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## Mindfulness-Based Interventions and Processes of Change: A Conceptual Model for Clinicians

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**MINDFULNESS-BASED INTERVENTIONS AND PROCESSES OF  
CHANGE: A CONCEPTUAL MODEL FOR CLINICIANS**

**PROFESSIONAL DISSERTATION**

**SUBMITTED TO THE FACULTY**

**OF**

**THE SCHOOL OF PROFESSIONAL PSYCHOLOGY  
WRIGHT STATE UNIVERSITY**

**BY**

**SHALAGH A. FRANTZ, Psy.M.**

**IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE  
OF  
DOCTOR OF PSYCHOLOGY**

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**WRIGHT STATE UNIVERSITY**  
**SCHOOL OF PROFESSIONAL PSYCHOLOGY**

June 1, 2013

I HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER MY SUPERVISION BY **SHALAGH A. FRANTZ** ENTITLED **MINDFULNESS-BASED INTERVENTIONS AND PROCESSES OF CHANGE: A CONCEPTUAL MODEL FOR CLINICIANS** BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PSYCHOLOGY.

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## **Abstract**

Mindfulness-based interventions are receiving a great deal of attention from clinicians and researchers and research in this field is increasing dramatically in the past decade. Much of this research is consistent with positive psychotherapeutic outcomes for a wide range of presenting clinical issues. As with any seemingly successful psychotherapeutic treatment, it can be helpful to understand the processes of change underlying mindfulness-based interventions that are responsible for observed positive outcomes. In doing so, the effective components of an intervention can be refined and perfected, while components deemed unneeded can be appropriately discarded. This dissertation critically reviews the literature's current understanding of the processes of change associated with mindfulness-based interventions. This dissertation also explores the connection between Western mindfulness based interventions and the unaltered forms of mindfulness as it originated from Buddhist psychology. In addition, this dissertation attempts to elucidate a conceptual model that helps clinicians understand how these processes of change may interact in clinical settings. Future directions include fully developing a clinician's resource guide based on this conceptual model and gathering further empirical support for processes of change and the proposed conceptual model.

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## Chapter I

There is a growing body of research suggesting that mindfulness-based interventions such as mindfulness-based stress reduction (MBSR; Kabat-Zinn, 1982), mindfulness-based cognitive therapy (MBCT; Segal, Wililams, & Teasdale, 2002), acceptance and commitment therapy (ACT, Hayes, Strosahl, & Wilson, 1999); and dialectical behavior therapy (DBT; Linehan, 1993) lead to clinically significant improvements in psychological and physical functioning, as well as promote stress reduction in healthy individuals (Carmody & Baer, 2008; Chiesa & Serretti, 2010; Grossman, Neimann, Schmidt, & Walach, 2004; Hayes, Luoma, Bond, Masuda, & Lillis, 2006; Lynch, Trost, Salsman, & Linehan, 2007; Salmon et al., 2004; Pull, 2009). Recent reviews of the literature suggest that mindfulness is positively associated with psychological health and that training in mindfulness may improve subjective well-being, reduced psychological symptoms and emotional reactivity, and improve self-regulation of behavior (Chiesa & Serretti, 2010; Davis & Hayes, 2011; Grossman et al., 2004; Keng, Smoski, & Robins, 2011). In addition, neurobiological findings demonstrate that mindfulness meditation practices are associated with changes in the activation of specific regions of the brain and preliminary evidence indicates that mindfulness meditation practices could enhance cognitive functions (Cahn & Polich, 2006; Chiesa, Calati, & Serretti, 2011; Chiesa & Serretti, 2010; Ivanovski, & Malhi, 2007; Jha, Stanely, Wong, Gelfand, & Kiyonaga, 2010). Despite the numerous research articles demonstrating the

effects of mindfulness on well-being and reduction in psychological symptoms, there remains relatively little understanding of what mechanisms mediate the processes of the change observed in these studies.

