Chapter 1

Introduction

The concept of mindfulness has been explored in many contexts, ranging from its advantages in management practices (Marques & Dhiman, 2009), relationship with spirituality (Garland, Carlson, Cook, Lansdell, & Speca, 2007), to its therapeutic effects on certain psychiatric disorders (Zarrabian, 2010). Results have mostly shown positive results. Mindfulness has its roots in Buddhist meditative traditions and has been in existence for the past 2500 years. Though it originated in Buddhist practices, it is also a key component of several other Eastern traditions (Shapiro, 2009). Almost every religion today appears to have certain components that resemble mindfulness.

The term mindfulness is equivalent to sati from the Indo-Aryan language of Pali. Sati means “to remember”, and implies the presence of mind in a situation (Bodhi, 2000; Thera, 1973). Mindfulness is the “presence of mind” that allegedly lets an individual experience the inner and outer world as it is, distinguishing it from projections and misunderstandings (Thera, 1973). However, put in simple words, mindfulness means being in the moment. Although the direct translation of the word means “to remember,” in essence, it is to remember to be present in a moment. One is more aware of one’s inner and outer experience, one’s own thoughts, emotions, sensations, feelings and our surroundings without responding to or striving to change them when one is mindful (Fulwiler & Torrijos, 2011). Brown, Ryan and Creswell (2007) outlined certain characteristic features of mindfulness that are more interrelated than mutually exclusive
components. Some of the major hallmarks of mindfulness are such components as clarity of awareness, flexibility of awareness, continuity of attention, nondiscriminatory awareness, empirical stance towards reality and present-oriented consciousness (Brown, Ryan, & Creswell, 2007).

To understand mindfulness completely, one must also understand the distinction between the related concepts of awareness and attention. Both awareness and attention are the features of our consciousness. Awareness is the conscious registration of stimuli, and it involves the participation of our physical senses. When we come in contact with a stimulus that is strong enough, we engage our attention (Brown, Ryan, & Creswell, 2007). Attention involves the “taking notice of” or “turning towards” the object (Nyaniponika, 1973). Anderson (2005) defines attention as the behavioral and cognitive process of selectively concentrating on a discrete aspect of information, whether deemed subjective or objective, while ignoring other perceivable information. Attention during mindfulness is different from the active stimulus-driven attention that we are familiar with; instead, it is mostly referred to as a state of receptivity and meta-awareness (Siegel, 2007). It is the awareness of awareness.

Three broad dimensions of attention are: alerting attention, orienting attention and executive attention. Alerting attention is the sustained attention given to a particular stimulus or the alertness to respond in preparation for a stimulus. Orienting attention is the ability to scan a variety of options, to select certain specific information. Executive
attention refers to the type of attention required for decision making, conflict resolution among competing stimuli, error detection and so on (Siegel, 2007).

Brown, Ryan and Creswell (2007) explained certain interrelated aspects of mindfulness that can be described as follows: pure and lucid awareness during mindfulness as the state of being aware of one’s inner as well as outer surroundings through thoughts, feelings, emotions, sensations and actions at that moment. The clarity of one’s awareness, this “unbiased receptivity” is considered to aid unconstrained access to knowledge that manifests in different circumstances of life. Mindfulness is also said to include a component of non-interference with experience i.e. the awareness of being mindful disentangles our mind from the influences of our cognitive content, which contributes to our evaluation of thoughts. The focus is more highly directed towards the details of that moment. This direct insight into reality characterized by a pure awareness suggests its “non-conceptual” nature.

The voluntary regulation of awareness and attention is also a major criterion of mindfulness. Depending on the situation and preference, the focus of one’s attention and awareness could be diverted from the salient characteristics of something in particular to the zooming out on the various outlooks of the situation itself. This feature of mindfulness emphasizes the flexibility of one’s awareness that moves from a larger perspective to the minute details of something, in particular, by the circumstances that one come across. Another significant criterion of mindfulness is present-oriented consciousness. Mindfulness focuses towards the awareness and presence of the moment.
we are in, while all other realities cease to exist. Our mind has the skills to travel to our past experiences or future fantasies. However these accounts of the past, the present, and the future permit us to experience only partially our existing reality that provides an important regulatory purpose.

