail has been created and maintained to confirm rigour in the execution of this study. It includes the raw data (the electronic records of the audio files and both the electronic files and hard copies of the transcribed data) as well as the data reduction, data analysis, and data synthesis records, along with the process notes (as per Halpern in Lincoln & Guba, 1985). The details of the research processes followed in this study provide an in-depth methodological description to allow the study to be repeated (Krefting, 1991; Shenton, 2004), thus providing transparency. Transparency promotes honesty and sincerity, which are additional criteria for high quality research (Tracy, 2010).

3.4.1.2.4 Confirmability

"How can one establish the degree to which the findings of an inquiry are a function solely of the respondents and conditions of the inquiry and not of the biases, motivations, interests, perspectives, and so on of the inquirer?" (Guba & Lincoln, 1982, p. 246).

In qualitative inquiry, the subjectivity of the investigator is not a weakness influencing trustworthiness, as stressed in the positivist tradition. Rather, the adaptability, insight, and knowledge base of the researcher as well as the subjectivity of the human-as-instrument (Lincoln & Guba, 1985) are regarded as strengths. The issue now becomes data confirmability (Guba, 1981). With regard

to the data: "Are they or are they not *confirmable*?" (Lincoln & Guba, 1985, p. 300, emphasis in original).

A number of the strategies discussed earlier and implemented in this study, are also proposed by Guba (1981) as strategies to support confirmability:

- Triangulation
- Audit trail
- Practising reflexivity

Confirmability of the research data is based on transparency (Tracy, 2010), to ensure that the results emerged from the data and are not simply a reflection of the researcher's biases or own agenda (Shenton, 2004). This aspect of trustworthiness demands that important research strategies, like triangulation (Guba, 1981), are put in place, as they have been in the present study. The stages of analysis have been carefully documented to ensure that "the full story has been told", rather than a truncated view due to premature closure (Morse et al., 2002). The researcher has also exercised self-awareness and ongoing reflexivity (Guba, 1981) at all stages of the research. These strategies are exercised in this study and serve to strengthen confirmability.

3.4.2 Ethics

These two aspects of qualitative research – trustworthiness and ethics – are placed together here under the title of quality assurance because "ethical issues are inextricably intertwined with the trustworthiness of findings" (Merriam, 2002, p. 18). In qualitative research, "trustworthiness very much hinges on the *ethical* conduct of research" (Merriam, 2002, p. 24, italics in original). This is an expected consequence of "humans using themselves as [the] prime data collection instruments" (Guba & Lincoln, 1982, p. 244) and bringing *themselves* to the research situation (Merriam, 2002). The researcher cannot be separated from their moral being.

Lincoln (1995) writes of standards for quality research as being standards for ethics, and of "the dissolution of the hard boundaries between rigor and ethics" (p. 287). Tracy (2010) also writes of ethics being a key marker for excellence in qualitative research practices. Tracy (2010) distinguishes between procedural, situational, relational and exiting ethics. These four criteria are used here as a framework for discussing ethical practices related to this study.

3.4.2.1 Procedural ethics

Procedural ethics refer to the actions of large institutions (Tracy, 2010), such as universities, in the establishment of policies and procedures to ensure that research is conducted in accordance with ethical standards. This would include the ethics review boards of the two educational institutions that were involved in this study. The research proposal for this study successfully obtained clearance in accordance with the Policy on Research Ethics of the University of South Africa**.** The proposal also obtained clearance from the Research Ethics Board of Seneca College for Applied Arts and Technology, the institution that was the site for the practical portion of this study.

3.4.2.2 Situational ethics

Situational ethics refer to the ethical practices that are relevant to the circumstances and the specific context of the research (Tracy, 2010). In this study, situational ethics surround the research participants being drawn from the students at the college that was the site for the practical portion of the study. The research proceedings were conducted under stringent privacy and confidentiality rules that included no discussion with college administrators of who was participating in the study, as well as the careful storage off-campus of all documents and records related to the research.

3.4.2.3 Relational ethics

Relational ethics refer to the "ethical self-consciousness" of the researcher (Tracy, 2010). It is a measure of "mutual respect, dignity and connectedness between researcher and researched" (Ellis in Tracy, 2010, p. 847). It includes reciprocity "wherein parties to the research effort and their relationships [are] marked by a deep sense of trust, caring and mutuality" (Lincoln, 1995, p. 284). In this study, the researcher was particularly aware and constantly mindful of relational ethics. As a teacher at the college that was the site of the practical portion of this study, and where the participants are students, the researcher is already in an established position of authority. Keen attention was paid to honouring the research relationship and maintaining a relationship of trust with the research participants. This involves what Tracy (2010) terms "ethics of care", and what Merriam (2002) talks of as affording the participants "protection from harm".

3.4.2.4 Exiting ethics

Exiting ethics apply to how the researcher "leaves the scene" of the research (Tracy, 2010). In this study, the individual interviews at the end of the data collection process served as an opportunity to practise strong exiting ethics. The research participants were given the opportunity for a one-on-one private interview with the researcher during which participants were encouraged to ask questions about any concerns they may have about the study or about any aspect of the research process. These exit interviews also provided the researcher an opportunity to express her gratitude to the participants for their invaluable contribution to the study. The debriefing, wrap-up and closure afforded by these interviews allow for the important practice of exiting ethics, which are adhered to in this study.

3.4.2.5 Ethical safeguards in this study

In adherence to sound ethical research standards, the following conditions and safeguards were put in place during this study:

1. In the spirit of full disclosure, participants were fully informed of the nature and purpose of the study prior to the study commencing.
2. Participants signed an Informed Consent form before the study commenced (see Appendix C).
3. All participants, by their own volition, volunteered to participate in the study.
4. Participants were informed that they could leave the study at any time without fear of any negative consequences.
5. Participants were informed that the study involved the practice of meditation.
6. There are no known risks involved in the practice of meditation.
7. The identity of participants has been protected from college authorities.
8. Participants were informed prior to the start of the study that the study would take place in a small group setting.
9. All personal and biographical information of the participants is kept confidential.
10. Audio recordings of the focus group sessions and the final individual interview sessions are stored on the researcher's personal computers at a private location away from the college.
11. In all transcribed data, the identity of each participant is coded to ensure anonymity.
12. The nature of the study is non-sectarian. No reference is made to any organised religion with a view to promoting that religion.
13. The final interviews also function as debriefing sessions (Tesch, 1977) during which participants were given the opportunity to privately and confidentially ask questions of the researcher and receive answers about all facets of the study.

3.5 CHAPTER SUMMARY

In this chapter, the research methodology for this qualitative research study has been presented. The purpose of the study is to explore the subjective experience of the phenomenon of meditation with a group of novice meditators. Working within the framework of naturalistic inquiry, a phenomenological approach provides the most appropriate qualitative research approach to reveal the essence of the phenomenon of meditation as *lived* experience. The research sample was gathered using a convenience sampling method. Participants volunteered for the study by self-identifying as experiencing stress in their daily lives.

In order to gather data for this inquiry, a research design has been implemented using a multiphase data collection process. A 4-week meditation program is at the centre of this investigation. The research participants were organised into four groups based on their individual timetables. Each group attended a weekly meditation session. Immediately after each meditation session, a focus group was conducted during which participants described their subjective experience of meditation. Individual interviews were conducted at the end of the meditation program. The Perceived Stress Scale (PSS-14), a pre-constructed tool, was used to monitor changes in perceived stress over the course of the meditation program.

The data analysis process followed in this study includes steps associated with more formal phenomenological data analysis (Giorgi, 2012; Moustakas, 1994), together with additional steps that include the use of computer software for electronic coding. Emerging meaning clusters were organised and the key constituents of the phenomenon of meditation according to the research participants in this study were carefully constructed and checked and re-checked against the raw data.

Quality assurance was a crucial aspect of the research process. A number of steps were taken to build rigour and promote trustworthiness. The efforts taken to ensure ethical conduct throughout the research proceedings have been described. The findings of this study are presented in the next chapter.

CHAPTER 4
RESEARCH FINDINGS

4.1 INTRODUCTION

In this chapter, the findings of this research study are presented. The findings are presented in the chronological order in which the data were collected. The pre-study PSS-14 scores are presented first, followed by the findings from the focus groups and the individual exit interviews. The post-study PSS-14 scores are presented last.

For the purposes of confidentiality, the research participants' identities have been protected by the use of a coding system. A coded nametag has been used for each participant. The coded nametag includes a # plus a number. (See Table 3.3 on p. 72.) This coding system is used consistently throughout this report.

Of the 19 students who began the study, 17 students successfully completed the study. Successful completion of the study is defined as attending a pre-study meeting with the researcher during which the pre-study PSS-14 was completed, attending at least three of the four meditation sessions and focus groups, as well as attending a post-study individual interview during which the post-study PSS-14 was completed.

The data gathered from all 19 students who commenced the study are included in the focus group findings unless otherwise specified. As two sets of PSS-14 scores were required for analysis, only the data from the 17 students who successfully completed the study and provided both pre-study and post-study PSS-14 scores have been included here.

4.2 PRESENTATION OF THE RESEARCH FINDINGS

The research findings will now be presented in the chronological order in which they were gathered beginning with the pre-study PSS-14 scores.

4.2.1 Pre-Test PSS-14 Scores

The pre-study PSS-14 scores for the 17 research participants who successfully completed the research study and provided sets of both pre-study and post-study scores are presented in Table 4.1 below.

Table 4.1

The Pre-Study PSS-14 Scores for the Research Participants

Participant	Pre-Study Score
#1	27
#2	22
#3	38
#4	25
#5	30
#6	42
#7	32
#8	19
#9	32
#10	19
#11	25
#12	34
#13	11
#14	25
#15	13
#16	35
#17	21
Mean	26.47

Descriptive statistics with regard to the pre-test PSS-14 scores of the research sample show the following data:

N = 17

Range = 11 to 42

Mean = 26.47

Median = 25

Mode = 25

It should be noted that the PSS-14 is not a diagnostic tool, so there are no cut-offs for what may be regarded as low, medium or high levels of perceived stress (Cohen et al.,1983). "There are only comparisons between people in [the research] sample" (Cohen et al., 1983, p. 393).

4.2.2 The Research Findings From the Focus Groups

Focus groups were conducted immediately following each meditation session. The focus groups were audio recorded, as were the individual exit interviews. After the audio recordings of the focus group discussions and the individual interviews were transcribed and analysed, the researcher became actively immersed in the data. After multiple readings of the data and other careful and thoughtful analysis and synthesis procedures, patterns emerged from the data. The patterns were coded, organised and structured revealing 12 key constituents of the experience of the phenomenon of meditation.

4.2.2.1 The key constituents

The themes that emerged from the participants' reports of their experience of the phenomenon of meditation make up the "key constituents" of the experience (Giorgi, 2008), and the relationship between them comprise the "moving parts" of the phenomenon (Giorgi, 2008). The twelve key constituents are as follows:

- *Relaxing*
- *Pleasant experience*

- *Distracted by thoughts*
- *A state between sleeping and waking*
- *Itches/tingles*
- *Feeling as if in a different place*
- *Time distortions*
- *Feeling heavy*
- *Body perception changes*
- *Feeling as if all alone*
- *Feeling light*
- *Other unusual sensations and perceptions*

4.2.2.1.1 Matrix display of the data summary

The matrix display of the data in Table 4.2 lists each of the themes or key constituents, along with which participant reported experiencing each key constituent of the phenomenon.

Table 4.2

Matrix Display of Participants' Responses With Regard to the Twelve Constituents of the Experience of the Phenomenon of Meditation

Participant	Relaxed	Pleasant	Distracted By Thoughts	Between Sleeping/ Waking	Unusual Sensations/ Perceptions	Itches/ Tingles	Different Place	Time Distortions	Feelng Heavy	Body Perception Changes	All Alone	Feeling Light
#1	X	X	X	X	X		X	X	X	X	X	X
#2	X	X	X	X	X	X	X		X	X	X	X
#3	X	X	X	X	X	X			X			X
#4	X	X	X	X	X	X			X			
#5	X	X	X		X	X	X	X			X	
#6	X	X	X	X		X						X
#7	X		X	X	X		X	X			X	
#8	X	X	X	X		X	X	X	X	X	X	
#9	X	X	X	X	X	X	X	X	X	X	X	
#10	X	X	X	X		X	X	X	X			
#11	X	X			X	X	X	X		X	X	
#12	X	X	X	X	X	X	X		X	X	X	
#13	X	X	X	X	X			X	X	X		X
#14	X	X	X	X	X		X	X		X		X
#15	X	X	X	X	X	X	X				X	
#16	X	X	X	X	X	X		X	X	X		X
#17	X	X	X	X	X	X		X	X	X		
Proportion	17/17	16/17	16/17	15/17	14/17	13/17	11/17	11/17	11/17	10/17	9/17	7/17
Percentage	100.00%	94.12%	94.12%	88.24%	82.35%	76.47%	64.71%	64.71%	64.71%	58.82%	52.94%	41.18%

Quantifying and summarising respondent data in table form or as a matrix display (Bazeley, 2009) can assist the qualitative researcher and the reader to view

complex data in a reduced and structured manner (Bloomberg & Volpe, 2008). A matrix display can help both the researcher and the reader detect patterns in qualitative data as well as facilitate a comparative analysis of research data (Bazeley, 2009). It can also help orient the researcher and the reader to significant research findings.

As Sandelowski (2001) notes, counting in qualitative research can help the researcher to: a) see the data in new ways; b) sharpen the focus on key findings; c) simplify extensive amounts of information; and d) clarify meaning. It assists both the researcher and the reader to "see more" with regard to the characteristics of the research sample and the data (Sandelowski, 2001).

Constructing a matrix display of the data summary in Table 4.2 provided the researcher with invaluable assistance to see 'the wood for the trees, and the trees for the forest' within a vista of complex qualitative data.

4.2.2.1.2 Proportion of research participants that reported experiencing each of the twelve key constituents

The main themes or key constituents of the experience of meditation that emerged from the data are listed below in Table 4.3 along with the proportion of the research sample that reported experiencing each key constituent. This information was drawn from the matrix display presented above in Table 4.2.

4.2.2.2 Verbal reports of the key constituents

With regard to the verbal descriptions provided by the research participants and presented below, there has been a strong commitment to edit as little as possible. This has been "balanced against issues of readability, issues of confidentiality and ethical practice...[so that] people's own voices be heard" (Cordin & Sainsbury, 2006, p. 18). It should be noted that when ellipses are used within participant quotations, the ellipses indicate that the speaker paused or used trailing dialogue

while thinking about what to say next (Cordin & Sainsbury, 2006; McLellan, MacQueen, & Neidig, 2003).

Table 4.3

Proportion of Participants That Experienced Each of the Twelve Key Constituents of the Experience of the Phenomenon of Meditation*

1.	All participants (17 of 17, or 100%) found meditation to be relaxing.
2.	Almost all participants (16 of 17, or 94%) described it as a pleasant experience.
3.	Almost all participants (16 of 17, or 94%) reported being distracted by thoughts during meditation.
4.	Almost all participants (15 of 17, or 88%) described meditation as similar to a state between sleeping and waking.
5.	The vast majority of participants (14 of 17, or 82%) experienced unusual sensations and perceptions during meditation.
6.	The majority of participants (13 of 17, or 76%) experienced sensations that they described as itches and/or tingles.
7.	The majority of participants (11 of 17, or 65%) felt like they were in a different place during meditation.
8.	The majority of participants (11 of 17, or 65%) experienced a distortion in their sense of time.
9.	The majority of participants (11 of 17, or 65%) described feeling heavy or having parts of their body feel heavy during meditation.
10.	Over half of participants (10 of 17, or 59%) felt like they lost touch with their bodies or that the boundaries of their bodies disappeared during meditation.
11.	More than half of participants (9 of 17, or 53%) felt like they were somewhere all on their own despite being surrounded by other people.
12.	Almost half of participants (7 of 17, or 41%) experienced a feeling of lightness during meditation.

* of the 17 participants who successfully completed the study.

The twelve key constituents of the experience of the phenomenon of meditation that emerged from the responses provided by the research participants are presented below. Responses from the two participants who did not successfully

complete the study, participants #18 and #19, have also been included where appropriate.

4.2.2.2.1 Relaxing/calming

All of the participants (17 of 17, or 100%) found meditation to be relaxing.

The dominant theme that emerged from participants' responses was that meditation was experienced as a relaxing and calming activity.

> #7 *Relaxing and calming and peaceful.*

Some reports were more effusive.

> #14 *I feel very relaxed, very, very, very relaxed. I feel very comfortable.*

Some participants were less effusive.

> #17 *I feel a bit more relaxed, I guess. Just a lot quieter...I just feel kind of mellow, kind of thing...content, peaceful...*

A participant was surprised at being able to relax during meditation in spite of her emotional state.

> #6 *I was honestly just shocked that I was able to relax because I was like fuming two minutes before I walked in here, like livid, you know. I have been pretty much livid the whole day, to be honest.*

The relaxation aspect of meditation was compared to the relaxation aspect right before the point of being hypnotised:

> #10 *During my first year I volunteered for a hypnotist show and I felt that while we were doing the meditation, it was sort of the same feeling like deep relaxation right before the point when you are actually hypnotised.*

The progressive nature of becoming relaxed during meditation, of initially being bothered by thoughts that slowly quietened as the meditation session continued, was also reported.

#16 Eventually I calmed down and I felt relaxed.

4.2.2.2.2 A pleasant, positive experience

Almost all participants (16 of 17, or 94%) described meditation as being a pleasant experience.

#17 I just felt really good.

#10 It was good. It felt good.

#5 It was really nice and calming.

#2 That was really good...(laughs softly). Yah, I didn't want to come out of it...(pauses). My body was fighting back against it, saying, no, stop, let me stay...

#17 Yah, I am looking forward to next week...it was a good experience.

#8 Same for me...it was a pleasant experience for me.

4.2.2.2.3 Distracted by thoughts

Almost all participants (16 of 17, or 94%) reported that they were distracted by thoughts during meditation.

A primary component of the practice of meditation is learning to calm the mind by quieting the ongoing cascade of thoughts that the mind generates (Kabat-Zinn, 1990; Santorelli, 2000). Meditation training involves becoming acquainted with the mind and developing an intimate awareness of the constant stream of thoughts the mind produces as part of the thinking process (Kabat-Zinn, 1990).