Elucidation of the mechanisms of change occurring in mindfulness-based interventions for specific diagnoses is important in developing an understanding of what changes are important in accounting for the improvements in psychological functioning. Ultimately, this would improve the utility and application of mindfulness-based interventions and hopefully maximize their effectiveness by helping psychologists to understand how mindfulness training can exert characteristic effects within specific disorders (Kabat-Zinn, 2003). At present, several researchers have developed theoretical conceptualizations of processes that could be mediating the changes observed with mindfulness-based approaches, a few of which include the concepts of psychological flexibility, self-compassion, decentering, and emotion regulation (Baer, 2010; Chambers, Gullone, Allen, 2009). Despite a growing body of research attempting to evidence these theories of change processes, no attempts have been made to coherently synthesize this new research in accordance with the aforementioned theoretical conceptualizations, particularly as categorized by diagnosis. In order to further understand the mechanisms of change associated with mindfulness-based interventions, there is a need to analyze and synthesize emerging research in this area. It is also vital to educate clinicians who are interested in and actively utilizing mindfulness interventions in their practice regarding the most recent research findings that can best inform their clinical work.

Therefore, the aim of this dissertation is to create a critical review of the mindfulness-based intervention literature that encompasses the latest research on the

impact of mindfulness-based interventions, the field's present understanding of the constructs of mindfulness that are associated with the mechanisms of change, and connect these works with the original Buddhist psychological and philosophical constructs that define mindfulness. As such, the purpose of this critical review is fourfold. First, this review is meant to update and integrate the field's understanding of the mechanisms of change associated with mindfulness-based interventions in order to reflect new research emerging from clinical psychology, neuropsychology, positive psychology, and mindfulness meditation research. The purpose of this task is to identify what, if any, common, critical, factors exist between the mechanisms of change in mindfulness-based interventions, and evidenced-based treatments for a particular diagnosis. Second, it is the purpose of this critical review to summarize all relevant information that connects how Buddhist philosophy may or may not be related to these mechanisms of change. Third, this critical review will also include a conceptual model of how these mechanisms of change interact in a clinical setting and how they can be properly applied in treatment. Fourth, this review will provide the foundation for the development of a clinician's resource guide that will encompass what components of mindfulness-based interventions should be attended to in clinical practice.

Therefore, the goal of this dissertation is to create a critical literature review and a conceptual model for clinicians that is based on the latest research which (1) identifies what common factors may exist in the research on mindfulness-based interventions and evidenced-based interventions as categorized by diagnosis, (2) explains the connection to the original Buddhist constructs of mindfulness, (3) can be easily used by clinicians that have a desire to improve the utility and maximize effectiveness of the mindfulness-based

interventions they incorporate into their therapeutic work, and (4) will form the foundation of what will ultimately be developed into a complete clinician's resource guide.

## **Chapter II**

### **Literature Review**

The concepts of mindfulness and mindfulness practice referred to in the psychological literature originate from ancient contemplative spiritual traditions, particularly as adapted from Buddhism, as well as aspects of both the Sāṅkhya and Yoga schools of Indian philosophy (Baer, 2003; Barua, 1990; Bishop et al., 2004; Kabat-Zinn, Lipworth, & Burney, 1985; Kalupahana, 1987; Seigel, Germer, Olendzki, 2009). Mindfulness is a 2,500 year old practice that has been referred to as the 'heart of Buddhist meditation.' It is considered the foundational stance of attention aimed at striving towards the state of cessation and freedom from suffering, or *nibbāna* (Kalupahana, 1987; Thera, 1992). Buddhist's believe that continued engagement in the practice of mindfulness meditation teaches one how to eliminate needless suffering, while simultaneously cultivating the components of awareness, attention, and remembering. It is through mindfulness practice, that insight into the nature of the mind and the environment that composes reality may be found. As insight is attained, mindfulness exposes habits of the mind that perpetuate suffering and unhappiness, such as greed, anger, or various harmful behaviors (Seigel et al., 2009).

## **What is Mindfulness?**

A very simple definition of mindfulness by Brown and Ryan (2003) describes mindfulness as the basic human capacity to maintain a quality of conscious attention and awareness to the present, moment-to-moment unfolding of experience. When illuminating the linguistic roots of the original Pali word for mindfulness, 'sati', the word mindfulness evokes meaning relating to a combination of awareness, attention, and remembering (Seigel et al., 2009). Brown and Ryan (2003) describe this *awareness* by likening it to “the background ‘radar’ of consciousness” (p. 822) which is continually monitoring the inner and outer environment. *Attention* is a process of focusing conscious awareness, so as to provide increased or heightened sensitivity to a much smaller range of experience (Westen, 1999). *Remembering*, on the other hand, is the intention to engage in mindfulness practice, and remembering to open oneself to awareness and pay attention (Seigel et al., 2009).