A final component of mindfulness is the steadiness of attention and awareness that differs depending on the mental strength of different individuals. At a greater capacity, this quality of awareness is more stable and continuous. It helps in identifying one’s conceptual understanding of past experiences and emotions or the probable future, and in returning one’s awareness to the moment at present. An instance of mindfulness is when an individual realizes that he/she is not attentive towards something. This steadiness and continuity in mindfulness thereby facilitates the shift in focus from something narrow to something broad or vice versa without disruption (Brown, Ryan, & Creswell, 2007).

It is not strange to find that these definitions of mindfulness are drawn from Eastern philosophies, especially from Eastern traditions of mindfulness because of its historical roots. However, the concept has been widely explored in the Western realm as well. Ellen Langer is one amongst many leading authors who has been studying mindfulness from a Western perspective. According to Langer (2009), mindfulness is the feeling of being involved or engaged by an active mind while noticing new stimuli. She explains mindfulness as a concept with three-fold characteristics: 1) creation of new categories, 2) openness to new information, and 3) awareness of more than one
perspective (Langer, 1991). Further, she defines mindfulness as “a state of mind that results from drawing novel distinctions, examining information from new perspectives, and being sensitive to context” (p. 44). According Langer and Moldoveanu (2000), mindfulness is a process of novel distinction, and de-automatization. Furthermore, they point out that the subjective feeling of being in the state of mindfulness is an increased state of involvement and involves an experience of living in the here and now. Careful examination of Langer’s definition reveals that mindfulness involves the key concept of bottom-up and focus in process-before-outcome which are concepts also present in Eastern traditions.

Langer also emphasizes its similarities with the Eastern conceptions of mindfulness. But she cautions from drawing a comparison based on differences in the historical and cultural background in which they are rooted in, especially how mindful states are said to be achieved through practices, that are found in Eastern traditions (Langer, 2014). Langer believes that mindfulness states can be accomplished without meditation. We are more likely to find a novel distinction when one learns facts in a conditional way (Langer, 2009). It appears that a novel distinction is the key aspect of the Western concept of mindfulness as opposed to the post-meditative state of mindfulness in Eastern meditative traditions.

The moral issues and elaborate system of cosmology found in the Eastern system are other distinctions from the Western concept of mindfulness (Langer, 1991). According to Langer (2009), mindlessness comes either by repetitive action or by a single
exposure to information. The Western studies on mindfulness seem to be more concerned about the demerits of mindlessness. For example, the early studies by Langer and Benevento (1978) on self-induced dependency and another study by Langer, Perlmutter, Chanowitz and Rubin (1988) on the application of mindlessness theory on alcoholism and aging demonstrated very clearly that there may be adverse impacts of mindlessness on an individual. For example, they showed that there was a poor outcome in the treatment of alcoholism among participants with mindless premature cognitive commitments.

Even the classic Milgram experiment (Milgram, 1963) on obedience may be considered as a study of the impact of mindlessness. Based on these studies, mindlessness can be identified as a state of mind indulging in concepts such as habit, functional fixedness, overlearning, and automatic processing. In all, most experimental evidence suggests that mindful individuals are in a better position to take advantage of certain opportunities that the mindless individual is unaware of (Langer, 1992). The mindfulness concept and technique to achieve or increase the level of mindfulness that is applied in this current study borrows the idea mostly from Eastern practices and traditions. Thus, an elaborate discussion on a Western perspective is outside the scope of this dissertation.

As stated earlier, another important aspect in the discourse of mindfulness is to define the term mindfulness. While no clear consensus exists regarding the definition of mindfulness, some scholars have attempted to define mindfulness based on its different approaches. A two-component model of mindfulness is one of them. It is developed by
incorporating self-regulation of attention towards immediate experiences and a curious and accepting orientation towards one’s specific experiences at that particular moment (Bishop, Lau, Shapiro, Carlson, Anderson, Carmody, Segal, Abbey, Speca, Velting, & Devins, 2004). Mindfulness is akin to ‘bare’ attention since it involves attending to our experiences without interruption of speech or thought (Thera, 1972). Brown and Ryan (2004) have explained mindfulness in similar terms, defining it as “an open or receptive attention to and awareness of ongoing events and experience” (p. 245). Despite these various perspectives, the most common and well-accepted definition of mindfulness was given by Kabat-Zinn (2003), one of the leading authorities on secular mindfulness meditation. According to him, mindfulness can be explained as "paying attention on purpose, in the present moment, and non-judgmentally, to the unfolding of experience moment to moment (p. 145).”