Below is an interaction between two participants as they share their experience of the thought-producing process of the mind:

#9 *What I realised was that it was like bursts of thoughts. You're thinking about one thing and then the next thing. You don't stay too long on it, and the next minute you trail to another thought, and, it's another shot! Like, why did I think of that? And then it just goes, and then it's onto something totally different. It doesn't linger. It just pops in and goes.*

#4 *Yah, random thoughts.*

#9 *Random thoughts...*

#4 *One from the past, one from the future...*

#9 *And you don't really do it, it just pops in your head, okay, and then it goes!*

#4 *I think this is the ability of the brain, that it has so many thoughts.*

#9 *It wants to think, and then we try and force it to relax and it just shoots a spark!*

Other participants also commented on the random nature of their thoughts during meditation:

#14 *Random thoughts... I thought about school, about my girlfriend, about my shower at home, some stuff that I have to do...*

#17 *It was just hard to relax. It would just be like random thoughts coming into my head, like oh, I saw my friend the other day, I wonder what he's doing...and then it just leads onto something else...and there is just this chain of thoughts...*

#19 *It was like random, stray, everyday thoughts, like what I was watching on TV today, stuff like that, total random stuff.*

The constant distraction of the meditator's own thoughts is a challenge to calming the mind during meditation. Participants described the struggle as follows:

> #16 *It was weird...because my thoughts...they just kept coming and coming and I just kept trying to go back to being relaxed.*
>
> #10 *My mind still felt that for some reason it could just keep on going, so I couldn't really relax much.*
>
> #14 *I spent most of the time fighting all these thoughts, like random thoughts, incoherent thoughts, and I was like, okay, I don't want to think about that, and after two seconds I was thinking about them again! I spent almost all the time fighting with those thoughts!*

Another participant shared how she devised a unique strategy to calm her thoughts and quieten her mind, similar to erasing files on a computer. This was appropriate for her as she is a technology student specialising in computer programming:

> #7 *This time I tried a new way. Because I wanted to get rid of all unnecessary thoughts, I thought of an image, that there is like some space and I have some thoughts, right. I imagined myself erasing [them] one by one, like really, graphically, like let's erase this. I tried to imagine that I am cleaning out my brain, and it was kind of helpful because now I am thinking about that, right, I am not thinking about some other thought. I am just concentrating, erasing one by one, emptying my brain.*

Another participant remarked on the change in the quality of their thoughts as they relaxed.

> #1 *It was good, it was really good because my body calmed down and I could...not control my thoughts but just let them flow very easily, like a river...it was good.*

A participant noted their surprise at their relaxed physical state in spite of their thoughts.

> #6 *It is strange because of what I was going through in my mind. I was listening to my thoughts...and it is funny because those thoughts are there, and so frequently...that I wouldn't be feeling as relaxed as I am feeling, but despite those thoughts entering my mind, the physical feeling has changed.*

4.2.2.2.4 A state between sleeping and waking

Almost all participants (15 of 17, or 88%) described meditation as being similar to a state between sleeping and waking.

> #6 *It has been a really long time since I have been able to relax and be on the verge of...what's that state when you're not sleeping but you're not awake? I don't know what the state is called. There is a specific word for it...*

The state of hypnagogia, of being between sleeping and waking, was described by other participants:

> #3 *A few times, I felt like...I don't know how to explain it...but I was like on the borderline somewhere between being...sleeping and being aware...*
>
> #2 *It was like I was dreaming...like I had no rational thought process.*
>
> #14 *By the end...I don't know if I was thinking or dreaming...because I am not sure if I was sleeping or awake...the same thing that happened to her...*

In a different session, this participant reported experiencing this state again.

> #14 *I just had a couple of thoughts, one [was] very short and the second one was the longest, and that was the one that I don't know if I was thinking or dreaming because I wasn't sure if I was awake or I was sleeping...*

A participant described the state in relation to the slowing of bodily processes.

> #1 *I didn't feel myself at all, I mean I forgot about everything, like you're falling asleep, but you are not asleep, because your heart slows and all your processes slow and you are forcing them to slow down...It is really amazing!*

A number of participants reported falling asleep.

> #7 *My kind of meditation style is I kind of fall asleep. (Laughs) I am not trying to sleep, but somehow, I start falling asleep, so I have to catch up! If I don't try to listen to your voice, I will sleep!*
>
> #15 *I was all so relaxed and it put me to sleep...I slept!*
>
> #10 *I think I probably fell asleep a couple of times. I felt myself going this way...(tilts head).*

The "going this way" that this participant was describing involves feeling like he was falling over.

Other participants also reported feeling like they were falling over.

> #17 *I felt I got a little deeper into the meditation compared to last week. A few times I think I might have been on the borderline of sleeping because I felt myself...I don't know if I was sleeping but...uhm...like these guys said, kind of falling over kind of thing...*

4.2.2.2.5 Tingles/itches

The majority of participants (13 of 17, or 76%) experienced sensations that they described as tingles and/or itches.

A participant described experiencing the physical sensation as "*a mix between a tingle and an itch*", suggesting that it was somewhat difficult to distinguish one from the other in meditation.

> #10 *I could actually feel like a kind of...a mix between a tingle and an itch, but it was at the point where it didn't really bother me, like I could feel it but, it didn't bother me.*

The tingles/itches were a source of distraction for some participants:

> #12 *One thing that I find very interesting is that every time that I try to meditate, some part of my body starts to itch, so it takes a little bit of concentration not to go and get rid of it, so it kind of is something that bothers me a little while trying to concentrate and meditate.*

One participant spoke about how placing one's attention or focus elsewhere helped to manage the itching:

> #6 *What I thought was interesting was I would frequently get little itches...you know, in different parts of my body and a few times I scratched...The other times I just ignored it and focused on my breathing and it went away. You feel like it won't go away unless you scratch it, but that is not actually true, you just have to focus on something else.*

In a subsequent session, this participant took this point further, suggesting that reacting to the distraction caused by the itching was a personal choice.

> #6 *When we get itches, we would normally just go for them, but because we are in this meditative state, because it was something that I had experienced last week, it came across more of a choice as opposed to a reaction, which was interesting.*

Other participants spoke of their decision not to scratch because of the risk of disturbing their focused, relaxed state.

> #16 *Yah, I did (feel itchy), but I didn't want to scratch because I knew if I scratched I'm going to lose my concentration so I just ignored it...*

> #15 *I was itchy here and there, but I couldn't scratch...or if I had gone to scratch, I would have disconnected myself*.

Two participants interpreted the tingling sensation as being associated with being in a deeper state of meditation.

> #17 *It felt like I went a little bit deeper and, uhm, I got a tingling kind of sensation.*

> #5 *I was all tingly at one point, but I don't know if it's just because I am tired, or if it's just a good session, I don't know.*

One of the participants experienced a tingle at the site of a previous injury.

> #2 *Physiologically, I was like really tingly, like I was feeling this tingling and then in certain parts of the body, like where I have injured myself before, I think I remembered the pain.*

4.2.2.2.6 In a different place

The majority of participants (11 of 17, or 65%) felt like they were in a different place during meditation.

A participant reported being in a space without points of reference.

> #14 *I was in this space, where you don't have a point of reference. It doesn't exist, north, south, west or east, up and down, front, back...it is just, you are there.*

The following statement from another participant is also an indication of a shifting sense of the perception of place:

> #1 *It seems like I fell down somewhere...*

Another participant remarked on the discordant experience of body and mind, of the difference between physical space and mental space.

> #10 *At one point I realised that I was actually not there, kind of...I don't know where I was, that's something that I'm still trying to figure out... but, yah, I wasn't there...I know that physically I was there...but I wasn't there.*

A participant reported that the meditative experience was like being "in a cocoon".

> #9 *At one point, uhm, I kind of drifted away, but it's almost like being in a cocoon, like kind of closed in, like you don't really hear anything, almost like a deafening silence.*

A second participant in the same group used the same metaphor.

> #1 *It was strange but my arms they grew numb a little bit, like they really became frozen for a little bit, but you're like inside of a cocoon. You're inside and you don't care what is outside. It was interesting...*

For another participant, the experience was like being transported elsewhere.

> *#15 [It was] more like me being in a place other than this...I was being transported to somewhere else...I was actually doing something else there but...I'm thinking of what word I can actually use (pauses)... teleporting, like I was being teleported...that was it...I was able to travel elsewhere [and] I was active in it.*

At a later stage, he described this experience further as follows:

> *#15 I wasn't feeling the atmosphere like here...I was like elsewhere, doing something else...Can't really describe that, that's the only thing...but I know I was busy in that place, I was...I was still hearing your (voice) but I was in a different realm...*

Another participant described a disembodied experience:

> *#13 It's like I am sleeping...or I am not in my body, just something like this, I don't know...like I am not feeling myself, just...I don't know how to say it... just like I am not in my body...Maybe like a person feels when he's in a coma...so everything goes away...It was really good, very relaxing...*

4.2.2.2.7 Feeling all alone

Half the participants (9 of 17, or 53%) described feeling like they were all alone, in spite of being surrounded by others.

> *#9 (Laughs) So in terms of your surroundings, you know that there are a lot of other people around you, but you don't get the sense that they are there with you. You get the sense that you are alone, you are by yourself.*

> *#15 You saying 'breathe in and out' took me to this other realm...I was in...more of a dark room realm though...a dark room realm where...I did not feel like I was in a room with people in it.*

> *#7 I had the feeling of sitting in this room alone. I totally forgot everyone else is around me.*

> *#12 It's a little bit strange because...usually when I start meditating, I kind of forget a little bit that I am, for example, in a place filled with people. For me it was...kind of like...as if I was alone.*

Some participants felt some emotion, some uneasiness, with feeling alone.

#11 *Fear...because I was somewhere alone...After you stopped giving some instructions, I forgot about the group...*

#2 *Like I am not here with everybody. I am just alone somewhere and it was kind of uncomfortable because I felt... it was like I was disconnected from the rest of the humans around me, so it was a little bit uncomfortable...*

4.2.2.2.8 Time distortions

The majority of participants (11 of 17, or 65%) experienced a distortion in their sense of time during meditation.

Here is a conversation regarding time from one of the sessions:

#7 *How long did we spend? Was it 15 minutes?*

*R** *It was about 32 minutes.*

#14 *Thirty-two minutes?! What?*

#16 *It didn't feel like 30 minutes...*

#7 *Really? (checking with researcher)*

#16 *How long did you feel like it was?*

#14 *Ten minutes!*

#16 *It felt short, but we did like 32 minutes!*

#7 *I am just kind of surprised. It felt only like 15 minutes.*

#14 *I think the difference is...I get bored, okay, and I get distracted very easily, okay? With one thought I just get distracted. But when you tell me that we spent like 30 minutes, that was shocking! There were a lot of thoughts, but keep in mind that I was so relaxed that I didn't notice that we spent this amount of time. For me it was like 10 minutes!*

** the researcher*

Other participants had a sense that time expanded rather than contracted during meditation.

> #17 *I guess a good surprise was that I went a little deeper compared to last week so I enjoyed that part 'cause I kind of lost track of time I think, I don't even know how long it's been, like, what was that? Forty-five minutes or...*

Some participants reported losing track of time completely.

> #5 *I had no track of time. I did not know how long we had been doing it for...*

> #11 *The same thing...with the time passing...I forgot about [the] track of time...*

This participant added later that it seemed to him that: *"In meditation, we forget about the existence of time".*

4.2.2.2.9 Body perception changes

Over half of the participants (10 of 17, or 59%) felt like they lost touch with their bodies, or that the boundaries of their physical bodies shifted or disappeared, during meditation.

> #2 *I kinda lost touch with my body. I couldn't feel it anymore...My fingers especially, because I am sitting like this, I couldn't feel my hands touching each other anymore.*

> #8 *I felt really relaxed...like my hands, they were so relaxed to the point where you don't know if you have hands anymore.*

> #1 *You feel like it is not your body...and sometimes you want to just move one finger just to realise, oh, I do still have arms...*

> #2 *I had a lot of numbness again, like usual, like I can't really feel my body anymore, so that was present this time as well...*

> #11 *I experienced something other than so-called "real" life, let's say. This time, when I meditate, it was something new. I got rid of my hands and feet... (laughs). It's like you have no...no limbs.*

> #1 *Do I have hands?...And my arms?...*

A participant described the shifting of the boundaries of the body as "melting".

> #19 *I had my hands on my legs and it's like, okay, where does one begin and the other stop? Then it's like it's just melting into itself.*

> #2 *I had my fingers together, so, I can push them together and realise that I still have a body, but it didn't work this time...I was pushing against them, but it's like I'm pushing through them...and, my feet, because I take my shoes off, it's like they're not on the floor anymore. I just can't feel anything...*

Some participants experienced being detached from their body.

> #9 *I think the thing is really [in meditation] everything is concentrated in the brain. You are actually using your brain so...it's almost as if your brain becomes somewhat detached from your limbs.*

> #1 *It is strange because it's like you are losing control...You're not losing control, but you become detached from your body and you want to go to that part and to that part, just to check, is it okay?*

4.2.2.2.10 Feeling heavy

The majority of participants (11 of 17, or 65%) described a general feeling of heaviness, or having parts of their body feel heavy, during meditation.

The following two participants reported feeling a general heaviness.

> #12 *Well, my experience for this session was that for one thing, as I was getting more and more relaxed, I kind of felt that gravity was pulling me [down]. I even started tilting my head slowly.*

> #2 *It's like I'm sinking through the chair, I'm sinking into the floor...It's like my body...like I'm not staying in one spot but I'm not moving at the same time...It's very confusing...but it's interesting.*

Here is an interaction between two participants talking about the unusual feeling of heaviness they experienced:

#9 *I also had the same feeling, but at one time, as he said, almost like a heaviness, and I was, like...Can I move?...and you can hardly move...*

#1 *You feel like it is not your body...*

#9 *And I cannot move and I [say]...Move!*

#1 *And sometimes you want to just move one finger just to realise, oh, I do still have arms!*

(Lots of laughter from the other group members in this session.)

Eight participants reported feeling heaviness in certain parts of their bodies.

#4 *I felt that my head is very heavy, [too heavy] for my neck.*

#13 *And through the whole session, I feel like a weight on my head, I don't know why...something is on my head. I feel lots of weight on my head. It was over here, like some heavy thing is on my head, and it goes over this side....*

#9 *At the end, my hands tend to be quite heavy...*

#10 *Well, I feel more relaxed. Right after we finished, I actually felt like my eyelids were heavy.*

#8 *I find like...when you meditate...like [your] mouth...just wants to drop [open] because you are just so relaxed and your tongue gets heavy...(laughs).*

#17 *I also got a feeling of heaviness as well...uhm...I can still actually feel it in my jaw. It is not as profound as it was before but my jaw kind of feels heavy.*

#4 *My hands...they feel heavy.*

#13 *Now it is okay...but I did feel heavy...around my eyes and face, but now it is okay...*

One participant described the feeling of heaviness as an anomaly.

#12 *It was really interesting, because it's kind of like feeling heavy but not heavy at all at the same time.*

4.2.2.2.11 Feeling light

Almost half of the participants (7 of 17, or 41%) experienced feeling light during meditation.

Some participants described a feeling of heaviness during the earlier part of a session, with a transition to a feeling of lightness as the session progressed. The experience of feeling light seemed to occur towards the end of the meditation session and seemed to be associated with being more deeply relaxed.

#13 *When we started, I felt like I was heavy, and I [was sinking] down in the chair for awhile, then...I feel...comfortable [and] I feel relaxed... Then, it feels like I am coming up, like I [am rising]. Everything felt very light. Just before we finished, I felt relaxed and like everything is light.*

#8 *So I felt like at first...when you first sit down on the chair you just feel heavy, and I pretty much experienced the same thing that he did, where you feel you lighten up.*

#14 *I feel when I opened my eyes...I felt a huge emptiness...okay? And it was in that moment, when I was like coming...waking up or coming back to this reality...I don't know how to say it...what I feel, I feel like without weight, I feel like someone took my weight and took it away from me.*

#2 *I feel lighter...like my arms don't feel heavy. I don't know if it's because I can't feel them very well right now...*

#16 *After the middle, I started feeling lighter, that's how I felt... Like when I was thinking about stuff, I felt heavy because of all the problems and stuff, then I started relaxing, I felt it just going away...that's how I felt.*

Some participants felt so light, they described feeling as if they were "floating", and even "flying".

#3 I felt like I was floating around.

#13 I feel so relaxed and throughout my meditation I felt like...I'm flying.

4.2.2.2.12 Unusual perceptions and sensations

The vast majority of participants (14 of 17, or 82%) experienced a wide variety of unusual sensations and/or perceptions during meditation, such as postural instability, sensations of the skin, unusual taste perceptions, distorted hearing perceptions, temperature changes, experiences of light, unusual experiences involving the eyes, and awareness of the heartbeat. These experiences are presented below.

4.2.2.2.12.1 Postural instability

A number of participants reported feeling as if they were falling over.

#13 Actually, during the session, like 5 to 6 times I felt like I nearly fell down...I don't know, like I am sleeping or I am not in my body...

#17 I felt I got a little deeper into the meditation compared to last week. A few times I think I might have been on the borderline of sleeping because I felt myself...I don't know if I was sleeping but...uhm...like these guys said, kind of falling over kind of thing...

#10 The next thing, I feel myself tipping a bit and...yeah, it was pretty good. I didn't know that I could actually get that deep, so...it was good.

#2 I was relaxed and then, finally...like, my head tilted, and I really just went!

#6 It's funny that you say that, because that is the same reason I took so long to come to, because I felt like it was taking me awhile to open my eyes...I was feeling a little spinny and whoozy...

#8 *I felt really relaxed, to the point where...if you keep your head straight, you don't know which way is straight, so you [are] kinda holding your head, like, which way is proper...?*

#2 *I think I should have waited a little longer, because when I opened my eyes, the room was doing one of these (shows a rotating motion with her hand) and I was like, wow...*

4.2.2.2.12.2 Sensations of the skin

In addition to the itches and tingles which participants described being on the surface of their skin, there was one participant who experienced "goose flesh" during meditation.

#1 *It was strange...I felt a little goose flesh...from my shoulder to my hand. The strange thing is the goose flesh followed my thoughts. I was thinking about my left hand and the goose flesh was on the left hand. If I was thinking about my right hand, then the goose flesh was on my right [hand].*

4.2.2.2.12.3 Unusual taste perceptions

#9 *One thing I do remember, was that my throat...my throat like started to itch, and that's when I swallowed a couple of times and it felt almost like soap. I had this funny taste in my mouth...and it tasted almost like soap! I just became conscious of it then, because before it never bothered me. Last week, I didn't have any problem like that! It was just weird.*

4.2.2.2.12.4 Distorted hearing perceptions

One of the participants reported that he clearly heard the sound of water dripping during one of our sessions.

#13 *I clearly heard a sound that is over there of dripping, water dripping... I heard it very loudly, like it takes all my concentration over there...*

No one else heard the sound of water dripping. The participant was insistent that the researcher should listen carefully to the audio recording because he was

certain that the sound would have recorded and that the researcher would hear it too, but there was no sound of water dripping on the recording. During the exit interview, he again mentioned the water dripping and was incredulous that no one else had heard it during the session and that the sound had not recorded as he had perceived it as being very loud.

4.2.2.2.12.5 Temperature changes

There were a number of reports of experiences during meditation that involved temperature changes.

> *#2 Yah, my hands were really warm, like I could feel them heating up, my hands, it was a very peculiar feeling...especially, because my hands are usually really cold...*

This participant experienced the sensation of warmth in her hands as a positive experience. In a subsequent session, she had a similar experience.

> *#2 I was getting a lot of heat...My hands were so warm, just randomly... If I called attention to them, they were just warm and kind of nice feeling...*

A number of participants reported feeling warmth in their hands. Here is another report of warm hands experienced along with tingling.

> *#19 In addition to the palms feeling warm and stuff like that, I got a tingling kind of sensation.*

A combination of warmth and itchiness was described by another participant.

> *#16 I experienced kind of like a warmth in different parts...I don't know what you call that...but it was like warm and itchiness, randomly, in the face...*

Focusing attention was reported to be accompanied by a "cooling sensation".

> *#17 It was kind of like a cooling sensation, uhm, like when I would breathe into...my lower back...as I would breath out it would be like a cooling sensation...*

A participant experienced a draft on his head, a flow of air in a room where there was no likelihood of a draft occurring. No other participant experienced a draft.