However, the aforementioned definition of mindfulness only encompasses its linguistic components, but mindfulness is in fact much more nuanced. As a result, there are many definitions of mindfulness observed in the psychological literature on the topic. This is largely because there is a great deal of diversity amongst the various Buddhist traditions relating to what factors should be included in descriptions of mindfulness. This diversity is also reflected in the ongoing debate within the psychological literature as to what exactly constitutes the construct of mindfulness (Carmody, 2009). As a result of this debate, there has been a historical difficulty with prevailing research studies investigating the effects of mindfulness practice because studies potentially employed

and measured different constructs of mindfulness. Much of this debate is centered around whether or not mindfulness refers to mental skill utilized as a part of practicing mindfulness, or rather a state or trait that emerges as a result of mindfulness practice (Brown, Ryan, & Creswell, 2007). Therefore, it continues to be difficult to generalize and compare research findings when differing definitions of mindfulness have been used and this should be considered while comparing and contrasting the research findings contained within this dissertation (Bishop et al., 2004; Chiesa & Malinowski, 2011).

One of the most commonly observed definitions used in the literature was coined by Jon Kabat-Zinn (1994), and supported by Baer (2003), as an appropriate operationalized working definition of mindfulness. According to this definition, mindfulness is "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgementally to the unfolding of experience moment by moment" (p. 4). This is also the most commonly used working definition of mindfulness utilized in research studies. It is important to note that use of this definition implies that mindfulness is a *state* rather than a trait and that while mindfulness may be promoted by certain practices or activities, such as meditation, mindfulness is not equivalent to those practices (Davis & Hayes, 2011). Carmody's definition of mindfulness is slightly different in that it attempts to describe what mindfulness cultivates. Her definition of mindfulness is "intentionally paying attention to present-moment experience (physical sensations, perceptions, affective states, thoughts and images) in a nonjudgemental way and thereby cultivating a stable and nonreactive awareness" (p. 271). Another commonly referenced definition of mindfulness was the basic Brown and Ryan (2003) definition noted earlier, which Germer, Siegel, and Fulton (2005) somehow simplify further by

defining mindfulness as "moment-by-moment awareness" (p. 6). Martin's (1997) definition expresses the relationship that mindfulness has to the Buddhist concept of *attachment*, which says: mindfulness is "a state of psychological freedom that occurs when attention remains quiet and limber, without attachment to any particular point of view" (p. 291).

### **Origins of Mindfulness**

In order to understand how Western psychology has arrived at a Western definition of mindfulness, it may be helpful to explore the relationship that mindfulness has with Buddhist psychology. First of all, it is important to note that within Buddhism itself, there are several primary schools of Buddhism: Theravada, Mahayana, Vajrayana, as well as Zen, Ch'an, and Korean (Olendzki, 2003; Segall, 2003). While all share some "universal" doctrines, they do diverge in their own particular ways. Therefore, for the purposes of clarity and coherence of understanding, this version of Buddhist psychology is largely based on Olendzki's (2003) conceptualization of Buddhism within the Mahayana tradition, which references the earliest formulations of Buddhism and to which the reader is referred for greater depth. This is the Buddhism that is chronologically connected to the time of the historical Buddha, Siddharta Gautama Sakyamuni and would have arisen somewhere in India sometime between the 6th and 3rd centuries B.C.E.

First, it may be helpful to understand some of the ethical and philosophical foundations upon which Buddhist psychology is built. The Buddhist approach to the mind begins with the principle that the mysteries of the human condition are best explored in the forever unfolding of each present moment by paying attention to and systematically assessing one's subjective experiencing in meditation. This type of



systematic assessment is quite similar to the Western conception of applying a scientific method of trying to understand the human body and mind to the stream of consciousness. From a Western perspective, it might be easy to assume that this might be a Buddhist "theory of mind." However, a theory of mind refers to an ability to infer mental states, such as beliefs, desires, emotions, etc., that cause action and allows humans to reflect upon the contents of one's own mind, as well as other's minds. A "theory of mind" does not quite fit for Buddhism, because Buddhism asks each individual to examine for oneself one's personal experience and offers an acknowledgement of the probability that each person's subjective experiencing may be different (Olendzki, 2003).