Considering the growing evidence of clinical benefits of mindfulness-based interventions, the lack of an explicit operationalization of the term mindfulness in the field of modern psychology comes as a surprise to some writers (Chiesa, 2012). Understanding of this concept to a certain extent remains elusive. However, certainly an in-depth understanding concerning Western and Eastern Psychological perspectives could lead to far more advancement within this field than what it offers at this stage. One can attribute the confusion created by the diversity of definitions to the tendency of mixing Western and Eastern ideas of mindfulness.
Since this study applies the Eastern concept of mindfulness based on Eastern meditative traditions, it is important to look at mindfulness in the context of Eastern meditation. Shapiro (1982) attempts to differentiate meditation practice into two broad categories: concentrative and opening-up meditations. The difference between concentrative meditation and opening-up meditation is simple. Concentrative meditation involves a restriction of awareness by focusing one's attention on a single object while ignoring other stimuli in the environment. The focus of attention can be towards an object either in the external or within the internal environment, for instance chanting a mantra or observing one's breath. Conversely, the opening-up meditation involves a conscious attempt to attend to all internal and external stimuli within the environment in a nonjudgmental and detached manner. A focus on a particular stimulus is avoided. Mindfulness meditation, which is the focus of this study, is a type of opening-up meditation technique (Shapiro, 2009). Thompson (2015) hypothesizes that an individual practicing this kind of meditation notices the thoughts and feelings as they rapidly arise and then reports the experience precisely in terms that is understandable to the layperson. According to him, in these types of meditations, the mind itself becomes the object of attention and awareness.

In the past decade, there has been a surge of literature in mindfulness, demonstrating its effects and broad applications in psychotherapy and contemplative neuroscience. An emerging body of literature suggests significant improvements in various disorders through mindfulness (Hayes, Follette, & Linehan, 2004; Hofmann, Sawyer, Witt, & Oh, 2010). Buddhist philosophy and psychology are fields devoted
towards suppression of covert habits and tendencies that are linked with the onset and maintenance of destructive emotions, e.g., anger, and the enhancement of positive emotions, e.g., happiness and care. This association best explains the link between growth in one’s psychological health concerning mindfulness meditation (Chambers, Gullone, & Allen, 2009). The psychological dimension of mindfulness has proved its efficacy in the intervention of both physical and mental conditions (Shapiro et al., 2006).

The effect of mindfulness on the brain, specifically through the deactivation of the default mode network (DMN), has been a consistent finding (Siegel, 2007). Its application in the cultivation of attention, positive emotions, and compassion has been of great interest (Germer, Siegel, & Fulton, 2013). Mindfulness has also been known to significantly improve cognitive functions, such as memory, concentration, and learning (Chiesa, Calati, & Serretti, 2011). Vipassana meditation, a type of mindfulness practice, has been shown to increase self-reports of greater focus, greater emotional intelligence, less negative emotions, improved self-control and greater group and environmental sensitivity among other factors in organization setup (Marques & Dhiman, 2009).

The application of mindfulness appears to be innumerable. In education, mindfulness can result in increased creativity, problem-solving, and successful transfer of skills and knowledge (Langer & Moldoveanu, 2000). The past decade saw the rise of behavioral based mindfulness therapies such as Mindfulness-Based Stress Reduction (MBSR), developed by Kabat-Zinn (2003) during the 1970s, as well as cognitive based therapies such as Mindfulness Based Cognitive Therapy (MBCT), a variation of the
MBSR, developed by Segal, Williams and Teasdale in 2002. The success of such programs has been prominent across clinics, hospitals, schools, organizations and in other contexts where stress is prominent.

MBSR programs are a promising intervention in stressful corporate environments. The bodily response to stressors like threat, demand or pressure produces the activation of the fight or flight mechanism for self-protection. However, more often than not, this response to stress is triggered by our automatic reaction to situations, rather than to stress. Therefore it causes a chronic activation of this stress response leading to health issues that could be addressed through mindfulness as a practice for stress reduction.