> *#19* *I felt like this rolling cool air over that area (moves hands over head)...so I think there was a draft...*

4.2.2.2.12.6 The experience of light

Two participants spontaneously mentioned experiencing light, or the feeling of light, during meditation.

> *#12* *It was good...but this one time I was having like lots of thoughts in my mind and all of a sudden they all went away and I noticed like a glare of light for a very brief moment, it was very soothing, very pleasant, it was a nice experience...*

> *#18* *I felt really relaxed and focused. I felt like I was thinking inside of me, somewhere in the middle (uses hands to indicate his abdomen), and I didn't see, but I felt like this white light inside of me...*

4.2.2.2.12.7 Unusual experiences involving the eyes

A number of participants reported experiences involving tears in their eyes even though they had their eyes closed, or experiencing eyelid twitches or unusual eye movements.

> *#5* *At one point...my eyes started watering and like that was weird...I don't know if that is normal...*

> *#14* *Wow, in the middle I felt like a tear come out of my eyes...*

> *#9* *I don't know why my right eye, when I closed it I could, I had a sense that it was jumping just a little bit at the bottom part or whatever...I don't know why...*

> *#11* *It was relaxing. I noticed that at the beginning my eyes didn't stop...I felt them move under my eyelids...*

4.2.2.2.12.8 Awareness of the heartbeat

The increased awareness of the body during meditation included an awareness of the beating of the heart.

#13 And then, like my breathing, like pumping in my lungs, I can feel like my heart is like pumping...

#15 It was more like me being in a dark room and I felt my heart beat...me, alone in this dark room and I could hear my heart going one thump after the other...

This participant later went further with his report.

#15 I wasn't feeling anything like I was in a room with people in it. I was feeling more like being in a dark place all by myself and my heart kept going boom, boom...

4.2.2.3 Variable nature of the experience of meditation

Rather than meditation being a consistent, predictable, uniform experience that all meditators experience in the same way, the data suggest that meditation is a variable experience. The variable nature of the meditation experience occurs: 1) for the same meditator during a single meditation session; 2) for the same meditator across different meditation sessions; 3) for different meditators.

4.2.2.3.1 Variability of experience during a single meditation session

In recounting their experiences, participants often distinguish between the beginning, middle and end of a meditation session, and then describe a range of experiences across the different stages of a single meditation session. This indicates that the phenomenon of meditation includes a variety of experiences during a single session.

#11 It was relaxing. I noticed that at the beginning my eyes didn't stop...I felt them move under my eyelids...

#2 *At the beginning...I knew my feet were touching the floor...but after a while I just lost contact with my legs...*

#14 *Wow, in the middle I felt like a tear come out of my eyes, and I didn't get distracted, I was focused on clearing my mind...but just by the end...I don't know if I was thinking or dreaming...because I...am not sure if I was sleeping or awake...*

#7 *Ah, at the beginning, and then until about the middle, I was kind of distracted...thinking about something else...and then going to the end I could focus and actually I had the feeling of sitting in this room alone. I totally forgot everyone else is around me.*

#16 *After the middle, I started feeling lighter, that's how I felt...Like when I was thinking about stuff, I felt heavy because of all the problems and stuff, then I started relaxing, I felt it just going away...that's how I felt.*

#9 *At the end, my hands tend to be quite heavy...*

#10 *I couldn't actually hear my breath as some of the others could, but I did feel that at the beginning... Actually at the end my, uh, the breath was coming in more deep and I had more control than at the beginning... At the beginning it was just, uh, it was a lot quicker than it was at the end... By the end, it was just deeper.*

4.2.2.3.2 Variability across meditation sessions as experienced by the same meditator

Participants often compared their experiences in a particular session with their experiences in another session, which illustrates that each meditation session is experienced differently.

#3 *I felt better than last time.*

#16 *I relaxed more and concentrated more...*

#12 *Compared to this one, the quality of the previous [session], wasn't so good [for me].*

#10 *I couldn't really relax as much...I was still relaxed but I wasn't as relaxed as the last session.*

#8 *For me, this session wasn't as good as the last one.*

#17 *I went a little deeper compared to last week.*

#3 *Compared to last week's session...it was totally different, because last week's session I could feel everything, I could do everything, whatever, right? But this week...I felt like I was relaxed...but...*

4.2.2.3.3 Variability of experiences between different meditators

Although the emergence of 12 key constituents of the meditation experience reveals a general meditation experience, no two participants reported experiencing the phenomenon in the same way. There was a wide variability of experiences between participants.

The research data provide no pattern of individual experiences that suggest why one participant enjoyed a particular session while another did not, or why one participant could relax deeply in a particular session and another participant could not. There were, however, clear differences in the experiences between meditators that were simply and clearly expressed.

#17 *Quite the opposite of what she said, I found that...I just didn't feel in tune with the whole session this week...*

#8 *I had a completely different experience from the two of them.*

4.2.2.4 The variable nature of the subjective experience of relaxation during meditation

Whereas all participants in this study described meditation as relaxing, the evidence suggests that the relaxed state during meditation is a variable experience. Relaxation during meditation was experienced at varying degrees by *the same meditator* during a single meditation session, to varying degrees in different meditation sessions by *the same meditator*, and to varying degrees by *different meditators.*

4.2.2.4.1 Variability of relaxation during a single meditation session

Here are responses by two participants indicating the variable and progressive nature of the experience of relaxation during meditation:

#16 *At the beginning [I was distracted by thoughts] but eventually I calmed down and I felt relaxed, that's how I felt...*

#3 *It does take me awhile to get to that point of relaxation.*

4.2.2.4.2 Variability of relaxation across different meditation sessions by the same meditator

The following responses indicate the variability of the experience of relaxation across meditation sessions:

#4 *I was still relaxed but I wasn't as relaxed as the last session.*

#2 *I was relaxed but I wasn't getting that same feeling that I had last time.*

4.2.2.4.3 Variability of relaxation experienced by different meditators

Participant responses describing their meditation experience indicated that there was a variability in the experience of relaxation by different meditators:

#12 *I kind of felt like I was getting more and more relaxed.*

#17 *It was just hard to relax.*

4.2.2.5 Participants' descriptions of the meditation experience as "difficult to describe", "weird" and similar to "being on drugs"

Participants often struggled to find the words to describe their experiences during meditation. They often remarked that their experiences were "difficult to describe", "weird", or the experience was similar to "being on drugs".

4.2.2.5.1 "Difficult to describe"

The participants found aspects of their experiences difficult to describe. They either said that it was "difficult to describe" or would say: "I don't know..."

#12 It's a weird sensation to describe...

#15 Can't really describe that, that's the only thing...

#17 I don't know...I can't describe it very well...

#13 I feel like relaxed, like everything is light and...I don't know...

#16 Everything felt like, just...I don't know...

4.2.2.5.2 "It's weird"

The term most often used by the research participants to describe the experience of meditation, or various aspects of the experience of meditation, was: "It's weird". Here is a sampling of statements that include the word "weird":

*#3 I am feeling a little **weird...***

*#16 It was **weird**...because you told us not to let the outside interfere with our thoughts but they just kept coming and coming...*

*#5 I felt like I was the only one breathing. I expected to hear everyone breathing, but...I don't know, it was **weird**...*

*#9 I had this funny **weird** taste, like soap. I don't have it now but I was very conscious of it then...yah...it was just **weird.***

*#2 After a while I just lost contact with my legs and, like I said, my hands...it was like my fingers were pushing through each other, like there was nothing there...it was **weird**...*

*#12 Actually, it's **weird**, because it feels like...it is not particularly like your body is heavy, but since I was feeling like I was being pulled down, ah, that is why I associated it with gravity...but it is not...uh...but it didn't feel heavy at all...*

*#1 It was more specific...because you really feel like you want to check the finger, one finger just...it's kind of **weird**...*

#3 *I felt my breathing actually expanding my face and I was kind of laughing about it because it was **weird**...*

#17 *It wasn't necessarily that I was feeling sick but it was just like a **weird** butterfly-ish kind of feeling in my stomach...*

#12 *I don't know...like, it's a **weird** sensation to describe...*

#5 *At one point...my eyes started watering and like that was **weird**.*

#3 *I felt like this **weird** kind of feeling in my head...like space coming back in.*

#10 *It was **weird**...Like I know I am here but...I was somewhere else...*

The liberal use of the word "weird" attests to the unusual nature of the various aspects of the meditation experience.

4.2.2.5.3 "Like being on drugs"

During a focus group, two participants described the experience of meditating like being on drugs. Meditation was compared to being high on marijuana.

Here is a brief interaction between two participants about feeling "stoned".

#2 *I think I went somewhere... That was really, really awesome for sure...*

#6 *Yah, I feel kind of stoned.*

#2 *(laughs) Yah, exactly!*

#6 *In my body, I still feel very relaxed... Whatever is going on here is affecting the body...*

#2 *Normally, I am pretty grounded, but right now, I kind of feel like I am floating. I kinda lost touch with my body. I couldn't feel it anymore. It was a very...sort of...like...freeing...a very freeing experience, for sure.*

4.2.2.6 Additional findings from the focus groups

Additional findings emerged from the data that are noteworthy. These additional findings include: 1) negative experiences; 2) awareness of the mind. These additional findings are outlined below.

4.2.2.6.1 Negative experiences

Although almost all the research participants spontaneously described meditation as being a pleasant experience, there were reports of some negative experiences. The term "negative experience" is used here to include any reported unpleasant experience, no matter how briefly experienced, that was associated with meditating. These reports included: 1) heaviness experienced as unpleasant; 2) feeling sick; 3) feeling pain; 4) feeling fear; 5) feeling agitated; 6) feeling frustration and anger.

4.2.2.6.1.1 Heaviness experienced as unpleasant

#1 First, it's like...this sensation usually passes, for me, but this sensation of heaviness is really unpleasant...It comes and then it goes, the deeper you are falling, then it goes...

4.2.2.6.1.2 Feeling sick

*#17 I don't say I felt sick, but a kind of odd feeling in my stomach kind of thing...but then I started concentrating more on my breathing... It wasn't necessarily that I was feeling sick but it was just like a weird butterfly-ish kind of feeling in my stomach. I am not going to over-exaggerate it. It wasn't like, oh, I am going to like vomit or something like that...but there was a little weird kind of sensation and that was a little surprising**...***

4.2.2.6.1.3 Feeling pain

#7 Actually, I was having a little bit of pain in my neck because I'm on computer lots, like oh, my neck hurts, my neck hurts...that's all I thought. I did not think of anything else.

#4 My foot hurt and...some part of my body started to itch... That is what happens when I want to sleep!

This participant experienced pain in two different sessions:

> #13 *Something that I feel from the last two [sessions]...when we start meditating, my stomach starts aching...I don't know why...a strange pain. Still I am feeling it [now].*

> #13 *I could feel pain in my back, and then I feel pain in my arm, and my stomach was aching, I don't know what that was...but I didn't feel comfortable this time.*

The following quotes are from a participant who experienced brief twinges of pain at the sites of previous injuries.

> #2 *Physiologically, I was, like really tingly, like I was feeling this tingling and then certain parts of the body, like where I have injured myself before, I think I remembered the pain...*

> #2 *Where my tonsils used to be, it's just like, on one side though only, it was hurting, and then it went away, and that was just really random...*

4.2.2.6.1.4 Feeling fear

"Scary" was how a participant described a brief experience of distorted space perception.

> #16 *I felt like tingles in my hands, like I was telling you, and for a minute, I felt like everything was getting smaller, it wasn't that long but it was kind of scary...I don't know what that is called...*

A participant used the term "scared" in relation to the feelings of heaviness and numbness she was experiencing.

> #9 *And I cannot move and I like...Move! And I feel...there was one point that I got a little bit scared of it, okay!*

A second participant felt "scared" in relation to the unusual aspects of the experience.

> *#1 It is really interesting... It's not about thoughts, it is about like how far your body can go because...but it is a little unusual and it made me scared, because I woke up suddenly and I started breathing deeply like, okay, what is going on...a sense of panic, actually. I am not used to it. But it is so cool, I want to try it again, actually... Okay, let's do it now.*

A participant expressed fear at perhaps losing his sense of time during meditation.

> *#11 I am afraid I will lose the notion of time if I go too deep...*

The same participant also expressed fear in relation to the experience of feeling all alone during meditation.

> *#11 Fear...because I was somewhere alone... After you stopped giving us instructions, I forgot about the group...*

Another participant reported feeling uncomfortable with the awareness of being alone during meditation.

> *#2 Like I am not here with everybody. I am just alone somewhere and it was kind of uncomfortable because I felt...it was like I was disconnected from the rest of the humans around me, so it was a little bit uncomfortable...*

4.2.2.6.1.5 Feeling agitated

While the rest of the members of her group were reporting feeling relaxed, a participant reported feeling agitated.

> *#3 I felt more, like, agitated. I don't know why... I tried to go back to the breathing...I was doing that, but it was still not working for me... Perhaps because I was thinking, why am I getting agitated? This is not supposed to be happening... It was in my chest...like when you get an anxiety attack.*

4.2.2.6.1.6 Feeling frustrated and angry

The challenge of trying to calm the mind of thoughts left some participants feeling frustrated and angry.

#6 It's kind of surprising to me that I was able to be relaxed at all because, trust me, the chatter was in my mind... First it started off really loud in the beginning, and I was getting a little frustrated, because it didn't seem like it was going to go away.

#13 I tried...and I feel some anger because I was not able to concentrate, and after a while...it feels...like a barrier inside...and I was not able to concentrate for the whole session.

4.2.2.6.2 Awareness of mind

The following are observations reported by participants about a growing awareness of mind as a result of practising meditation.

#2 So, apparently my brain is a pocket dimension. It is bigger on the inside than the outside...

#11 [It is] without edges... Maybe my mind is very big...because I cannot go to the edge...but it isn't something that has a shape or surface, or that you can go to the edge and see...

#12 I got a sense of emptiness...but no borders... It's kind of an interesting feeling because it is like having two bodies – one that you are aware of, that you are conscious that you have a body...but it is as if the mind has a body of its own and it's inside this empty, endless space...that is the feeling I had.

#14 I realised that (this internal) space is endless, okay. I realised that I could go deeper and deeper and deeper, and it is a huge place and that is kind of exciting because...I don't know...I am curious about that.

#1 First you have to switch off your body...I mean it comes naturally... It doesn't disturb you anymore...and you're falling, like you are completely inside your mind, and your mind is open to the universe, it is an amazing state! I felt very light here at the top of my head and I completely did not feel my body...like when you are unconscious.

4.2.3 Findings From the Exit Interviews

No additional key constituents emerged from the exit interviews. Rather, there were notable verbal descriptions that further elucidated constituents of the experience of meditation that had already been established from data collected in the focus groups: 1) being in a different place; 2) like being on drugs.

4.2.3.1 Being in a different place

In describing the discordant experience of mind and body during meditation, a participant described the experience of being in a different place during meditation as being in a "sub-world".

> #9 *Okay, so you have this sense...how should I say it...I guess the conscious [mind] knows that you are here, but the sub-conscious I guess is somewhere else. I guess that is how you would put it, I think. One sense knows that you are still here at all times, you are physically here...but then we are actually in this sub-world where it is different.*

4.2.3.2 Like being on drugs

In the first verbal description, a participant talks about perception being altered during meditation.

> #12 *I don't know if I mentioned this before, but this one time I was meditating and for a brief moment I felt like my mind was expanding, but it was very quick, like one or two seconds, and then it was like...it felt like I was able to tap into my unconscious...but it was so brief... I even felt a little bit frustrated when I stopped having that feeling. I was like, oh my god, I was getting there... It's kind of like being on drugs, having an altered state of perception...that's how it felt...but only once...very brief. If I could hold onto it...I think I would have had some sort of insight about my own life, or even something greater, like my place in the universe or... That is the impression I had, that I could learn something very valuable with that...*

A participant shared the following experience of using the drug, Ecstasy, and having similar feelings during meditation:

#3 *When I was younger, this might be too much information, but I used to dabble in the party scene… There is a particular experience when I knew I was getting to a certain point...and I felt the same way meditating, like it would start at my feet and work its way up my body... It was Ecstasy, right? So I always knew when I was starting to get up there because I would always feel it in my feet first...and then it would like go through to my head...but it was the exact same feeling that I got here... I could even feel my breathing going in and out of my nostrils, and that is how I knew I was at a certain point... I could feel everything... I was fully aware of the moving in and out process...like the breathing. My chest was going up and down. I could like feel it in my chest, kind of thing, instead of just knowing that it was going up and down, so this was cool...but more like a tingly feeling...*

4.2.4 Post-Test PSS-14 Scores

The post-study PSS-14 scores for the 17 research participants who successfully completed the research study and provided a set of both pre-study and post-study scores is presented in Table 4.4 below.

Table 4.4

The Post-Study PSS-14 Scores for the Research Participants

Participant	Post-Study Score
#1	18
#2	16
#3	22
#4	25
#5	18
#6	29
#7	34
#8	16
#9	19
#10	20
#11	20
#12	33
#13	13
#14	20
#15	13
#16	32
#17	19
Mean	21.59

Descriptive statistics with regard to the post-test PSS-14 scores of the research sample show the following data:

N = 17

Range = 13 to 34

Mean = 21.59

Median = 20

Mode = 20

4.2.5 Differences Between the Pre-Study and Post-Study PSS-14 Scores and Testing for Significance

Table 4.5 below shows each participant's coded nametag, along with their pre-study and post-study PSS-14 scores and the difference between the two scores.

Table 4.5

The Pre-Study and Post-Study PSS-14 Scores and the Differences Between the Scores for the Research Participants

Participant	Pre-Study Score	Post-Study Score	Difference
#1	27	18	-9
#2	22	16	-6
#3	38	22	-16
#4	25	25	0
#5	30	18	-12
#6	42	29	-13
#7	32	34	2
#8	19	16	-3
#9	32	19	-13
#10	19	20	1
#11	25	20	-5
#12	34	33	-1
#13	11	13	2
#14	25	20	-5
#15	13	13	0
#16	35	32	-3
#17	21	19	-2
Mean	26.47	21.59	-4.88

The scores were entered into SPSS®, a statistical software program created for use in the social sciences. There was a significant difference in the scores for the pre-test (M=26.47, SD=8.54) levels of perceived stress and the post-test (M=21.59, SD=6.69) levels of perceived stress; t (16)=3.49, p=0.003. These results indicate that, as a group, there was a statistically significant change in perceived stress over the course of the short-term meditation program.

4.3 CHAPTER SUMMARY

The purpose of this study is to explore the subjective experience of meditation with a group of novice meditators in order to better understand the phenomenon of meditation. This chapter covers the findings of this research study.

The research findings were presented in the chronological order in which they were collected. The pre-study PSS-14 scores were presented first, followed by the findings from the focus groups, then the findings from the individual interviews, and ending with the post-study PSS-14 scores.

Twelve key constituents of the experience of meditation emerged from the verbal descriptions provided by the research participants during the focus groups. The twelve constituents are: *relaxing; a pleasant experience; being distracted by thoughts; a state between sleeping and waking; itches/tingles; feeling as if in a different place; time distortions; feeling heavy; body perception changes; feeling as if all alone; feeling light; and other unusual sensations and perceptions.*

Additional research data gathered from the participants' verbal descriptions were also presented, including reports of negative experiences.

Also presented are data providing evidence of the variable nature of meditation and the variability in the subjective experience of relaxation during meditation.