Therefore, from a Buddhist perspective, consciousness doesn't consist of stringing together moments of knowledge over a period of time, but consciousness is simply a moment of awareness or knowing. This awareness or knowledge would relate to some aspect or quality of the subjective present moment, which could be anything we are capable of detecting with our senses, perceptions, or mind. This consciousness is what allows us to have the ability to be aware. This moment to moment awareness of the present is why Buddhists have invested themselves in the practice of meditation because it is a vehicle that allows an individual to continually bring attention to one's present experiencing in order to observe what is happening within each present moment at any time. Therefore, meditation is a continual process because the moment the attention wanders, it encourages the meditator to redirect the attention back to the present moment (Olendzki, 2003).

Through this continual process of attending and redirecting in meditation, patterns begin to emerge. From each moment of knowing, which is present and accessible at any

moment, the Buddhist conceptualization that all of one's experience or even reality, itself is a human construction, ultimately making Buddhism quite psychological in nature (Kalupahana, 1987; Olendzki, 2003). Thereby, Buddhism suggests that each person is actively constructing one's own independent reality and can modify and change that construction at any moment (Olendzki, 2003). Arising from this construction is what is known as a "psychophysical personality," a word that is somewhat analogous to the Western conception of consciousness, but is different in that it places greater emphasis on the dependence of the mind on the physical body and the capacity for the mind to influence the physical, as well as denying the existence of a permanent and eternal self (Kalupahana, 1987; p. 15). Within Buddhist psychology, the practice of trying to understand how we go about constructing our own reality is important in helping us learn how to experience happy lives that are enriched with meaning. Although some aspects of the construction of reality are argued to be universal, most people's constructions of reality are unique because how we think, see, hear, and react to the world around us is conditioned and shaped by a network of our prior experiences that combine in influencing who we are in the unfolding of the present moment. Some of these conditions might arise from our past, such as childhood experiences, an influence from the present, such as our mood, as well as our attitudes towards the future that influence how our future will reveal itself. From each moment-to-moment, our thoughts, feelings, and behavior have been influenced in some way by the moments that immediately preceded it. At the same time, our actions in the present moment may impact a future moment that may not happen for a long time (Olendzki, 2003). Reality according to Buddhist philosophy, is influenced by the past, present, and future (Olendzki, 2003).

Therefore, the feeling of a "self" occurring in this stream of consciousness, is an awareness and affirmation of the relationship and dependence that exists between a person, one's family, nation, humanity, and nature itself (Barua, 1990; Kaluhapana, 1987; Olendzki, 2003). The idea of a "self" is entirely contextual, dependently arising from many factors over which one has no control, and not an absolute (Kaluhapana, 1987).

This leads to the interesting observation within Buddhist psychology, the idea that experience is never the same from one moment to the next and, therefore, is in a constant state of change, often referred to as *impermanence*. Or rather, we experience ourselves and the world flowing by as the constant rising and passing of successive experiences, akin to the idea of stream of consciousness (Kalupahana, 1987; Olendzki, 2003). Because reality is constructed in a serial fashion, whereby we can only experience one moment right after another, Buddhist psychology posits that we can never truly be aware of two things in the same moment. The appearance of attending to more than one experience simultaneously is considered to be a rapid cycling between several modes of consciousness. Further, serial and singular experiencing also means that we cannot have the same experience twice. Buddhism argues that multiple experiences of the same object will be experienced differently each time because not only is it unlikely that all the conditions in the external, sensory environment will be the same each time, but largely, our experiences are influenced by the nuances of our internal experiencing. Human experience is not solely evoked from our external environment or sensory observations, but is largely influenced by our internal experience, which might mean our mood or expectations for an experience that are informed by prior experiences. Prior experience often create expectations for present moment experiences and often, those expectations

actually influence how we experience something a second time. Even recollection of an old memory will be constructed differently because our internal circumstances will be different or will have changed. However, the things we notice from one moment to the next are largely shaped by how the human brain has evolved to enhance human survival. Our minds are receiving vast amounts of information at relatively high speeds and have developed ways in which to make sense of all of this information quickly and in a way that is manageable. If we were open to the wealth of our sensory experiences in any given moment, we would quickly be overwhelmed and it would be exhausting to process such a large amount of data simultaneously (Olendzki, 2003).