Mindfulness helps in bringing these automatic or habitual responses into one’s awareness, as a result breaking the cycle of these learned responses (Fulwiler & Torrijos, 2011).

Similarly, the MBCT, used commonly to prevent depression, has been known to be effective in preventing relapse and can be used to prevent and address a broad range of maladaptive behaviors and clinical symptoms. It carefully explores the underlying mechanisms involved in rumination and the patterns of negative thinking as involved in depression (Teasdale, Segal, Williams, Ridgeway, Soulsby, & Lau, 2000). Khoury et al., (2013) conducted a meta-analysis on Mindfulness-Based Therapy (MBT) using more than 200 studies comprising of participants with a wide variety of disorders. The meta analysis demonstrated that MBT is an effective treatment option for individuals with certain psychological problems, especially anxiety, depression, and stress.
It is interesting to note that the studies carried out on mindfulness meditation, with few exceptions, mostly involve seasoned meditators or participants, although new to mindfulness, taking long-term meditation courses or retreats. Although long-term courses are generally suggested and preferred by some people (Hart, 2009), many individuals may not always be able to meditate for a long time due to several reasons or to meditate using all the techniques prescribed. They may simply prefer to practice meditation through a shorter format. One such study builds a case for the usefulness of short-term courses. The study demonstrated an increase in the attention of participants through mindfulness breathing practice for four sessions of 20 minutes duration only (Zeidan, Johnson, Diamond, David, & Goolkasian, 2010). This short-term study was found to have the same positive cognitive effect on participants as most other long term meditators’ reports. The result is encouraging, and at the same time merits further investigation of the impact of short format meditation.

This research attempted to examine the effects of short format body-scan mindfulness meditation with an emphasis on cognition and affect. Most mindfulness awareness practices (MAPs) occur over several weeks during which the participants are taught the principles and techniques of mindfulness through lectures, discussions, and a practice of the techniques. The MAPs comprise several techniques to cultivate mindfulness including several sessions of body-scan meditation, other sitting meditation practices, for example, breathing mindfulness, mindful walking, and, in some cases, specific yoga techniques.
This study focused on a particular MAP technique referred to as body-scan meditation. Body-scan mindfulness meditation is the primary method of *vipassana*-oriented meditation and is also called *vipassana* proper (Hart, 2009). *Vipassana* is one among many meditation approaches that are commonly known as mindfulness in the mainstream literature (Germer, Siegel, & Fulton, 2013). During the body-scan, participants are asked to focus their attention towards their body and sense their whole body part by part, while in a resting position. It is done to make the participants aware of the sensations, thoughts and feelings experienced by them during the activity.

**Objectives**

The study attempted to investigate whether short format body-scan meditation has any benefit on individuals. Specifically, the following objectives were set:

1. To observe whether there is any effect of practicing short format body-scan meditation on negative and positive affect.

2. To observe whether there is any impact of such short format body-scan meditation practice on cognitive functions.

**Need of the study**

Even though some individuals may want to spend the time required to practice long format meditation or practice mindfulness in long-term retreats, it may not be possible and affordable to many. It substantiates the need to identify whether individuals can still benefit from the practice of mindfulness when they only spend a little time
without much disturbance in their daily life schedule to practice it. Short format mindfulness, if found to be beneficial, could be practiced in multiple settings where usually relatively less time is spent, for example, in brief psychotherapy.

In the author’s experience, many individuals who are aware of the benefits of meditation usually associate the practice with something that requires a significant amount of time and patience. This notion may be true if an individual is trying to achieve the utmost benefit he or she can get from meditation. However, it is also imperative to investigate the impact of short format practice so that individuals are informed about advantages of both long format and short format practice.

Another important aspect of this study is to focus on one single technique, that is, the body-scanning technique. Most extended format meditation practices, such as Mindfulness Based Stress Reduction (MBSR), are comprised of multiple methods. However, knowing the effect of a single, specific technique may help individuals choose or emphasize an appropriate method based on their need and its utility.

**Research question**

The study aimed at finding answers to the research question of whether there was any effect of short format body-scan mindfulness meditation on affect and cognitive functions.