No additional constituents emerged from the exit interviews, but notable verbal descriptions provided during the exit interviews broadened descriptions provided during the focus groups concerning *feeling like being in a different place* and the meditation experience being similar to *being on drugs*.

The post-study PSS-14 scores were then presented. This was followed by a listing of the differences between the pre-study and post-study PSS-14 scores for each participant. The chapter ends with the result of the test for significance of the pre- and post-study scores.

These findings are discussed in the following chapter, Chapter 5.

CHAPTER 5

DISCUSSION OF THE RESEARCH FINDINGS

5.1 INTRODUCTION

In this chapter, the findings of this research study are discussed. The discussion begins with an examination of the research findings from the focus groups followed by the individual exit interviews. The pre-study and post-study PSS-14 scores, as measures of change in perceived stress over the period of this study, are then discussed. This chapter ends with a discussion of the findings in relation to meditation as an altered state of consciousness.

5.2 DISCUSSION OF THE FINDINGS FROM THE FOCUS GROUPS

In Table 5.1 below, the key constituents that emerged from the focus groups are presented in Column 1. The key constituents reported in the phenomenological studies of Walsh (1977, 1978), Kornfield (1979), Gifford-May and Thompson (1994), and Travis and Pearson (2000) are shown in Columns 2 to 5. In Column 6, the characteristics of altered states of consciousness according to Ludwig (1969) are included for comparison purposes and will be discussed later in this chapter.

This table shows that all 12 key constituents that emerged from the focus groups in this research study have confirmed findings of constituents in the other studies. However, no other single study documented all 12 constituents that were identified in this study.

Table 5.1

The Key Constituents of the Experience of Meditation That Emerged From the Focus Groups and Other Studies of the Phenomenology of Meditation

1	2	3	4	5	6
Key Constituent	Walsh 1977 1978	Kornfield 1979	Gifford-May & Thompson 1994	Travis & Pearson 2000	Ludwig ASCs 1969
Relaxed, calming	X	X	X	X	
Pleasant feeling	X	X	X		
Stream of random thoughts provides ***ongoing distraction***	X				
A general feeling of ***heaviness*** or ***heaviness*** in particular parts of the body, like the hands, arms, jaw		X			X
Itches and/or tingles	X	X			X
A state similar to being between asleep and awake with a dreamlike quality	X				X
Body perception changes with ***the boundaries of the body melting or disappearing*** or a feeling of being disembodied		X	X	X	X
Other ***unusual sensations and perceptions*** such as sensory hallucinations involving taste, hearing, temperature changes	X	X	X		X
Feeling as if ***in a different place***	X		X	X	
Feeling ***all alone*** even when surrounded by others	X	X			
Distortions in the sense of time with time slowing, or accelerating, or a sense of timelessness		X		X	X
A *feeling of* ***lightness***	X	X			X

The findings from the focus groups will now be discussed with reference to the findings of the phenomenological studies of Walsh (1977, 1978), Kornfield (1979), Gifford-May and Thompson (1994) and Travis and Pearson (2000), as listed in Table 5.1 above.

5.2.1 Discussion of the Verbal Reports of the Key Constituents That Emerged From the Focus Groups

Each of the key constituents is discussed below along with selected quotes provided by the research participants during the focus groups.

5.2.1.1 Relaxing/calming

All participants described meditation as a relaxing activity.

> *#7* *Relaxing and calming and peaceful.*
>
> *#14* *I feel very relaxed, very, very, very relaxed. I feel very comfortable.*
>
> *#17* *I was honestly just shocked that I was able to relax because I was like fuming two minutes before I walked in here, like livid, you know. I have been pretty much livid the whole day, to be honest.*

Walsh (1977) described experiencing a *"sense of peace"* (p. 153) and feeling *"peaceful, relaxed and safe"* (p. 164) during meditation. Kornfield (1979) lists *"calm"* (p. 50) and *"peace"* (p. 50) as being reported by the research participants in his study.

Gifford-May and Thompson (1994) report a participant in their study describing meditation as a relaxed, calm state, *"a deep sense of calm...with stillness"* (Gifford-May & Thompson, 1994, p. 128), and include a participant's description of feeling like they were "*at the bottom of a very still, clear pond"* during meditation (p. 127). Another participant described meditation as a "*calming of the mind*" (Gifford-May & Thompson, 1994, p. 128). The feeling of calmness during meditation was so positive for one particular participant that *"it was enough to motivate him to meditate for the rest of his life"* (Gifford-May & Thompson, 1994, p. 134).

Travis and Pearson (2000, p. 81) named one of three themes that emerged from their data *peaceful*. Travis and Pearson (2000) unfortunately include only one

quote in the report of their study. That quote describes the research participant feeling "*at peace"* (Travis & Pearson, 2000, p. 81) during meditation.

Considering the neurological substrate of meditation, that is, the engagement of the parasympathetic nervous system (Cahn & Polich, 2006) and its physiological calming effects, it is understandable that meditators would experience meditation as relaxing/calming.

As can be seen in Table 5.1, the findings of Walsh (1977, 1978), Kornfield (1979), Gifford-May and Thompson (1994), and Travis and Pearson (2000) all corroborate this study's findings that meditation is a relaxing, calming experience. However, relaxation is not a general characteristic of altered states of consciousness, according to Ludwig (1969).

5.2.1.2 A pleasant, positive experience

Almost all research participants in the present study (16 of 17, or 94%) described meditation as a pleasant, positive experience.

#17 *I just felt really good.*

#17 I am looking forward to next week... It was a good experience.

#5 It was really nice and calming.

The pleasant, positive aspects of the experience of meditation are experienced both physiologically and emotionally. Gifford-May and Thompson (1994) report *positive emotion* as one of the three constituents that emerged from their study. Participants in their study describe meditation as a relaxing and calming experience, as noted above, and also describe experiencing joyousness and laughter during meditation, *"a state of intense pleasure"* as one of their participants noted (Gifford-May & Thompson, 1994, p. 129).

Gifford-May and Thompson (1994) make several references to their research participants feeling bliss and joy during meditation (pp. 128-129). Kornfield (1979) created a category labelled *rapture and bliss* to accommodate reports from his participants who experienced bliss and joy (Kornfield, 1979, p. 49), while Walsh (1978) describes meditation as *"an inherently beautiful and rewarding process"* (Walsh, 1978, p. 24).

Bliss, which may be regarded here as intense pleasure, was not reported by any of the participants in the present study. This suggests that feelings of bliss may be an experience of more seasoned meditators rather than novice meditators, as in this research study.

5.2.1.3 Distracted by thoughts

Almost all participants (16 of 17, or 94%) reported that they were distracted by thoughts during meditation.

The major challenge during meditation is to focus attention on the mantra or the breath and train the mind to quieten the ongoing bombardment of thoughts that naturally occurs during the waking state (Kabat-Zinn, 1990; Maharishi Mahesh Yogi, 2001). The participants in the present study also faced the challenge of a constant stream of thoughts:

> *#17* *It would just be like random thoughts coming into my head, like oh, I saw my friend the other day, I wonder what he's doing...and then it just leads onto something else...and there is just this chain of thoughts...*
>
> *#10* *My mind still felt that for some reason it could just keep on going, so I couldn't really relax much.*

Walsh (1977) writes of experiencing *"a frantic torrent of forceful, demanding, loud, and often unrelated thoughts"* (p. 154) that proved distracting during meditation. Although thoughts and thought processes were mentioned in all of the

phenomenological studies under review here, none of the other authors specifically mentioned the distracting nature of thoughts during meditation.

5.2.1.4 A feeling of heaviness

The majority of participants (11 of 17, or 65%) described a general feeling of heaviness, or having parts of their body feel heavy, during meditation.

The reports were of a general feeling of heaviness, for example:

#9 *I also had the same feeling, as he said, almost like a heaviness.*

Some participants experienced heaviness in certain parts of their bodies.

#4 I felt that my head is very heavy.

#17 My jaw kind of feels heavy.

#9 *At the end, my hands tend to be quite heavy.*

Of the other studies reviewed here, only Kornfield (1979) reports research participants experiencing heaviness during meditation: *"felt body heavily pulled in all directions"* (Kornfield, 1979, p. 46).

5.2.1.5 Itches and/or tingles

The majority of participants in this study (13 of 17, or 76%) experienced sensations that they described as tingles and/or itches.

#10 *I could actually feel like a kind of...a mix between a tingle and an itch.*

#17 It felt like I went a little bit deeper and I got a tingling kind sensation.

#6 I would frequently get little itches in different parts of my body and a few times I scratched...

The itches and tingles were experienced as a source of distraction that interfered with focusing attention on the breath.

Walsh (1977) describes experiencing numerous itches (p. 153). In Kornfield's study, a participant describes *"acute body sensations...tingling"* (Kornfield, 1979, p. 46).

5.2.1.6 A state between sleeping and waking

Almost all participants (15 of 17, or 88%) described meditation as being similar to a state between sleeping and waking.

There were frequent reports from participants of hynagogic-like experiences, that is, feeling like being in a dreamlike state between sleep and wakefulness.

#6 *It has been a really long time since I have been able to relax and be on the verge of...what's that state when you're not sleeping but you're not awake? I don't know what the state is called. There is a specific word for it...*

#3 *I don't know how to explain it...but I was like on the borderline somewhere between being...sleeping and being aware...*

#14 *I don't know if I was thinking or dreaming because I wasn't sure if I was awake or I was sleeping...*

#15 I was all so relaxed and it put me to sleep...I slept!

Cahn and Polich (2006) discuss a number of EEG studies that show brainwave activity in meditators to be in line with Stage I sleep with marked alpha-theta activity. Their discussion includes studies that "seem to suggest that meditation [is] a physiological twilight condition between waking and sleep, although this viewpoint [does] little to explain [the] meditation state other than to indicate that it is not waking or sleeping" (Cahn & Polich, 2006, p. 188). This may account for the number of participants who reported feeling like they were on the borderline between being asleep and awake, or feeling as if they were falling asleep, or feeling like they had been asleep during meditation.

Walsh (1977) used the term *"hypnagogic universe*" (p. 160) for his own personal experience of meditation, and this concurs with the findings from the focus groups in this study. Hypnagogic states are, according to Ludwig (1969), in line with the experience of altered states of consciousness.

5.2.1.7 Body perception changes

Over half of the participants (10 of 17, or 59%) felt like they lost touch with their bodies, or that the boundaries of their physical bodies shifted or disappeared, during meditation. This key constituent includes a diverse mix of descriptions of changes in body perception during meditation.

> #2 *I kinda lost touch with my body. I couldn't feel it anymore.*
>
> #8 *My hands, they were so relaxed to the point where you don't know if you have hands anymore.*
>
> #9 *It's almost as if your brain becomes somewhat detached from your limbs.*
>
> #19 *I had my hands on my legs and it's like, okay, where does one begin and the other stop? Then it's like it's just melting into itself.*

Kornfield (1979) reports descriptions by his research participants of body perception changes, such as "*loss of perception of hands"* (p. 46); *"loss of body awareness"* (p. 46); *"body disappeared"* (p. 46).

Gifford-May and Thompson (1994) report a participant's description of body perception changes with the boundaries of the body shifting: *"I am usually aware of the boundary of my body against the skin and you lose that sense"* (p. 124). Gifford-May and Thompson (1994) also report another participant's response: *"There was no sense of my physical body...there was nothing there"* (p. 125), and *"one loses body consciousness"* (p. 125). One of the themes that Gifford-May and Thompson (1994) identified in their study was *transcendence beyond the normal physical and mental boundaries of the self* (p. 123), which could include a range of experiences of body perception changes.

Travis and Pearson (2000) identified a similar theme of *absence of space, time, or body sense* (p. 81) that emerged from their data. Unfortunately, they do not provide descriptions from their participants to support this theme.

Body perception changes thus form a part of the experiences reported by the research participants in this study as well as the experiences in the Kornfield (1979) and Gifford-May and Thompson (1994) studies.

5.2.1.8 Unusual sensations and perceptions

The vast majority of participants (14 of 17, or 82%) experienced a wide variety of unusual sensations and/or perceptions during meditation, such as postural instability, an awareness of the heartbeat, and other unusual experiences that included distortions in taste and hearing. Other unusual somatic experiences were also reported. These experiences are discussed below.

5.2.1.8.1 Postural instability

Below are selected quotes from participants describing experiences of postural instability during meditation.

#10 *The next thing, I feel myself tipping a bit.*

#13 *I felt like I nearly fell down...I don't know, like I am sleeping or I am not in my body...*

#17 *I felt myself kind of falling over kind of thing...*

#2 *My head tilted.*

#6 *I was feeling a little spinny and whoozy...*

#3 *I felt like I was floating around.*

#13 *I felt like...I'm flying!*

Kornfield (1979) reports similar experiences to those described above by research participants in the present study who felt like they were tipping over, falling over, floating and flying. Research participants in the Kornfield (1979) study felt like their heads were *"rolling"* (p. 45) or *"tilted"* (p. 46) during meditation, and others reported that they felt like they were *"falling over"* (p. 45). There were also reports from participants who felt like they were *"floating"* (p. 46).

5.2.1.8.2 Awareness of the heartbeat

There were some reports from participants in the present study of being particularly aware of the beating of their heart during meditation.

#13 I can feel like my heart is like pumping...

#15 I could hear my heart going one thump after the other...

#15 My heart kept going boom, boom....

Similar reports were received from the research participants in the Kornfield (1979) study. Participants reported feeling "*acute body sensations, feel heartbeat"* (Kornfield, 1979, p. 46).

5.2.1.8.3 Other unusual sensations and perceptions

There were reports of other unusual sensations and perceptions from the participants in the focus groups. These included distorted auditory and taste perceptions, and other unusual somatic experiences.

#13 I clearly heard a sound that is over there of dripping, water dripping.

#9 I had this funny taste in my mouth...and it tasted almost like soap.

#1 I felt a little goose flesh.

#2 I was getting a lot of heat...my hands were so warm, just randomly...

Kornfield (1979) reports that auditory hallucinations and unusual somatic experiences are the norm among long-term meditators, and that they are frequently described in the traditional spiritual literature. However, there are no participant experiences in the long list of descriptions supplied by Kornfield (1979) that are similar or comparable to those included above from the present study.

Walsh (1977) also describes experiences of "vivid hallucinations" (p. 160), both visual and auditory, during meditation.

5.2.1.9 Feeling as if in a different place

During the focus groups, the majority of participants (11 of 17, or 65%) described feeling as if they were in a different place during meditation.

> *#14* *I was in this space, where you don't have a point of reference. It doesn't exist, north, south, west or east, up and down, front, back... It is just, you are there.*
>
> *#1* *It seems like I fell down somewhere...*
>
> *#15* *I was like elsewhere, doing something else... I know I was busy in that place… I was in a different realm...*

Similar reports were received from participants in the Gifford-May and Thompson (1994) study. One participant reported: *"I was...forgetting who I was...in what direction I was going...what country I was in"* (Gifford-May & Thompson, 1994, p. 124). Another participant described this experience as: *"[It's like] you've fallen into a hole that's so deep"* (Gifford-May & Thompson, 1994, p. 126). These two descriptions are very similar to the first two quotes listed above from participants in the present study.

Walsh (1977, 1978) does not write of a change in his sense of time or place, nor of body perception changes, being experienced during meditation. However, he does make multiple references to getting lost in fantasies, images and in his mantra

(Walsh, 1977, 1978). While this may suggest that there was a falling away of his sense of body, time and place, he does not expressly state this.

5.2.1.10 Feeling all alone

Half the participants (9 of 17, or 53%) described feeling like they were all alone, in spite of being surrounded by others during the group meditation sessions. The experience of being part of a group fell away, and participants described a solitary process.

> #9 *There are a lot of other people around you, but you don't get the sense that they are there with you. You get the sense that you are alone, you are by yourself.*
>
> #15 *I did not feel like I was in a room with people in it.*
>
> #7 *I had the feeling of sitting in this room alone. I totally forgot everyone else is around me.*
>
> #12 *I kind of forget a little bit that I am, for example, in a place filled with people. For me it was...kind of like...as if I was alone.*

Participants in Kornfield's (1979) study also reported experiencing *"feelings of aloneness, loneliness"* (p. 49) during meditation in a group setting.

Possibly as an extreme experience of feeling alone, Walsh (1977) writes of closing his eyes and *"losing all contact with where I was"* (p. 160) and *"losing contact...with ordinary reality"* (p. 160). He was describing his experiences while meditating on his first meditation retreat, most likely in a group setting.

5.2.1.11 Time distortions

The majority of participants (11 of 17, or 65%) in this study reported distortions in the passage of time during meditation. There were reports of time accelerating, time slowing, and losing track of time completely during meditation.

#5 I had no track of time. I did not know how long we had been doing it for...

#11 With the time passing...I forgot about [the] track of time...

#11 In meditation, we forget about the existence of time.

#14 You tell me that we spent like 30 minutes, that was shocking! There were a lot of thoughts, but keep in mind that I was so relaxed that I didn't notice that we spent this amount of time. For me it was like 10 minutes!

"Time changes" are listed by Kornfield (1979, p. 44) as a category of unusual experiences reported by the research participants in his study.

Travis and Pearson (2000) identified a theme that emerged from their research data that they named "absence of space, time and body sense" (p. 81). In the only quote they include in their paper, the research participant reports *"there is no awareness of where I am, or the passage of time"* (Travis & Pearson, 2000, p. 81).

5.2.1.12 Feeling light

Almost half of the participants (7 of 17, or 41%) in the focus groups reported feeling lighter as the meditation session progressed. The experience of lightness tended to occur towards the end of the meditation session and seemed to be associated with being more deeply relaxed.

#13 Everything felt very light. Just before we finished, I felt relaxed and like everything is light.

#8 You feel you lighten up.

#16 After the middle, I started feeling lighter.

A feeling of *"lightness"* during meditation was also experienced by Walsh (1977, p. 183). Kornfield (1979) includes reports from his participants of experiencing "*lightness"* (p. 48) and that *"body and mind became very light"* (p. 49) during meditation.

5.2.2 Discussion of Additional Findings

There were additional findings that emerged from the focus group data that are noteworthy. The additional findings included here are negative experiences and the awareness of mind during meditation practice.

5.2.2.1 Negative experiences

There were some reports from participants that may be termed "negative experiences". The negative experiences reported in this study included the feeling of heaviness experienced during meditation as being unpleasant; feeling sick; experiencing pain in certain parts of the body; feeling agitation, frustration and anger; feeling fear.

#1 *This sensation of heaviness is really unpleasant...It comes and then it goes, the deeper you are falling, then it goes...*

#7 *I was having a little bit of pain in my neck.*

#13 *When we start meditating, my stomach starts aching...I don't know why...a strange pain.*

#2 *Certain parts of the body, like where I have injured myself before, I think I remembered the pain...*

#2 *Where my tonsils used to be, it was hurting.*

The research participants in this study did not provide consistent reports of negative experiences, and negative experiences did not emerge as a theme or key constituent of the experience of the phenomenon of meditation. However, negative experiences during meditation have been reported in the scientific literature (Kornfield, 1979; Otis, 1984; Walsh, 1977) and are an important element for discussion with regard to informing new practitioners of what to expect when meditating.