Therefore, humans have developed a way in which we can store information for short periods of time in short-term memory so that we can continually compare pertinent information stored there against incoming data. This same concept can be applied to the level of cognition and our attitudes and beliefs. Our ideas evolve into symbols that can be manipulated via verbal processing, but translating moment-to-moment experiencing into a symbol creates a fixed or rigid construct of that experience. The same could be considered of how we come to view ourselves in the respect that we often come to believe that we are a particular person with particular views and interacting with the world in a way that has been learned and remembered based on prior experiences. As a result of forming a habit of seeing ourselves in this narrow way, our future experiences are often shaped by how we have defined ourselves and our behaviors by these attitudes and beliefs. In this way, we create a semi-permanent reality in what is truly an impermanent reality and rather than there being a fluidity in our ideas about "things" and "self" and "others", they are bound by our ideas about them (Olendzki, 2003).

So how exactly does Buddhist psychology propose that this understanding of the human condition contributes to the practice and therapeutic goal of alleviating suffering and deepening an inner sense of peace and happiness? The first step is consistent with the first noble truth of Buddhism, which is the acknowledgement that the human condition is unsatisfactory and that suffering can manifest itself in our lives in ways that we are not altogether comfortable with or accustomed to acknowledging. Thereby, this first step involves no longer living in denial that suffering is a part of our existence. For example, the basic avoidance of pain and change, the illusion of one's identity, and ignoring the reality of death, are ways in which we cope with these unsatisfying aspects of life. However, these forms of coping are temporary and do not offer a permanent sense of safety, meaning, or fulfillment. This is an acknowledgement, without judgment as to whether it is good or bad, that suffering exists and we are in need of healing, much like a doctor would diagnose and treat a sickness. The next step towards healing within Buddhist psychology is to begin exploring the cause of the illness, in an attempt to identify it. The cause of this illness or suffering, according to the Buddha, is surprisingly simple. In our striving to seek relief from suffering, which is often driven very strongly by our basic survival instincts, for example in our desire for pleasure or desire for pain to go away, we often behave in ways that cause us to suffer more. However, this expression of desire often instigates a dysfunctional response called attachment, which according to Buddhist psychology, is what is responsible for what we experience as suffering (Olendzki, 2003).

So how is it that our attempts to actually alleviate our suffering in the moment through our desire to alleviate our pain or seeking pleasure actually have an entirely

opposite effect? At a very basic level, our attempts are hindered by attachments to greed, hatred, and delusion/ignorance. For example, desire only exists in the mind because we are not comprehending the fundamental parts of experience that would allow us to understand that all things are impermanent and that pleasure and pain will not continue indefinitely, but that they too will pass. If one could identify with a non-self, one would not become attached to material things and to people as if they were things upon which happiness is dependent. Thus this leads us into the third noble truth, which offers a solution to this problem, which proposes that only through the cessation of desire and ignorance will suffering also cease (Olendzki, 2003).

While the first three noble truths are primarily concerned with analyzing and explaining the nature of the human condition, the fourth noble truth is concerned with the process of healing and transformation, which is why mindfulness is such an important practical piece of the Buddhist religions tradition. Within most Buddhist traditions, mindfulness involves cultivating an intention to attend to whatever may arise in the present moment and accessing the here and now. Mindfulness is an important part of the healing process because it offers a way in which one can practice going beyond the conditioned habits of the mind and free ourselves from the distortions that we may have learned. This occurs by training our minds to attend with careful deliberateness to our individual process of how we construct both past and future experience in the present moment. Accessing and attending to the present moment can be done at anytime, but it is more difficult to simply pay attention to what is arising and passing away in the moment because we have been conditioned to pay attention to very little of what is actually happening in the present. But rather our minds have been conditioned to remember the

past and plan for and try to predict the future as a means to maintain our survival. As mentioned before, our minds would prefer to lead us towards pleasurable experiences and away from unpleasurable or uncomfortable experiences (Kalupahana, 1987; Olendzki, 2003).