Walsh (1977) writes of experiencing pain during meditation. He describes experiencing "sore knees" – more an expected consequence of seated meditation than the experience of the phenomenon itself. In the present study, some participants experienced pain during meditation at the sites of previous injuries while others experienced pain which may, like Walsh (1977), have been the result of sitting for a period of time. Pain is also reported as a frequent meditation experience in the Kornfield (1979) study with respondents using the meditation experience to relate to pain in new ways, with surrender and detachment.

Negative emotions such as frustration and anger were reported in the present study in relation to the constant barrage of distracting thoughts during meditation that disturbed the focus on the breath. For example*:*

#6 *I was getting a little frustrated, because [the constant chatter in my mind] didn't seem like it was going to go away.*

#13 *I [felt] some anger because I was not able to concentrate.*

Kornfeld (1979) reports that his research participants experienced *"intense emotions of anger"* (p. 48) and *"incredibly strong hate"* (p. 48). However, the reports do not include information about what may have provoked these strong emotions.

Reports from the novice meditators in the present study do not reflect strong or intense emotional experiences during meditation. However, feeling fear was reported. Fear was related to the unusual nature of the meditation experience.

#1 *It is a little unusual and it made me scared, because I woke up suddenly and I started breathing deeply like, okay, what is going on...a sense of panic, actually.*

#11 *Fear...because I was somewhere alone...I forgot about the group...*

#11 *I am afraid I will lose the notion of time if I go too deep...*

Gifford-May and Thompson (1994) also report the experience of fear by a participant as a result of the unusual and unfamiliar aspects of the phenomenon: *"It feels quite frightening in as much as it isn't anything that I know about"* (p. 129). Fear was also reported by the participants in the Kornfield (1979) study, but it is unclear whether the fear was free-floating or linked to elements of the meditation experience.

Kornfield (1979) includes reports of dramatic mood swings by his participants. However, the dramatic mood swings may have been due to participants meditating under extreme retreat conditions. Experiences of intense emotions and mood swings are also reported by Walsh (1977) but, again, these bouts of intense emotions are encountered while meditating under extreme retreat conditions.

None of the participants in the current study reported strong or dramatic emotional changes during meditation.

There were also no reports of lingering negative effects beyond the meditation session by the participants in the present study. Lingering adverse after-effects from meditation have been documented elsewhere. According to Otis (1984), some meditators with psychiatric symptoms, such as anxiety and depression, experienced a worsening of their symptoms after commencing meditation. The negative experiences reported in this study were momentary. They were experienced for a limited amount of time and generally passed as the session progressed or soon after the session ended.

5.2.2.2 Awareness of expansive mind

Four participants in the focus groups reported an awareness of spaciousness and expansiveness in relation to their minds during meditation.

> #2 *So, apparently my brain is a pocket dimension. It is bigger on the inside than the outside...*

#12 *It is as if the mind has a body of its own and it's inside this empty, endless space...*

#14 *This space is endless, okay. I realised that I could go deeper and deeper and deeper, and it is a huge place...*

#1 *Like you are completely inside your mind, and your mind is open to the universe...it is an amazing state!*

#12 *I was meditating and for a brief moment I felt like my mind was expanding.*

This sense of the expansiveness and the spaciousness of mind during meditation is also documented by Gifford-May and Thompson (1994) and Walsh (1977, 1978).

Gifford-May and Thompson (1994) report a participant's description of feeling as if they are *"expanding out...in all directions, infinitely"* (p. 125). Another participant in that study described the sense of space during meditation as seeming *"vast"* (Gifford-May & Thompson, 1994, p. 125).

The reports of expansiveness of mind in the present study may also relate to the Gifford-May and Thompson (1994) theme of *transcendence beyond the normal physical and mental boundaries of the self* (p. 123) and to the theme of *unbounded* in the study by Travis and Pearson (2000, p. 81).

Walsh (1978) writes of "big, big mind" (p. 8), a concept that originated in the writing of Suzuki Roshi (Suzuki, 1970). Walsh (1977, 1978) references "big mind" in connection to his sense of expansion during meditation: *"I now had the experience of my mind being extraordinarily vast and stretching in all dimensions, and of thoughts passing through this vast space in a relatively calm and nondisruptive fashion while I merely sat and watched them"* (Walsh, 1977, p. 180).

The above information details the similarities between the findings from the present study and the findings of other published studies on experiences during meditation.

A comparison of the verbal reports of the key constituents that emerged from the present study with the other published studies indicates that: 1) each of the key constituents identified in the present study has been identified by other researchers; 2) the experiences described by the novice meditators in this study are comparable to the experiences of more seasoned meditators in the other published studies; 3) the experiences of novice meditators in this study are comparable to the experiences of 'deep states' during meditation as described by more seasoned meditators in other published studies. This suggests that novice meditators experience intense experiences, like body perception changes and time distortions, for example, early on in their meditation practice.

However, there are noteworthy differences. The novice meditators in this study rarely report experiences of light perception like those described by the seasoned meditators in Prakash et al. (2009). Also, they did not report episodes of 'pure consciousness' as described by Travis and Pearson (2000). The research participants in the present study did not report experiences of intense emotional reactions or mood swings, like those reported in Kornfield (1979) and Walsh (1977, 1978). There were also no reports of bliss or profound joy like those reported by Gifford-May and Thompson (1994), Kornfield (1979) and Walsh (1977, 1978). These differences may be due to differences in length of practice (i.e. novices versus more adept meditators), or they may be due to differences in the meditation setting (i.e. retreat versus an everyday setting). Further research is required to clarify these differences.

5.2.3 Discussion of the Variable Nature of the Experience of Meditation

According to the responses from the research participants during the focus groups, meditation is not a uniform or consistent experience. It is a *variable experience* with changes occurring *during a single meditation session.*

> #2 *At the beginning...I knew my feet were touching the floor...but after a while I just lost contact with my legs...*

#16 *After the middle, I started feeling lighter, that's how I felt... Like when I was thinking about stuff, I felt heavy because of all the problems and stuff, then I started relaxing, I felt it just going away...that's how I felt.*

Variability in the experience of meditation was also reported *by the same meditator* across different sessions.

#3 *I felt better than last time.*

#12 *Compared to last week's session...it was totally different, because last week's session I could feel everything, I could do everything, whatever, right? But this week...I felt like I was relaxed...but...*

The variable nature of the meditation experience is also indicated by meditation experiences reported by *different meditators*:

#17 *Quite the opposite of what she said, I found that...I just didn't feel in tune with the whole session this week...*

#8 *I had a completely different experience from the two of them.*

According to the findings from the focus groups, no single meditator had the same experience in different meditation sessions, and no two meditators reported the same meditation experience, although aspects of their individual experiences were similar.

These findings are borne out by the different descriptions of meditation by different researchers.

Walsh (1977, 1978) writes about a diversity of content in his meditation sessions that clearly varies from one session to another, but the variability of the experiences is not specifically addressed as such. In the Kornfield (1979) study, "a range of fluctuating experiences" (p. 54) during meditation is documented. The Gifford-May and Thompson (1994) study reveals "a complex range of experiences of meditation" (p. 136) which they seem to attribute to the different levels of meditation experience of their research participants. However, none of the authors fully describe the scope of the range of experiences during meditation. To gain

further clarity, Gifford-May and Thompson (1994) suggest that further research with different groups of meditators needs to be conducted.

The findings of this study that specifically indicate the variability of the meditation experience – within individual sessions, across different sessions experienced by the same meditator, and when comparing the meditation experiences of different meditators – thus serve as an extension to the existing scientific literature.

5.2.4 Discussion of the Words Used to Describe Meditation

The words that the participants in this study used to describe their experience can be divided into: 1) a sense of the ineffable; 2) everyday words; 3) similes and metaphors; and 4) creative descriptors. These overlapping divisions are used here for organisation and discussion purposes. They are not discrete categories.

5.2.4.1 A sense of the ineffable

Because of the subtle and unusual nature of the meditation experience, the research participants in the focus groups often struggled to put their experiences into words. They reported that aspects of the experience were *"difficult to describe"*, often saying *"I don't know..."* and *"I don't know how to describe this"*, and labelling the meditation experience as *"weird".* Gifford-May and Thompson (1994) also documented that meditation is an experience that is encountered with a sense of the ineffable.

5.2.4.2 Everyday words

When participants were able to put their experiences into words, they used everyday language that their fellow research participants and the researcher were immediately able to understand.

They used words such as:

- *"heavy"*
- *"light"*
- *"numb"*
- *"itch"*
- *"tingle"*
- *"distracted"*

These common terms were similar to those used by Walsh (1977, 1978), the participants in Kornfield's (1979) study as well as the participants in the Gifford-May and Thompson (1994) study. Travis and Pearson (2000) only include one quote in their report and do not include terms their participants used in describing their meditative experiences. It is difficult to draw comparisons with such limited data.

5.2.4.3 Similes and metaphors

The participants often used similes and metaphors when they described their experiences. They compared their experiences to something they had encountered previously in their lives, such as, "*I felt like I was on the borderline...somewhere between sleeping and being aware"* (#3), and "*I just let [my thoughts] flow, like a river"* (#1).

Participants reported the heaviness they experienced during meditation as follows: *"It's like I'm sinking through the chair, I'm sinking into the floor"* (#2), and *"I kind of felt that gravity was pulling me [down]"* (#12). The lightness that participants experienced in the later stages of meditation was described as feeling *"like floating"* (#3) and feeling *"like flying"* (#13). One participant described the lightness they experienced during meditation as: *"I feel like someone took my weight and took it away from me"* (#14). Some participants described the meditation experience *"like being on drugs"* (#3; #12) and *"being stoned"* (#2; #6).

Similes and metaphors were also used by the respondents in the Gifford-May and Thompson (1994) study where there were reports of *"becoming a field of energy"* (p. 124), of feeling as if they were *"at the bottom of a very still, clear pond"* (p. 127). Kornfield (1979) includes reports of *"arms flapping like wings"* (p. 45) and feeling *"like being drawn by a magnet"* (p. 48).

5.2.4.4. Creative descriptors

The participants in the focus groups used very interesting, creative terms as descriptors of unusual sensations and perceptions, for example, like the following phrase which describes the shift in boundaries between parts of the body: *"It's like it's just melting into itself"* (#19).

Some of the most interesting descriptions of experiences during meditation were of the change in sense of place during meditation, such as *"being in a cocoon"* (#9), and being transported to a different realm, *"a dark room realm"* (#15). Describing the experience of the expansiveness of mind, a participant said, *"Apparently my brain is a pocket dimension. It is bigger on the inside than the outside"* (#2).

Creative descriptors were also used by the participants in the Kornfield (1979) study. There were reports of *"screaming mind trips"* (p. 48), of experiencing *"a visual snowfield"* (p. 47), of feeling *"like an open cut – so raw [and] sensitive"* (p. 48).

It is unfortunate that not all the published studies discussed here provided extensive, in-depth information with regard to the words their participants used in describing their experiences. It would be a valuable exercise to examine the raw data of these studies and compare them to the raw data of the present study to seek out commonalities and differences.

When a published study did include details of the descriptions provided by their research participants, there were clear similarities with the words that were used by the participants in the present study to describe experiences during meditation.

5.3 DISCUSSION OF THE FINDINGS FROM THE EXIT INTERVIEWS

The purpose of the exit interviews was to provide an opportunity to all the research participants to privately share additional information about their experiences of meditation that they may not have shared during the focus groups. In addition, the exit interviews provided an opportunity to ask the researcher questions about the study and the research process.

No new constituents emerged from the exit interviews. However, additional verbal descriptions emerged that provided further elucidation of the experience of meditation. A noteworthy description was provided with regard to the constituent *being in a different place* during meditation. Participant #9 described it as being in a *"sub-world"*: *"You are physically here...but then we are actually in this sub-world where it is different".* Gifford-May and Thompson (1994) also reported a participant's responses that alluded to a change in physical place in describing the meditation experience: *"It's sort of...'beyond-the-beyond'...it's just very unknown territory"* (p. 127).

Participants #3 and #12 in the present study compared the meditation experience to "*being on drugs"*. Participant #3 spoke about the physical sensations during meditation as being similar to the effects of being on the drug, Ecstasy. Participant #12 in the present study spoke about the cognitive aspects of meditation in relation to being on drugs: *"It's kind of like being on drugs, having an altered state of perception...that's how it felt".*

The similarities between the experience of meditation and being on drugs is noted elsewhere in the literature. Walsh (1977) described his meditation experience as similar to *"having ingested a stimulant",* with *"significant psychedelic effects"* (Walsh, 1977, p. 160). Kornfield (1979) reports a participant's description that compares meditation to a drug-related experience, and having *"LSD melting-like visions"* (Kornfield, 1979, p. 46). These reports are further evidence of findings from other studies that corroborate the findings of this study.

5.4 DISCUSSION OF THE PRE-TEST AND POST-TEST PSS-14 SCORES

The study findings show a significant reduction in perceived stress across the duration of the research study for the participant group as measured by the PSS-14. The majority of the participants (76%, or 13 of 17 participants) experienced a reduction in perceived stress. This reduction in perceived stress, as measured by pre- and post- PSS-14 scores, occurred even as the research participants, who were all students, were preparing for their final examinations. In fact, the post-study PSS-14 was completed just one week before the final examinations began.

Below is a histogram that visually represents the pre-test and post-test scores for each participant.

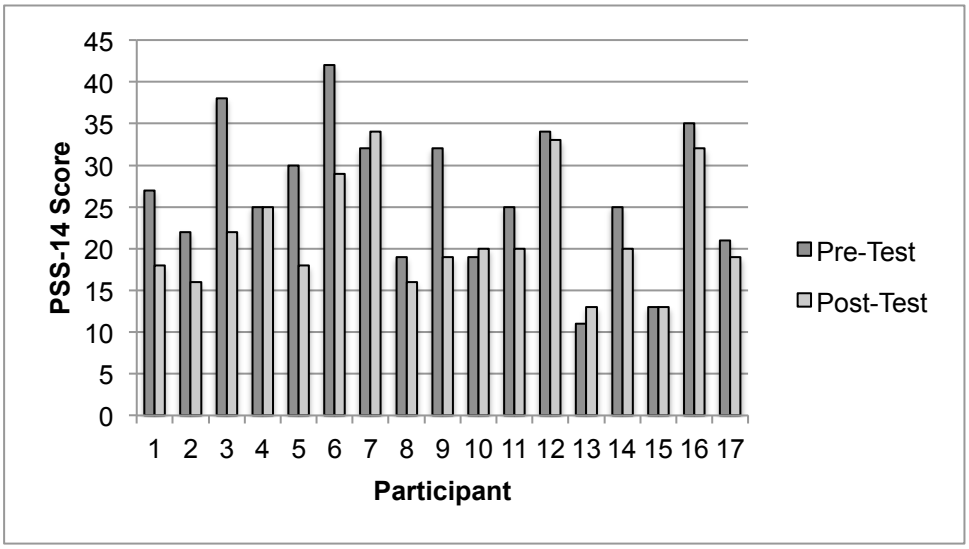

Figure 4.2 A histogram of the paired pre-test and post-test PSS-14 scores for the research participants.

Figure 4.2 shows a histogram of the paired pre-study and post-study scores for the research participants. Most participants measured higher on perceived stress at the pre-study stage. Two participants (#4 and #15) showed no change, while the perceived stress scores of two participants (#7 and #13) increased from pre-test to post-test.

Current research indicates that the primary benefit of meditation is its stress-reducing properties (Burns et al., 2011; Lane et al., 2007; Rubia, 2009). Given the neurological substrates of meditation, that is, the engagement of the parasympathetic nervous system (Cahn & Polich, 2006) and its relaxation effects, the reason why meditation could be experienced as stress-reducing is clear. However, what is surprising is the significant change scores elicited over a very short period of time, that is, after only four weeks of meditation practice with only one meditation session per week. Further research is required to better understand these findings.

5.5 MEDITATION AS AN ALTERED STATE OF CONSCIOUSNESS

To further our understanding of the phenomenon of meditation, the findings from this study will now be discussed in relation to meditation as an altered state of consciousness.

The study findings will be examined according to the schema of Arnold Ludwig (Ludwig, 1969). Although Ludwig's schema is decades old, it continues to be afforded an important role in discussions around the psychology of altered states of consciousness (Beischel, Rock, & Krippner, 2011; Rock & Krippner, 2007). To date, no alternative comprehensive framework has been presented for use by the scientific community for the classification of the psychological production and experiential characteristics of altered states of consciousness.

Vaitl et al. (2005) provide a broad, psychobiological description of altered states of consciousness. They identify meditation as a psychologically-induced altered state of consciousness and provide a table of comparisons between various altered states of consciousness with regard to induction method, or how the state is activated, and other phenomenological dimensions, such as awareness span, self-awareness, and sensory dynamics. However, what they present does not provide the details that allow for the broad exploration and expanded understanding of the

phenomenon of meditation that Ludwig's schema, or framework, does with regard to the production and characteristics of altered states of consciousness.

According to Crick and Koch (2003), a framework “is a suggested point of view for an attack on a scientific problem. A good framework is one that sounds reasonably plausible relative to available scientific data and that turns out to be largely correct. [It] often contains unstated (and often unrecognized) assumptions, but this is unavoidable” (p. 119). It is proposed here that Ludwig’s (1969) schema provides “a good framework” for a discussion of meditation as an altered state of consciousness.

Ludwig defines an altered state of consciousness as: "Any mental state (or states), induced by various physiological, psychological, or pharmacological maneuvers or agents, which *can be recognized subjectively by the individual himself*...as representing *a sufficient deviation in subjective experience* or psychological functioning from certain general norms for that individual during alert, waking consciousness” (Ludwig, 1969, pp. 9-10, emphasis added).

While Ludwig’s definition has been criticised for lacking specifics around what is meant by “a sufficient deviation in subjective experience” (Rock & Krippner, 2007, p. 35), it affords a workable definition for the purposes of this discussion to further our understanding of the phenomenon of meditation. The participants in this study reported the experience of meditation to be a deviation from their normal alert, waking, everyday consciousness.

Here is a description of changes experienced during meditation from a participant in the present study:

> #2 *Normally, I am pretty grounded, but right now I kind of feel like I am floating. I kinda lost touch with my body. I couldn’t feel it anymore. My fingers especially, because I am sitting like this...and I couldn’t feel my hands touching each other anymore.*

Consciousness continues to be deeply mysterious (Baars, 2003; Crick & Koch, 1990). While the field of neuroscience has helped expand our knowledge of the neural basis of consciousness (Crick & Koch, 1990), the mechanisms of consciousness remain largely elusive (Aru & Bachmann, 2015). Arguing for a neuroscience approach to the understanding of consciousness, Crick and Koch (1990) state that “although arguments at the cognitive level are undoubtedly important, we doubt whether they will, by themselves, ever be sufficiently compelling to explain consciousness in a convincing manner” (Crick & Koch, 1990, p. 263). The efforts to link mind and brain through the scientific study of consciousness (Baars, 2003) may have been aided by modern brain imaging techniques. However, many questions remain. “The puzzle of consciousness persists and the need for focused interdisciplinary attacks on the problem is as timely as ever” (Aru & Bachmann, 2015, p.1).

According to Ludwig (1969, p. 10), "Varied and diversified environmental stimulation appears necessary for the maintenance of normal cognitive, perceptual and emotional experience". When there is a marked increase or decrease from the optimal level of stimulation, changes in mentation take place (Ludwig, 1969). Ludwig notes that the manipulation of motor, cognitive and emotional processes can lead to alterations in consciousness (Ludwig, 1969).

The classification of meditation as an altered state of consciousness is based on: 1) how altered states of consciousness are produced; and 2) the general characteristics of altered states of consciousness. This classification is discussed here in relation to the findings of this study.

5.5.1 The Production of Altered States of Consciousness With Reference to Meditation

There are five methods to produce an altered state of consciousness: 1) a reduction of exteroceptive stimulation and/or motor activity; 2) an increase of exteroceptive stimulation and/or motor activity and/or emotion; 3) increased alertness or mental involvement; 4) decreased alertness or relaxation of critical faculties; 5) the presence of somatopsychological factors (Ludwig, 1969, pp. 10-13). Three of these categories have direct relevance to the practice of meditation: reduction of exteroceptive stimulation and/or motor activity; increased alertness or mental involvement; decreased alertness or relaxation of critical faculties. These three categories are discussed below with regard to the phenomenon of meditation and the findings of this study.

5.5.1.1 Reduction of exteroceptive stimulation and/or motor activity

Seated meditation is an activity during which there is a marked *reduction in motor activity*. Meditators practise in a seated position. The limbs are still. The hands are still, usually folded in the practitioner's lap. The reduction of physical movement, and therefore a *reduction in motor sensory stimulation*, is a hallmark of seated meditation practice.

There is also *a reduction of visual stimulation* from external sources. This is in line with the instructions given to the research participants, to sit with eyes closed. A reduction of visual sensory stimulation is common in seated meditation practice. The reduction in motor activity accompanied by a reduction in externally produced visual stimulation would qualify as a reduction in both motor and visual sensory stimulation and may produce an altered state of consciousness (Ludwig, 1969).

Listening to the natural rhythm of one's breath, or paying attention to sensory data obtained from the rise and fall of the chest during the breathing process, or the monotonous repetition of a mantra, could be regarded as *exposure to repetitive, monotonous stimulation*, which is also a part of meditation practice. Ludwig

includes mental states produced by a "change in the patterning of sensory data, or constant exposure to repetitive, monotonous stimulation" (Ludwig, 1969, p. 10) as a method that may produce an altered state of consciousness.

Participants in this study specifically described their experiences during meditation as similar to *being in a state between sleep and wakefulness*.

> *#3 I don't know how to explain it...but I was like on the borderline somewhere between...sleeping and being aware...*
>
> *#14 I don't know if I was thinking or dreaming...because I am not sure if I was sleeping or awake...*

Being in a hypnagogic state, that is, between sleeping and waking, was one of the key constituents that emerged from the *lived* experience of the phenomenon of meditation as reported by the participants in this study.

Hypnagogic states are psychophysiological states that can produce altered states of consciousness, according to Ludwig (1969). Walsh (1977) also described the state of meditation as a *"hypnagogic universe"* (p. 160).

5.5.1.2 Increased alertness or mental involvement

It is proposed here that during the early stages of a meditation session, there is an *increase in alertness or mental involvement* as the meditator's attention is focused on the meditation device. This is similar to the "spotlight of attention" from Baars's model of consciousness (Baars, 1997) first described in Chapter 2. With intention, the "spotlight of attention" is placed on the meditation device (the natural rhythm of the breath or the repetition of a mantra). The meditator focuses attention on the meditation device, gets distracted, and then re-focuses attention back on the meditation device. This process, repeated over and over again during meditation, helps manage the distractions caused by random thoughts and/or other unusual sensations or perceptions. This could be considered a manipulation of cognitive processes, a technique that can produce an altered state of consciousness (Ludwig, 1969).

A participant describes this point as follows:

> #6 *The chatter was in my mind, like you know, first it started off really loud in the beginning and I was getting a little frustrated because it didn't seem like it was going to go away, but, you know, I just kept on going and trying to bring the focus back to [my] breathing.*

5.5.1.3 Decreased alertness or relaxation of critical faculties

Another hallmark of meditation is the quieting of the mind with *a reduction of cognitive activity*, or a reduction in stimulation that is normally produced through thought processes. A defining characteristic of meditation is the gradual slowing of the flow of thoughts in order to achieve a passive state of mind. Walsh (1977) described this as quieting the internal dialogue. The reduced cognitive activity during meditation is a process that leads to *further reductions in sensory stimulation*, and could produce an altered state of consciousness (Ludwig, 1969).

Ludwig (1969) specifically mentions states attained through "passive meditation", in which the critical faculties are relaxed. "A passive state of mind, in which active goal-directed thinking is minimal" is how Ludwig (1969, p. 12) describes these states.

Here are examples of three participant reports in this study describing this aspect of meditation:

> #18 *I felt really relaxed and focused.*

> #17 *I feel...just a lot quieter...I just feel kind of mellow, kind of thing...content, peaceful.*

> #1 *It was really good because my body calmed down and I could...not control my thoughts, but just let them flow very easily, like a river...*

Meditation is a method or activity that can produce an altered state of consciousness according to Ludwig's schema (Ludwig, 1969). In addition, there are a number of findings in this research study that show that the characteristics of

meditation fit the general characteristics of an altered state of consciousness. These characteristics are discussed next.

5.5.2 Characteristics of Altered States of Consciousness

The findings from this study indicate that meditation shares a number of the characteristics of altered states of consciousness proposed by Ludwig (1969). These include: 1) a disturbed sense of time; 2) the loss of a sense of control; 3) body image changes; 4) perceptual distortions; 5) feelings of profound insight; 6) a sense of the ineffable; 7) feelings of rejuvenation (Ludwig, 1969). Each of these characteristics is discussed below in relation to the findings of this study.

5.5.2.1 Time distortions

In this study, participants reported that they experienced a distortion in their sense of time. The participants reported that they experienced the acceleration of time as well as the experience of time slowing. There were also reports of completely losing track of time, and of time no longer existing.

#17 I kind of lost track of time I think, I don't even know how long it's been.

#11 I forgot about [the] track of time...

#11 In meditation, we forget about the existence of time.

According to Ludwig (1969, p. 14), "Subjective feelings of timelessness, time coming to a standstill, the acceleration or slowing of time, are common" during altered states of consciousness. Walsh (1977, 1978), Kornfield (1979), and Travis and Pearson (2000) also documented reports of a distorted sense of time during meditation.

5.5.2.2 Loss of a sense of control

Perhaps because of the unusual nature of "looking inwards" which is central to the practice of meditation, fear was aroused in some participants in this study that related to a potential loss of control. There were some participants who spoke of this fear: *"It is strange because it's like you are losing control"* (#1). Another participant spoke of his fear of losing control, and that he would *"lose the notion of time if I go too deep"* (#11).

Ludwig (1969) describes this as a fear of losing a grip on reality and losing self-control. But this sense of a loss of control is not always frightening. Walsh (1977) describes his own experience of meditation as follows: *"To close my eyes meant losing contact almost immediately with ordinary reality"* (p. 160). While this uncomfortable experience was beyond his control, he did not find it frightening. Fear is not an inevitable emotional accompaniment of the loss of a sense of control during meditation.

5.5.2.3 Body image changes

The participants in this study reported experiencing distortions in body perception. "*I kinda lost touch with my body...I couldn't feel it anymore"* is how participant #2 described it. *"You feel like it is not your body"* (#1) and *"It's almost as if your brain becomes somewhat detached from your limbs"* (#9) were other reports received. Ludwig (1969) notes that it is common for individuals experiencing an altered state of consciousness to have "a profound sense of depersonalization, a schism between body and mind" (p. 14).

Ludwig (1969) notes that a characteristic of altered states of consciousness is numbness and tingling. *"I had a lot of numbness"*, participant #2 reported. Tingling was also a sensation reported by participants in this study, for example, *"It felt like I went a little bit deeper and I got a tingling kind of sensation"* (#17). Kornfield (1979) also reports tingling (p. 46) as being experienced by research participants in his study.

5.5.2.4 Perceptual distortions

The majority of participants in this study reported experiencing a range of perceptual distortions. These included, but are not limited to, postural instability, (*"I felt myself falling over"* – #17), distorted perceptions of hearing ("*I clearly heard a sound [of] water dripping"* – #13), distorted perceptions of taste ("*I had this funny taste in my mouth...and it tasted almost like soap!"* – #9), and the experience of temperature changes ("*I was getting a lot of heat...My hands were so warm, just randomly"* – #2).

According to Ludwig (1969, p. 15): "Common to most [altered states of consciousness] is the presence of perceptual aberrations, including...illusions of every variety". Each one of the studies discussed earlier and included in Table 5.1 (Gifford-May & Thompson, 1994; Kornfield, 1979; Walsh, 1977, 1978) documented reports of perceptual distortions during meditation, except for Travis and Pearson (2000).

5.5.2.5 Feelings of profound insight

A participant in this study reported an experience of feeling like being on the verge of a profound insight:

> #12 *I [felt] I was getting there... If I could [have held] onto it...I think I would have had some sort of insight about my own life, or even something greater, like my place in the universe... That is the impression I had, that I could learn something very valuable with that...*

James (2002) noted that states of alterations in consciousness could be accompanied by genuine metaphysical revelations or mystical experiences. Experiences of profound insight were reported in both the Gifford-May and Thompson (1994) and Kornfield (1979) studies. "Some meditators experience an unusual quality of power and insight within meditation" (Gifford-May & Thompson, 1994, p. 134).

5.5.2.6 A sense of the ineffable

There were numerous occasions when participants were unable to articulate their experiences, as if the experience was "beyond words". As discussed earlier in this chapter, they would struggle to communicate what they had experienced, saying, *"It's difficult to describe"* or *"I don't know",* and often simply labelled the experience as *"weird".* "Because of the uniqueness of the subjective experience associated with certain [altered states]...persons claim a certain ineptness or inability to communicate the nature or essence of the experience" (Ludwig, 1969, p. 16). The ineffable nature of the experience of meditation was also reported in the Gifford-May and Thompson (1994) study.

5.5.2.7 Feelings of rejuvenation

Participants in this research study spoke of feeling better after experiencing meditation. *"You feel more rejuvenated after you have done it"* (#8), and *"You feel more lively afterwards"* (#8). Some participants also reported that their day seemed to go better after meditation.

After experiencing an altered state of consciousness, individuals claim to feel a sense of rejuvenation and hope (Ludwig, 1969). This may be connected to the after-effects of the state of calmness and joy often reported by research participants during meditation (Gifford-May & Thompson, 1994; Kornfield, 1979; Walsh, 1977). The mood-elevating nature of mystical states described by James (2002) as involving spiritual energy and emotional excitement “rendering the soul more energetic” (James, 2002, p. 453) accords with the subjective experience of rebirth or being revitalised by altered states (Ludwig, 1969).

5.5.3 Other Authors' Perspectives on Meditation as an Altered State

Kornfield (1979) states that "meditation itself is not an altered state of consciousness", yet follows this up in his discussion in his report, writing that "a

wide range of altered states may arise" during meditation, and again later reports that his participants showed a positive correlation between higher levels of concentration and "unusual altered states" (Kornfield, 1979, pp. 50-51).

Travis and Pearson (2000) do not consider meditation to be an altered state of consciousness. Rather, they posit the experience of 'pure consciousness' during meditation to be a fourth state of consciousness, different from being awake, sleeping and dreaming.

Gifford-May and Thompson (1994) write of "the proximity of radically different levels of consciousness" experienced by research participants, of being within an "altered state" during meditation (Gifford-May & Thompson, 1994, p. 131).

Walsh (1978) mentions "a variety of states of consciousness" during meditation when meditators may feel as if they are connected to, or become "one with, or are, the universe" (Walsh, 1978, p. 11).

The findings of this study support meditation being an altered state of consciousness, both in the way it is produced and the characteristics of the experience, with reference to Ludwig (1969).

5.6 LIMITATIONS OF THE RESEARCH STUDY

Two limitations of this research study will be discussed here. The limitations are related to the generalisability of the findings, and issues around study design that reduces the ability to interpret the PSS-14 component of the study. Each of these limitations will be discussed next.

5.6.1 Issues Around Generalisability

Limitations of this study can be attributed to the small sample size and the sampling method, which in this case was convenience sampling. All the research participants in this study are student volunteers. The findings in this study cannot

be generalised to the population at large. The findings of this study cannot be extended without further research to other groups of novice meditators or to other groups of meditators who may have more experience with the practice of meditation.

5.6.2 Issues Around Study Design

Another limitation of this research study is the difficulty in attributing a causal relationship between the significant reduction in perceived stress, as measured by the PSS-14 pre-study and post-study scores, and the short-term practice of meditation.

The significant reduction in the test scores could be explained as a positive change in perceived stress due to taking part in this meditation program. However, other possibilities exist for these results. For example, emotional support effects as a result of being part of a group may have played a role. Emotional support effects may also have been an outcome of being part of the social community that developed around the short-term meditation program and the research study.

It is a limitation of this study that a comparison group was not included in the research design. A set of PSS-14 scores from a comparison group, drawn from the same student body but not exposed to the meditation program or the practice of meditation or the focus groups, could possibly have assisted in better understanding the factors underlying these significant results.

These factors will be discussed further in Chapter 6 with regard to possible future directions for meditation research.

5.7 CHAPTER SUMMARY

This chapter provided a discussion of the research findings. The key constituents of the phenomenon of meditation that emerged from this study were discussed in relation to the existing scientific literature that the researcher was able to locate.

The only key constituent that all participants experienced was that meditation was *relaxing*. This was the only invariant constituent, that is, it was the only constituent that all research participants reported experiencing. However, there were other key constituents that were emergent constituents that some, but not all, of the research participants reported experiencing. The emergent constituents were *a pleasant experience; being distracted by thoughts; a state between sleeping and waking; itches/tingles; feeling as if in a different place; time distortions; feeling heavy; body perception changes; feeling as if all alone; feeling light;* and *other unusual sensations and perceptions.* All the key constituents that emerged from the data in this study have been identified by other published studies on the phenomenology of meditation. However, no other single study identified all twelve key constituents.

Both the similarities and differences between the findings of this study and the findings of other studies on the phenomenology of meditation were noted.

The evidence from this study indicates that meditation is not a uniform or consistent experience. The experience is variable during a single meditation session by the individual meditator, across different meditation sessions as experienced by the same meditator, as well as across meditation sessions as experienced by different meditators.

The words that meditators use to describe their experiences were then discussed. Four overlapping, non-discrete categories were identified: words that indicated the ineffable nature of meditation; common everyday words; similes and metaphors; creative descriptors. The research participants in other phenomenological studies that explored meditation used similar words to those used by the research participants in this study.

The pre-study and post-study PSS-14 scores were discussed. These findings indicate a significant reduction in perceived stress for the research group over the period of the short-term meditation program.

Meditation as an altered state of consciousness was examined in relation to the findings of this study and the schema presented by Arnold Ludwig (Ludwig, 1969). Meditation is discussed as a method of producing an altered state of consciousness through a marked reduction in sensory input. This includes reductions in motor activity, reductions in visual stimulation, reductions in cognitive stimulation, and further limitations on mental involvement through the increased focus on a meditation device and progressive, deepening relaxation. The characteristics of the meditation process that emerged from this study were then compared to the characteristics of altered states of consciousness as detailed by Ludwig (1969). According to the findings from this study, meditation has a number of characteristics in common with altered states of consciousness. These characteristics include a disturbed sense of time, a feeling or fear of losing control, changes in body image, distortions in perception, feelings of profound insight, a sense of the ineffable, and feelings of rejuvenation after meditating.

The conclusion of this research study will be presented in the next chapter, Chapter 6. Answers to each of the research questions will be provided based on the study's findings. Also included in Chapter 6 is a section on recommendations for future research.

CHAPTER 6

CONCLUSION

6.1 INTRODUCTION

The findings from this study have yielded a new perspective and a better understanding of the nature of meditation, particularly with regard to the subjective experiences of novice meditators. From the descriptions provided by the research participants, twelve key constituents of the phenomenon of meditation emerged. These findings corroborate the findings of other studies on the phenomenology of meditation.

The variability of experience of meditation was revealed, during a single meditation session, in different meditation sessions as experienced by the same meditator, as well as in different sessions as experienced by different meditators.

The change scores on the PSS-14, used to measure perceived stress across the duration of the short-term meditation program, showed reductions in perceived stress in 13 of the 17 participants who completed the program. These results were significant and occurred despite the fact that the research participants, who were all college students, were under the added pressure of preparing for final examinations commencing a week later.

The findings of this research study will now be used to answer the research questions. Each of the five research questions will be answered in turn. A discussion of meditation as an altered state of consciousness then follows. The

characteristics that distinguish this study from other studies in the field will be reviewed, followed by a discussion of the implications of these research findings. The chapter ends with recommendations for future research.

6.2 ANSWERING THE RESEARCH QUESTIONS

Each of the research questions will now be answered in relation to the findings from this research study.

6.2.1 Question 1: How Does it Feel to Meditate?

The findings from this research study revealed 12 key constituents of the subjective experience of meditation. These key constituents are *relaxing/calming; pleasant experience; being distracted by thoughts; a state between sleeping and waking; itches/tingles; feeling as if in a different place; time distortions; feeling heavy; body perception changes; feeling as if all alone; feeling light;* and *other unusual sensations and perceptions.*

According to this research study, the above constituents form the "working parts" (Giorgi, 2008) of the phenomenon of meditation. The only invariant constituent that emerged from this study was *relaxing*, that is, all participants reported experiencing relaxation at some point during the meditation process. The other constituents were experienced by some of the participants, but not all of the participants, during meditation.

All 12 key constituents that emerged from the research data have been identified in other published studies on the phenomenology of meditation. However, no other single study has documented all twelve of the key constituents that emerged from the descriptions of the experiences of the novice meditators taking part in this study.

These 12 key constituents form the *textural description* of the phenomenon (Moustakas, 1994), or *what* was experienced during meditation. A *structural*

description of the phenomenon refers to *how*, or the way in which, the constituents were experienced (Moustakas, 1994). All the research participants in this study described their experiences during meditation in relation to the order or sequence in which the experiences occurred. Ninety percent of the research participants (17 of the 19 participants who began the study) specifically referred to at least one of the following stages of the meditation session when reporting their experiences: *the beginning; the middle;* or *the end.* They therefore spontaneously provided information on the order in which experiences occurred.

According to Husserl (in Moustakas, 1994), the *eidos,* or essence of a phenomenon, can be exemplified intuitively in the data of the experience: "In the play of fancy we bring spatial shapes of one sort or another to birth" (Husserl in Moustakas, 1994, p. 98).

After a period of imaginative variation (Moustakas, 1994; Giorgi, 2006), creative insight (Colaizzi in Hycner, 1985), or artistic judgment (Hycner, 1985), which involved reflecting on the research data and taking into account the sequence in which the constituents were reported to have been experienced, a diagrammatic representation of the essential structure of the experience of the phenomenon was produced. See Figure 5.1 below.

Incorporating the key constituents in a timeline of a typical 30-minute meditation session in the order or sequence in which they were experienced, provides a visual representation, or "spatial shape", to the experience of meditation. This diagrammatic representation is not to be considered exact. It is offered here as a pictorial view of the composite structure of the phenomenon of meditation that emerged from this study.

All 12 key constituents are included in this representation. The three lines at the top of the diagram indicate the following: the top line indicates the relaxing nature of the experience across the duration of the session; the middle line indicates the ongoing pleasant feelings associated with the experience; the lower line depicts

the changing nature of distracting thoughts that diminish in intensity towards the end of the session.