In addition, the practice of mindfulness also introduces the practical application of becoming more aware of our actions and behaviors. Paying attention to what is happening when it is happening while we are actually doing it, we start to develop clarity about the conditioning of our actions and what mental processes occur leading us towards or away from something. This process of simply observing our behavior can be transformative and healing because it begins to naturally change the quality of our actions. Mindfulness also serves the practical purpose of learning how to calm the mind. Because our minds are often engaged in flighty inattention and easily swayed by the persistent demands of our information processing systems, it requires practice to retrain our minds to become calm and quieted (Olendzki, 2003).

Many Buddhist traditions reference the importance of the role of developing concentration as a means to increase the power of the mind. The practice of calming the mind has the effect of deepening concentration because it helps to close off sensory experiences that diminish the quality of awareness, which assists the mind's ability to fully attend to something. Or rather, as the mind becomes more calm, it also becomes more alert. This combination of mindfulness, an ability to attend to our behavior and actions, as well as the intention to calm the mind and develop concentration, are important components necessary for the gradual attainment of wisdom.

However, according to Buddhism, wisdom is an important part of the path that leads to the cessation of suffering and is what eventually leads to an understanding of self, experience, and the world. Buddhism espouses that wisdom arises as a result of a connection of realizations or understandings. The first understanding is the realization that the impermanence of life can lead to the illusion of continuity. This then connects to the understanding that the unsatisfying aspects of life that arise from fear of pain, sickness and death cause the habitual seeking of pleasure or avoidance of pain. These two realizations go together to form the realization that what we know as our reality, existence, and even our identity itself has been manufactured and then projected into our experience, and that this manufactured construction is often misinformed by the illusion of continuity, and an avoidance of pain and seeking of pleasure. Experiencing an understanding of these three things allows one to "see things as they really are." Inner healing and transformation occurs not due to a change in our schemas about self and the world around us, but rather from gradually gaining wisdom and insight into these three characteristics of the human condition. As this understanding develops, it transforms the way in which we construct ourselves and how we respond to events of the present moment. The change that occurs is from no longer responding to experience with a habituated and unconscious response to life with attachment to craving/desire for pleasure or aversion to pain, and to being able to maintain an inner-equilibrium while experiencing. This transformation is what is known as an awakening of the mind and liberation from the roots of suffering, or *nibbāna* (Kaluphana, 1987; Olendzki, 2003).



## **Various Constructs of Mindfulness**

Review of the psychology literature continues to reveal a lack of consensus as to what components of mindfulness specifically compose the mechanism of psychological processes and change. This is largely in part because the most commonly cited definition of mindfulness coined by Kabat-Zinn et al., (1985) contains elements of other mental qualities, such as non-judgment. This definition of mindfulness is “the awareness that emerges through paying attention on purpose, in the present moment and nonjudgementally to the unfolding of experience moment to moment (Kabat-Zinn, 2003).” The consensus definition of mindfulness formulated in Bishop et al. (2004) also includes the mental quality of acceptance: “mindfulness is self-regulation of attention so that it is maintained on immediate experience, thereby allowing for increased recognition of mental events in the present moment” and “adopting a particular openness, and acceptance.” As a result, it is important to highlight the various additional mental qualities that have been and continue to be incorporated into the therapeutic use of mindfulness, beyond awareness, attention, and remembering (Bishop et al., 2004; Siegel et al., 2009).

The three most common mental qualities cited in psychological literature on mindfulness include: acceptance, nonjudgment, and compassion (Germer et al., 2008). Acceptance is defined as relating openly to experience and actively allowing whatever thoughts, feelings or sensations that might arise to occur in the field of awareness. At the same time, acceptance involves an intentional decision to let go of any agenda that might be controlling one’s experience or wishing to have a different experience (Bishop et al., 2004; Hayes et al., 1999; Roemer & Orsillo, 2002). In theory, incorporating acceptance

as a part of therapeutic mindfulness would potentially change the psychological context of objects, thoughts, or feelings may have been experienced as painful or unpleasant at one time, thereby improving affect tolerance. Further, a stance of acceptance might lead to reductions in use of various cognitive-behavioral strategies that would typically lead to avoidance of particular aspects of experience while potentially improve coping skills (Bishop et al., 2004). This mental quality of acceptance finds itself at the center of Acceptance and Commitment Therapy (Hayes et al., 1999). As a result, there is a growing body of research investigating the role of acceptance in the mechanism of psychological change. Recent articles in the mindfulness literature that have an emphasis on the mental quality of acceptance include topics such as: affect regulation and depressive symptoms (Jimenez, Niles, & Park, 2010), trauma (Vujanovic, Youngwirth, Johnson, & Zvolensky, 2009), and treatment of generalized anxiety disorder (Roemer & Orsillo, 2002).