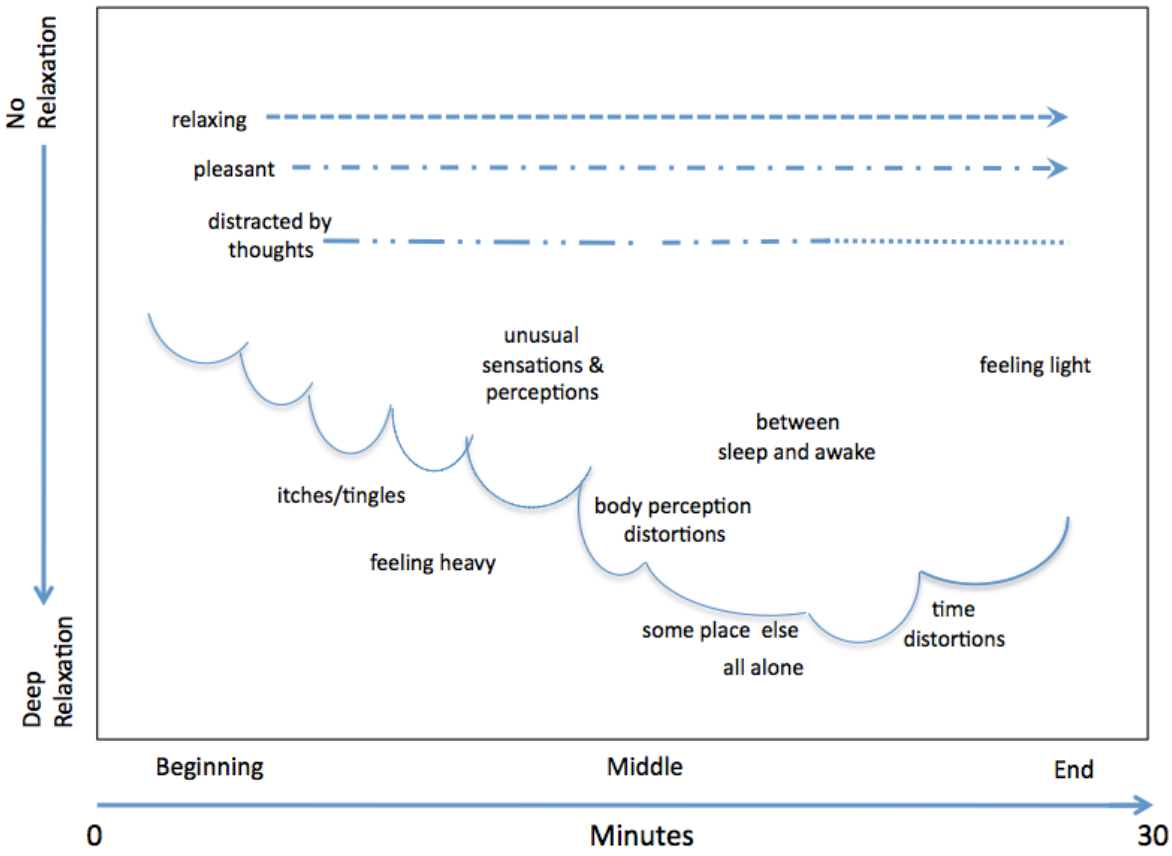

Figure 5.1 The structure of a meditation experience showing the looping quality of the mind as the experience of quieting gradually occurs, with drawbacks by distracting thoughts, in association with deepening relaxation of the body. The key constituents of the experience of meditation are included with rough estimates of when these constituents may be experienced during the stages of a typical 30-minute meditation session according to the descriptions provided by the participants in this study.

The looping line in the centre of the diagram represents the mind as it gradually quiets in association with the progressive relaxation of the body during meditation. The looping line shows the mind quieting (the line moves downward), and then being distracted by thoughts (the line moves upwards), and then quieting further (the line moves downward).

This diagram is used here as an illustration of the process of meditation that emerged from this study. Each of the 12 constituents is represented along the line. The approximate stage at which the participants reported experiencing each constituent is indicated.

The findings indicate that, to the extent that the meditator is able to manage quieting their mind by placing their attention repeatedly on the meditation device, relaxation deepens over the course of the meditation session. As relaxation deepens, the key constituents are likely to be experienced.

This diagram is used here to illustrate the process of a typical meditation experience over a 30-minute period. It represents the complex, multilayered nature of the experience of meditation. Even though the meditator may be sitting quietly with eyes closed, there is a lot going on. During a typical meditation session, there are ongoing changes in subjective experience taking place.

From this study, it appears that meditation is a process involving a series of changes in mentation and physiology that occur in a somewhat predictable manner over the duration of a 30-minute meditation session. This process is dependent on the meditator maintaining focus on the meditation device (the natural rhythm of the breath or mantra) and repeatedly refocusing their attention in spite of distracting thoughts and sensations, in order to continue experiencing deepening levels of relaxation. The experience of deepening levels of relaxation is central to the meditation process. As previously noted, relaxation was the only invariant constituent to emerge from the research data. According to Giorgi (2007), the invariant constituent is the one constituent that, if it were to be removed, the phenomenon would collapse because that constituent is essential to the phenomenon being studied.

If only the invariant constituent, *relaxing*, is used here to reveal the essential structure or essence of the experience of meditation, then the most that can be said about the essence of the phenomenon of meditation is that the experience is

relaxing. However, the essence of the experience of the phenomenon of meditation extracted from this study includes all 12 key constituents.

Provided below is the composite textural and structural description of the phenomenon of meditation generated from the responses provided by the research participants in this study. It is representative of the phenomenon of meditation as experienced by the research participants over a 30-minute session, which was the typical length for a session in this study.

The context for the practice of meditation is sitting in a quiet place, spine erect, eyes closed, with attention focused on the natural rhythm of the breath.

> There is an increasingly relaxed, calming, pleasant feeling. A constant stream of random thoughts provides ongoing distraction, and attention will repeatedly need to be returned to the breath. A gradual feeling of heaviness may be experienced. This feeling of heaviness may be experienced in particular parts of the body, like the hands, arms, and jaw. Itches and tingles may be felt. A state similar to being between asleep and awake may be experienced, with a dreamlike quality. Body perception changes may take place, with the boundaries of the body seeming to melt or disappear, or a feeling of being disembodied may occur. Other unusual sensations and perceptions may be experienced, such as sensory hallucinations involving taste, hearing, and temperature changes. The meditator may feel as if they are in a different place, all alone, even while being surrounded by others. Distortions in the sense of time may occur, with time seeming to slow or accelerate, or a sense of timelessness may prevail. The feeling of heaviness experienced earlier may change to a feeling of lightness as the session progresses.

This description provides information as to how meditation was experienced by the novice meditators in this study. It answers the first research question: *How does meditation feel?*

6.2.2 Question 2: Is There a Common Meditation Experience That all Meditators Experience in the Same Way?

The findings from this research study show that meditation is a *variable experience*. Changes occurred within a single meditation session and across different sessions as experienced *by the same meditator*. The variable nature of the meditation experience was also found in the differences that were reported by *different meditators*. Aspects of their individual experiences may have been similar, but no two meditators reported having the same meditation experience in the same meditation session.

The answer to Question 2, *Is there a common meditation experience that all meditators experience in the same way?* is, therefore, *No*. The findings do, however, support a general meditation structure and process that includes the 12 key constituents identified here that meditators may experience in a *similar* way, but not in the *same* way.

6.2.3 Question 3: Do all Meditators Experience Relaxation in the Same Way During Meditation?

The findings of this study indicate that all participants experienced relaxation during meditation, which corroborates the findings of Rubia (2009). *Relaxing* emerged as the single invariant constituent. However, the variability of the experience of meditation noted above extends to the experience of relaxation during meditation. Although all the research participants experienced relaxation at some point during meditation, they did not describe the subjective experience of relaxation in the same way. Therefore, the findings from this study indicate that not all novice meditators subjectively experience relaxation in the same way during meditation.

The answer to Question 3, *Do all meditators subjectively experience relaxation in the same way during meditation?* is, therefore, *No*.

Here are summary points from the findings of this study with regard to relaxation:

- Participants generally experienced a progressive deepening of relaxation from the beginning of a session to the end of a session.
- Some participants experienced a deep state of relaxation during meditation while other participants experienced a lighter state of relaxation.
- Some participants experienced deep relaxation during *some* meditation sessions, but *did not consistently* experience the same depth of relaxation in all meditation sessions.
- The depth of relaxation experienced by a participant seemed to be associated with the extent to which the meditator was able to manage the flow of their thoughts by focusing their attention on their breath.
- The beginning stages of a meditation session seem to be associated with feelings of heaviness that changed over the course of a session to feelings of lightness as the meditator became progressively more relaxed.
- The more unusual, intense experiences, such as distortions in body perception, and distortions in the sense of time and place, seemed to be associated with deeper stages of relaxation.

All participants experienced relaxation, but the participants' reports suggest that they experienced relaxation to different degrees. The depth of relaxation that a meditator experienced in any one particular meditation session was not consistently experienced in every meditation session. The reasons for this are unclear, but may be due to personal issues, for example, what meditators may have had on their minds when they entered the meditation room, or physiological determinants, like hunger or tiredness.

6.2.4 Question 4: What Words do Meditators Use to Describe Their Experiences?

The words that the participants in this study used to describe their experience can be divided into four categories: 1) a sense of the ineffable; 2) everyday words; 3) similes and metaphors; and 4) creative descriptors. These categories are not discrete. They overlap broadly, but the categories are used here for the purpose of discussion.

1. A sense of the ineffable

Because meditation is an uncommon and unusual phenomenon, participants often struggled to find the right words to describe their experiences. Some participants responded by saying *"I don't know..."* when asked to put their experiences into words, saying that what they had experienced was *"difficult to describe".* They repeatedly described the meditation experience as *"weird".* This indicates that the unusual and uncommon experience of meditation was encountered with a sense of the ineffable.

2. Common everyday words

When they did manage to describe their experiences, they often used everyday words that were clear and easy to understand, like *"heavy", "light", "numb", "itch", "tingle", "distracted".*

3. Similes and metaphors

The participants often described their experiences using similes and metaphors. For example, participants reported the heaviness they experienced during meditation as follows: *"It's like I'm sinking through the chair, I'm sinking into the floor"* and *"I kind of felt that gravity was pulling me [down]"*. Some participants described feeling as if they were *"floating"* and *"flying".* Participants also compared the experience to *"like being on drugs".*

4. Creative descriptors

There were also, amongst the similes and metaphors, descriptions that may be labelled creative descriptors, because they were particularly rich in their descriptive quality. For example, a participant described their thoughts as *"flowing, like a river".* Another participant described the meditative state *"like being in a cocoon*" and being in "*a sub-world".* The meditative state was also likened to being in *"a dark room realm".*

The words that meditators in this study used to describe their experiences were found to be similar to the words used to describe the meditation experiences by research participants in other studies.

6.2.5 Question 5: Can a Short-Term Meditation Program Effectively Reduce Stress in Young Adults Attempting to Cope With the Stressors of College Life?

It appears from this study that a short-term meditation program can effectively reduce stress in young adults attempting to cope with the stressors of college life. The findings show a significant reduction in perceived stress across the duration of the research study for the participant group as measured by the pre-study and post-study PSS-14 scores. The majority of the participants (76%, or 13 of 17 participants) experienced a reduction in perceived stress. This reduction in perceived stress occurred even as the research participants, who were all students, were preparing for their final examinations. In fact, the post-study PSS-14 was completed just one week before the final examinations began.

The significant results of the PSS-14 change scores (i.e. t (16)=3.49, p=0.003) suggest that a short-term meditation program can effectively reduce perceived stress in college students. However, caution must be exercised when interpreting these results. These results cannot automatically be attributed to the practice of meditation.

There are at least three possible reasons for the reduction in perceived stress, and there could also be some interaction between these factors that may have produced the favourable outcome. The three possible reasons that are proposed here are: 1) the practice of meditation itself; 2) support group effects; 3) a sense of community that may have developed among the participants.

1. The practice of meditation

The main therapeutic effect of meditation has been shown in the scientific literature to be its stress-reducing properties. The physiological changes concomitant with a relaxed, parasympathetic dominant, hypometabolic state – that are hallmarks of the meditative state (Cahn & Polich, 2006) – were experienced by the participants during this study. Therefore, it may have been the practice of meditation that was directly responsible for the reduction in scores.

2. Support group effects

It is also possible that sharing one's subjective experiences in a group setting immediately after each meditation session was perceived by participants as being emotionally supportive. The contribution of support group participation to a sense of well-being has been documented in the scientific literature (Schiff & Bargall, 2000).

3. A sense of community

It could also have been that a sense of community had developed between participants. The kinship generated by the sharing of a common purpose as they learned to meditate, and worked together to gather research data, may have had positive emotional effects. A sense of community, of ‘belonging’, has been shown to contribute to well-being (Hudson, 2015).

A combination of all three factors, that is, the practice of meditation, support group effects and a sense of community, may have produced the reduction in perceived stress.

While it is possible that events in the personal lives of individual participants may have been the reason for the reduction in perceived stress, it is unlikely that the majority of the research sample experienced such events so that they felt less stressed, especially given the timing, that is, heading towards their final examinations.

The findings from this research study of a reduction in perceived stress in 76% of the research participants over the course of the study, suggest that practising meditation for 30 minutes just once a week in a group setting can significantly reduce perceived stress. This provocative proposal deserves further investigation. Given the fact that participants were preparing for their final examinations, it would not have been surprising if there had been the opposite effect – an *increase* in perceived stress scores – under these circumstances.

Although participants were given a CD with a recorded guided meditation session during their first group session and were encouraged to practise on their own at home, few of the participants found the opportunity in their busy schedules to do so. In fact, it was an often-mentioned frustration of the participants that they struggled to find time to practise on their own at home. Of those who did practise on their own at home, practise was sparse at best. The effects of individual practice outside of the group sessions cannot be ruled out but also cannot be seriously considered as having had any significant impact on these findings.

6.3 MEDITATION AS AN ALTERED STATE OF CONSCIOUSNESS

Altered states of consciousness have a long history in religious settings where they have served to enhance spirituality (Court, 2010). Now, they offer a means of healing both within religious settings and in secular health settings, according to Court (2010).

Altered states of consciousness obviously serve a useful human function because of the frequency of their occurrence, the ease with which these states are entered, and the biological and psychological benefits that these states produce (Court, 2010; Ludwig, 1969).

According to this study's findings, meditation is a method of producing an altered state of consciousness and the experience includes a number of characteristics of altered states of consciousness that are in line with the schema provided by Ludwig (1969).

Whilst categorising meditation as an altered state of consciousness has no practical or clinical value, it does provide an important theoretical context for meditation for future scientific discussions. It may, for example, have application to research studies that include the neurological, biological and psychological correlates of meditation and the phenomenology of altered states.

The *adaptive expressions* of altered states of consciousness (Ludwig, 1969) may be used for healing and/or allowing new knowledge and experiences to appear, "enabling [the individual] to cope better with his human predicament and the world about him" (Ludwig, 1969, p. 20).

It is proposed here that meditation, as a *self-induced*, *adaptive* altered state of consciousness, could enable individuals who practise meditation to cope better with their lives and their experiences in the world.

6.4 CHARACTERISTICS THAT DISTINGUISH THIS STUDY FROM OTHER PUBLISHED STUDIES ON THE PHENOMENOLOGY OF MEDITATION

This study includes a set of important factors that distinguishes it from other phenomenological studies of meditation published in the scientific literature. These factors are briefly detailed below for emphasis and clarity. These factors include: 1) an homogeneous group of research participants; 2) the use of a common

meditation technique; 3) a research design that includes the practise of meditation immediately followed by focus groups; 4) a research context set within the everyday lives of the research participants.

6.4.1 A Homogeneous Group of Research Participants With Regard to Meditation Practice

It has been noted in the literature that it is difficult to gather an accurate representation of the phenomenology of meditation when research participants vary widely in how long they have been practising (Pruitt & McCollum, 2010). For example, the experiences of novice meditators may be quite different to that of more seasoned practitioners (Gifford-May & Thompson, 1994). The research participants in this study are all novice meditators. This allows the findings from this study to reflect how meditation is experienced in the crucial beginning stages of practice. The beginning stages of meditation practice will need to be navigated by all who take up the practice before regular practice is established. The experiences of novice meditators are therefore particularly important.

One of the intentions of this study is to be able to provide new and prospective meditators with information as to what they can expect to experience during meditation. Novice meditators therefore present a valuable source of knowledge of the early stages of meditation practice. This information can also be used to compare the experiences of meditators at different stages of meditation practice.

6.4.2 A Common Meditation Technique

Lutz et al. (2008) have raised concerns about research studies that include practitioners using different meditation techniques from different meditation traditions. The difference in techniques could possibly produce different experiential outcomes. Some studies have included practitioners using a range of different techniques from a number of different traditions, for example, Vipassana, transcendental and centring prayer (Pruitt & McCollum, 2010).

In this research study, participants used a common meditation technique. All participants used a mindfulness meditation technique with the focus of attention on the natural rhythm of the breath.

6.4.3 The Research Design

The research design used in this study appears to be unique among studies examining the phenomenology of meditation. While individual interviewing is often the data collection method of choice (Gifford-May & Thompson, 1994; Kornfield, 1979), with some studies also using paper-and-pencil pre-constructed surveys (Kornfield, 1979) or extended writing methods (Travis & Pearson, 2000), the use of focus groups, in which participants are given the opportunity to share their experiences in their own words with others immediately following a meditation session, is unique. It is particularly important when considering the subtle and unusual experience of meditation (Gifford-May & Thompson, 1994) and the accuracy of description that may be eroded by the passage of time between the experience of the phenomenon and the reporting (Hycner, 1985). This method of data collection allows for immediacy and freshness of recall of the phenomenon under investigation.

The appropriateness of using focus groups in a study with a phenomenological approach is controversial, as was noted previously. It is proposed here, however, that given the context of this investigation, of exploring a subtle and unusual state of consciousness, that interaction with others in a group setting served to support and assist the research participants to articulate their subjective experiences.

6.4.4 The Research Context of Everyday Life

A number of published studies have investigated the phenomenology of meditation as experienced by research participants under retreat conditions (Kornfield, 1979; Walsh, 1977, 1978). The retreat conditions in these studies vary from 2 weeks to 3 months (Kornfield, 1979; Walsh, 1977, 1978) and involve meditators practising under extreme conditions for lengthy periods of time, away from their everyday

lives (Kornfield, 1979; Walsh, 1977, 1978). For example, Walsh (1977) describes the retreats he attended comprising of "18 to 20 hours daily of continuous walking and sitting meditation performed in total silence and without eye contact, reading or writing" (p. 151).

This research study examines the experiences of meditation in novice practitioners who, as part of their everyday lives, took the time to spend 30 to 40 minutes in meditation once a week, and then returned to their busy schedules immediately afterwards.

This study, which is set within the context of participants' everyday lives, thus provides data that is more representative of real life meditation practice.

6.5 IMPLICATIONS OF THE RESULTS

The methodological, theoretical and applied implications of this study are discussed below.

6.5.1 Methodological Implications

From a methodological point of view, this study confirms the value of the qualitative research approach in gathering research data of subjective experiences. The nuances and subtleties of the meditation experience provided by the research participants in their own words during focus groups and individual interviews could not have been gathered by quantitative means. No pre-constructed paper-and-pencil test could have elicited the subtle, rich and diverse research data gathered here.

The focus groups immediately following the meditation sessions allowed for immediacy of reporting with regard to the experience of the phenomenon leading to freshness of recall. While most phenomenological studies in the area of meditation research have used individual interviews (Gifford-May & Thompson, 1994; Prakash et al., 2009), the use of focus groups – especially immediately following a

meditation session – is a new way to collect data in the area of the phenomenology of meditation. It is proposed here that the use of focus groups immediately following the experience of the phenomenon under investigation provides a useful study design that could be used for similar research studies in the future if used appropriately in relation to the goals of the investigation.

6.5.2 Theoretical Implications

From a theoretical standpoint, this study has implications for the field of consciousness research. The evidence gathered in this study allowed for the exploration of meditation as an altered state of consciousness. Because of the body of scientific research already established with regard to the neurological and biochemical substrates of meditation, there are possibilities of interesting extensions to our knowledge of altered states of consciousness. Research evidence of the experiential substrates of meditation, like the findings from this study, could provide interesting and useful links for research in the future. These findings could also have relevance for the new field of neurophenomenology (Lutz & Thompson, 2003).

The theory-building aspects specific to this study include evidence of the 12 key constituents of the meditation experience in relation to the experiences of novice meditators, a general process of change in subjective experiences over a 30-minute meditation session, and the variable nature of meditation.

The findings of this study also suggest a link between stress-reduction and meditation. The significant reduction of perceived stress over the duration of the study, as measured by the change in pre-study and post-study PSS-14 scores, suggests that a 30-minute group meditation session just once a week may have a positive effect on perceived stress over the short-term.

6.5.3 Applied Implications

This study could have relevance for: 1) prospective meditators; 2) meditation teachers; 3) healthcare providers; and 4) other researchers. The manner in which this research study could be meaningful to the members of these groups is discussed below.

1. Prospective meditators

The key constituents and the 'shape' of a typical meditation session, along with the terms that novice meditators use to describe their experiences, may help demystify the meditation process for prospective meditators who perhaps feel tentative and cautious about trying meditation because of its unusual nature.

2. Meditation teachers

Meditation teachers may find this information useful to inform their students of what to expect during practise. In the past, meditation teachers have had to provide descriptions of their own experiences or depend on anecdotal information when responding to their students' questions. Well-informed and well-trained teachers are critical to the establishment of the infrastructure necessary to support the practice of meditation for all interested members of the general public. The dissemination of these findings may not only inform the practice of meditation but may also stimulate further interest in meditation research.

3. Healthcare providers

A wide range of healthcare providers may be interested in these findings. Healthcare providers who are already using meditation-based therapeutic techniques to assist patients struggling with stress, chronic pain and other chronic illnesses may benefit from these findings.

Mental healthcare providers, particularly those providing mindfulness-based cognitive behaviour therapy, could use these findings to inform their clients of what they might expect during meditation. These findings also provide further evidence of the positive outcomes of the practise of meditation, with particular reference to the early benefits of meditation practice and its stress-reducing effects.

4. Researchers

These findings could be of interest to other meditation researchers who may want to confirm, clarify, or extend these findings. Also, research data with regard to the phenomenology of meditation, especially the series of experiences encompassing the key constituents presented here, may be of particular relevance when these findings are linked to the neurophysiology (Cahn & Polich, 2006), biochemical bases (Delmonte, 1984) and the psychobiology (Vaitl et al., 2005) of meditative states. The research evidence gathered in this phenomenological study could also have some relevance to the field of neurophenomenology that links neural mechanisms to subjective experiences (Lutz & Thompson, 2003), and the field of psychoneuroimmunology that investigates the complexities of mind-body interactions as powerful agents in the healing of diseases in the human body (Olivo, 2009).

6.6 RECOMMENDATIONS FOR FUTURE RESEARCH

Two possible avenues for future research are proposed here: 1) a further examination of the factors that contribute to reductions in perceived stress; 2) adding to a comprehensive knowledge base of the phenomenology of meditation.

6.6.1 Examination of the Factors That Contribute to Reductions in Perceived Stress

It is recommended that an attempt be made to dissect the factors involved in the significant reduction of perceived stress as measured in the current study. In particular, the social aspects of the focus groups following the meditation sessions,

wherein participants shared their experiences with others, may have added an element of psychological support that operated in combination with the stress-reducing effects of meditation.

The new study would include four research groups as detailed in Table 6.1 below. Each group would take part in different aspects of the research activity. All groups would complete pre-study and post-study PSS-14 questionnaires.

Table 6.1

Four Groups of Research Participants for a Proposed Study to Dissect the Factors Contributing to Changes in Perceived Stress

Activity	Group 1 Meditation plus focus groups	Group 2 Meditation with no focus groups	Group 3 No meditation but with focus groups	Group 4 No meditation and no focus groups
Pre- and Post- PSS-14	X	X	X	X
Meditation	X	X		
Focus Group	X		X	

The research study could be designed within the same parameters as the current study, that is, a short-term meditation program serving as an introduction to meditation that provides novice meditators with the opportunity to experience the phenomenon of meditation, and then share their experiences in focus groups immediately thereafter.

Three additional groups of research participants could be included for comparison purposes. One group would also receive training in meditation but there would be no focus groups following the meditation sessions and, therefore, no social aspects to the sharing of information. For this group, data could possibly be collected by surveys. Another group would receive no training in meditation but would take part in weekly support groups to monitor the potential emotional effects of social connection. The last group would neither receive training in meditation nor attend group discussions. Pre- and post-study PSS-14 scores would be collected for all

four groups. It is recommended that the research participants in all four groups be drawn from the same student body.

This proposed study could answer the question: *Does meditation followed by the sharing of experiences with others in a focus group setting reduce perceived stress more effectively than meditation on its own or participation in a focus group on its own?*

6.6.2 Adding to a Comprehensive Knowledge Base of the Phenomenology of Meditation

A second avenue for future research is proposed here with regard to adding to the comprehensive knowledge base of the phenomenology of meditation with regard to length of regular practise.

This prospective study would include three groups of research participants. Here, participation in a particular group would be based on experience of the phenomenon, or the length of regular meditation practise. A group of novice meditators, a group of medium-term meditators with 3 to 5 years of experience of the phenomenon, and a group of long-term meditators with over 5 years of meditation experience would be included in the study.

Each group would participate in a meditation session followed by a focus group during which participants would share their experiences. The focus groups would be audio recorded for later transcription and analysis. Comparing and contrasting the themes that emerge from the experiences reported in the three research groups would provide valuable information on the phenomenology of meditation according to length of practice. The subjective experience of the phenomenon of meditation would be captured in the participants' own words.

The proposed three groups are indicated below in Table 6.2.

Table 6.2

Three Groups of Research Participants Based on Experience or Length of Regular Practice of Meditation for a Proposed Study to Extend the Knowledge Base of the Phenomenology of Meditation

Activity	Group 1 Novice Meditators	Group 2 Medium-Term Meditators	Group 3 Long-Term Meditators
Meditation	X	X	X
Focus Group	X	X	X

This proposed study would answer the research question: *Does the subjective experience of the phenomenon of meditation change over time with regular practice?*

6.7 FINAL WORDS

This research study uses human consciousness to investigate human consciousness, which is in itself a challenging pursuit (Blackmore, 2005). An attempt was made here to use the phenomenological approach to reveal "absolute knowledge" (Jennings, 1986) or "pure descriptions of what is" (Husserl, in Barrett, 1990, p. 214) of the experience of the phenomenon of meditation. However, the tools at our disposal for capturing and sharing these experiences are words, which are linguistic devices of *relative* meaning. Research participants were asked to describe their subjective experience of a subtle and unusual state of consciousness that is often encountered with a sense of the ineffable. Hycner (1985) may refer to this as "the difficulty of verbalizing essentially non-verbal experiences" (p. 295).

Walsh (1978) cautions that the English language is considered poorly developed to communicate inner experiences, and Hycner (1985) cautions that words and verbal descriptions are not the experience. Words mediate our subjective experiences (Jennings, 1986) and are therefore merely symbolic representations of them.

Having said that, this research study has generated a rich and diverse collection of language-based data that has allowed for the answering of the research questions and satisfied the research goals. This study has increased the knowledge base of the subjective experience of the phenomenon of meditation.

The regular practise of meditation has been associated with a wide range of adaptive benefits that support the health of both body and mind (Chiesa, 2010; Grossman et al., 2004). The ancient eastern religious practice of meditation has now become established as a modern western therapeutic intervention.

Meditation, however, has a usefulness that goes beyond spiritual practices in religious settings and treatment outcomes in clinical settings. The inclusion of meditation in a package of healthy lifestyle behaviours, along with a nutritious diet, regular physical exercise and sufficient sleep, appears warranted as an inexpensive and effective activity to manage stress and increase well-being.

This study sought to gather information regarding the phenomenology of meditation. The intention is to use this information to better inform prospective meditators, meditation teachers, and healthcare providers of the subjective experience of meditation. If meditation is to be responsibly promoted as a health-supporting activity and encouraged as part of a healthy lifestyle, research findings, like those of the present study, will hopefully play a role.

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APPENDIX A: Research Participant Recruitment Poster

Feeling Stressed and Anxious?

Join our research study and learn to meditate!

We are looking for 21 students to join our 4-week research study.
We will meet for 1 hour per week for 4 weeks during which time you will receive training in mindfulness meditation and then have a group discussion about your experience.

You will receive:

FREE instruction in mindfulness meditation
FREE CD with meditation instructions to use at home
A gift at the end of the 4-week study as a gesture of our appreciation

If you would like to learn this valuable stress-reducing technique
and improve your general health and well-being
please contact Denice Basnett at denice.basnett@senecac.on.ca

We look forward to meeting you!

Cartoon used with permission of loveoftech.com

APPENDIX B: Research Participant Recruitment Email

Hello,

I am running a meditation research study and I was wondering if you would be interested in participating or if you knew of other students who may be interested.

We will meet once-a-week for four weeks beginning the week of 8th November.

At the moment, we are looking for interested participants who have 75-90 minutes of free time on Tuesdays or Thursdays.

Friday morning sometime between 9am - 11:30am may also be a possibility.

Besides reducing stress and anxiety, meditation is a very pleasant way to improve your general health and well-being.

Please let me know if you are interested. I have attached an electronic version of the recruitment poster for your information.

I hope things are going well,

Denice Basnett MA (CPsy)
School of English & Liberal Studies
Seneca@York

APPENDIX C: Informed Consent

CONSENT TO ACT AS A RESEARCH PARTICIPANT

MEDITATION STUDY

Researcher: Denice Basnett

For the degree of
Doctor of Literature and Philosophy in Psychology
at the University of South Africa

You have volunteered to participate in a research study. Participation in this study is completely voluntary. Please read all the information below. The researcher will be available to answer any questions you may have as well as provide any additional information.

PURPOSE OF THE STUDY

This study is being undertaken to investigate participants' experience of the practice of meditation. While the effects of meditation have been well researched over the past 40 years, little is known of the individual experience of meditation.

SUBJECTS

Inclusion Requirements
You are eligible to participate in this study if you are at least 18 years old or older.

Exclusion Requirements
You are not eligible to participate in this study if you are a current student of the researcher.
You are not eligible to participate in this study if you have ever been diagnosed with post-traumatic stress disorder or a serious mental illness such as schizophrenia.

TIME COMMITMENT

Participants will participate in a meditation group session of about 1 hour each week for 4 weeks. Each meditation group will include 4-7 participants. Each group session will include 20-25 minutes of meditation practice followed by a 30-minute group discussion. A 30-minute individual interview will be conducted at a time convenient to you within 10 days of your last meditation group session.

PROCEDURES

The following procedures will take place:

You will be asked to complete the Perceived Stress Scale (PSS) at the start of the study and at the end of the study. The PSS covers 14 stress-related questions and will take a few minutes to complete.

As a member of a study group, you will be invited to sit quietly and practice meditation for approximately 20-25 minutes. The meditation group will be lead by the researcher. After meditation, you will be asked to discuss your meditation experience. The group discussion will be taped for later analysis.

You will receive a CD with 20 minutes of guided meditation. While you are encouraged to practice meditation at home at a time that is convenient for you, this is not a requirement for participation in the study.

You will also receive a meditation diary to make notes regarding your meditation experiences should you choose to practice at home. You may also use the diary to record any thoughts you may have regarding meditation in general or your research study experience.

After the four weekly group sessions, you will be asked to meet with the researcher for a 30-minute individual interview. The interview will be taped for later analysis. The meditation diary will be handed back to the researcher at this time. The post-study PSS will also be completed at this time.

RISKS AND DISCOMFORTS

There are no known risks or discomforts. However, should you experience discomfort of any kind, either with the practice of meditation or with the group discussion, you may withdraw from the study without consequence.

BENEFITS

The practice of meditation has been associated with reduced feelings of anxiety and an increased sense of well-being. There are also a number of positive health-related consequences to the practice of meditation. This information will be provided to you upon request.

COST FOR PARTICIPATION

There will be no cost for participation in the study.

REMUNERATION FOR PARTICIPATION

You will not be paid for your participation in this study. However, you will receive at no charge a 20-minute guided meditation on CD which you may use to practice meditation on your own in the comfort of your home should you choose to do so.

You will also receive a small gift at the end of the study as a gesture of thanks for your valued participation.

WITHDRAWAL FROM THE STUDY

You may withdraw from the study at any time. Please notify the researcher in person or by email should you decide to withdraw. There will be no consequence for withdrawal. The researcher may also end your participation in this study if your presence proves disruptive to the study in any way or if you miss scheduled appointments.

CONFIDENTIALITY

Participant Data
Your participation in the study will be completely private and confidential. You may share information about your participation in this study with others should you choose to do so. Your identity as a study participant will not be released for any reason without your signed consent. For the purposes of data analysis, your identity will be kept anonymous. You will be identified in the research data by an anonymous code.

Data Storage
All electronic data files (audio files and transcribed files) will be stored on personal computers of the researcher and will be maintained in a secure location away from the college. Only the researcher will have access to study files.

IF YOU HAVE ANY QUESTIONS
Please contact the researcher by email at the following address:
denice.basnett@senecac.on.ca

VOLUNTARY PARTICIPATION STATEMENT

Participation in this study is completely voluntary. Once you have read this information and all your questions have been answered to your satisfaction, please sign below, print your name and date the form.

Please check the box below to indicate that you have received a copy of this document for your records.

PARTICIPANT STATEMENT

The requirements of participation in this study and the research process have been clearly explained to me. I know that I will be required to attend four weekly meditation sessions of approximately 1 hour and 15 minutes each during which I will practice meditation in a small group followed by a discussion of my meditation experience.

I will be invited to an individual interview of approximately 30 minutes once the group sessions have been completed.

I understand that participation is completely voluntary. I may choose not to participate. I may withdraw from the study at any time without consequence.

☐ I have checked this box to indicate that I have received a copy of this statement.

PARTICIPANT'S SIGNATURE _____

PARTICIPANT'S NAME _____

DATE OF SIGNING _____

RESEARCHER'S SIGNATURE _____

RESEARCHER'S NAME _____

DATE OF SIGNING _____

APPENDIX D: Perceived Stress Scale - PSS-14

PSS-14

INSTRUCTIONS:

The questions in this scale ask you about your feelings and thoughts during THE LAST MONTH. In each case, you will be asked to indicate your response by placing an "X" over the circle representing HOW OFTEN you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate.

	Never	Almost Never	Sometimes	Fairly Often	Very Often
	1	2	3	4	5
1. In the last month, how often have you been upset because of something that happened unexpectedly?	O	O	O	O	O
2. In the last month, how often have you felt that you were unable to control the important things in your life?	O	O	O	O	O
3. In the last month, how often have you felt nervous and "stressed"?	O	O	O	O	O
4. In the last month, how often have you dealt successfully with day to day problems and annoyances?	O	O	O	O	O
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?	O	O	O	O	O
6. In the last month, how often have you felt confident about your ability to handle your personal problems?	O	O	O	O	O
7. In the last month, how often have you felt that things were going your way?	O	O	O	O	O
8. In the last month, how often have you found that you could not cope with all the things that you had to do?	O	O	O	O	O
9. In the last month, how often have you been able to control irritations in your life?	O	O	O	O	O
10. In the last month, how often have you felt that you were on top of things?					

PSS-14

	Never	Almost Never	Sometimes	Fairly Often	Very Often
	1	2	3	4	5
11. In the last month, how often have you been angered because of things that happened that were outside of your control?	O	O	O	O	O
12. In the last month, how often have you found yourself thinking about things that you have to accomplish?	O	O	O	O	O
13. In the last month, how often have you been able to control the way you spend your time?	O	O	O	O	O
14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	O	O	O	O	O

APPENDIX E: Meditation Script

MEDITATION SCRIPT

Sitting comfortably with your feet flat on the ground. Back straight, well supported. Head in a stately, dignified position, yet relaxed. Shoulders relaxed. Hands folded in your lap.

Close your eyes, or if it is more comfortable for you, look downwards slightly and leave your eyes open a little...

Taking a deep breath in to begin...and then breathing out slowly...

Breathing...in and out...in and out...

Becoming aware of the natural rhythm of your breathing...chest expanding gently as you breath in...letting go as you breath out....

Becoming aware that your breathing occurs in a continuous flow...

Breathing in...expanding...and then breathing out...emptying...

Becoming aware of the smoothness...of breathing in and breathing out...

Breathing in...and then automatically breathing out..

Now becoming aware of that small space, of that gap, between breathing out...and your lungs emptying...and then breathing in again...in....and out...

Focusing now on your breathing...in...and out...

Feeling your chest lift as you breath in...and feeling your chest empty as you breath out...

And if you find thoughts distracting you...just gently bring your attention back to your breath....

Breathing in...and out...

Bringing your attention back to your breathing...

Once again, becoming aware of the rhythm of your breathing...in...and out...in...and out...

And if you find your mind wandering...being distracted by thoughts...without judgment, without criticism...just gently bringing your attention back to your breath...

Feeling the rhythm of your breathing...in...and...out....

Becoming aware now of how deeply relaxed you are...of how comfortable you are...

And if any part of your body is tense or uncomfortable...placing your attention there...breathing into that space...and just letting the tension...the discomfort...go...as you breathe out,,,

Feeling the expansion of your chest...as you breath in...and feeling the fall of your chest as you breath out...

In...out...

And slowly now bringing your attention to your breath...

Taking a slow, deep breath in now...holding it just for a second...

Now breathing out...slowly...emptying your lungs...

And ...once more...deep breath in....

And out...

And, when you are ready, opening your eyes slowly and becoming aware once again of your surroundings....

Sitting now...comfortably...relaxed...eyes open....

And when you are ready, in your own time, taking a deep breath...you are done.

Namaste

APPENDIX F: Informal Script for Exit Interviews

SEMI-STRUCTURED EXIT INTERVIEW

Here is a questionnaire just like the one you completed when we met before we began our meditation sessions.

Can you please complete it according to the thoughts and feelings you've had over the last month, so that is since we first began our meditation sessions.

[Participant completes PSS-14]

We have completed four sessions of meditation over the past four weeks.

Q1: Do you have any questions you would like to ask me about meditation?

Q2: Do you have any questions you would like to ask me about the research study?

Q3: Do you have anything more you would like to add about experiences you had during our meditation sessions?

I would like to thank you most sincerely for being part of this study.

It is very much appreciated.