Nonjudgment is a mental quality inherently cultivated in mindfulness practice and closely related to the quality of acceptance. It is often commonly cited as an important component of mindfulness-based-interventions, but little research has been done specifically investigating the therapeutic impact of nonjudgment alone. This is in part because mindfulness involves experiencing each moment with a stance of acceptance; practitioners of mindfulness slowly begin to realize the difference between the event and their reaction, which could be a thought, an evaluation, or emotional response. Awareness of the moment between the event and the reaction opens up a space for reality to be experienced more directly, without judgment as to whether or not that experience is experienced in a particular, desired way, regardless of whether the experience is

perceived as good or bad (Leary & Tate, 2007). Nonjudgment and mindfulness are closely related because without having mindfulness first, it could be difficult for an individual to have the capability to maintain a stance of nonjudgment.

Compassion is also an important mental quality that can be cultivated as a part of mindfulness practice. For the Buddha, compassion arises naturally as a part of the mindfulness process because it reflects freedom from egoistic tendencies, such as passion, lust, and greed, and is viewed as the most beneficial and moral behavior in which one may engage. In fact, the Buddha argues that compassion for self and for others is not mutually exclusive, due to the dependent nature of existence, and that freedom from passion implies the capacity on the part of a person to have the freedom to be compassionate (Kalapuhana, 1987). A review of the Western psychological literature in this area suggests that compassion is an important mental quality associated with mindfulness and that there is some connection between compassion, mindfulness, and reduction of psychological distress and symptomology and improvements in emotional regulation. Neff (2011) argues that self-compassion is a necessary component underlying the psychological mechanisms of change associated with mindfulness. She describes self-compassion as being composed of three core components. The first of these is self-kindness. Self-kindness is a way of comforting ourselves, or responding to the self, as if responding to a close friend in need of kindness. It is an acknowledgement of one's own pain and a way in which to soothe troubles with warmth and sympathy. It also involves putting an end to constant self-judgments and negative self-talk, asking for self-understanding of one's flaws and mistakes, rather being critical of them (Neff, 2011). The second core component of self-compassion is recognition of the common human

experience. This is an acknowledgment of the nature of our lives to be deeply interconnected with others. The word compassion alone literally means “to suffer with,” which reinforces the idea that suffering is shared by all people. When an individual can access a connection to all of humanity, it is easier to remember that feelings of inadequacy and disappointment are shared by all. The ability to recognize our inherent connectedness with others and a sense that much individual suffering is shared by many is crucial to feeling a sense of belonging during times of trouble, rather than isolation (Neff, 2011). Finally, the third core component of self-compassion is mindfulness itself. The role that mindfulness plays in our ability to offer self-compassion is that the suffering must first be noticed and recognized before the healing process can begin. Mindfulness allows the creation of a pause between the internal mental processes and external events, offering a moment in which a decision concerning how to respond or relate to a situation can be made. It also offers insight into the parts of our experience that can be changed and those aspects that cannot be changed. Without mindfulness and the ability to recognize our suffering, there would be no space to offer self-kindness or experience human connectedness (Neff, 2011).

However, there is also a need for further research investigating this connection and also a need to synthesize the growing body of research investigating the mental quality of compassion in relationship with mindfulness. This is especially important given that the research emerging from this area supports Neff’s (2011) claim that compassion is an important component of mindfulness and a part of the conceptual association with emotional regulation research (Jimenez et al., 2010). Van Dam, Sheppard, Forsyth, & Earleywine (2011) found that self-compassion was a better

predictor of mindfulness of symptom severity and quality of life in mixed anxiety and depression. Michalak, Teismann, Heidenreich, Strohle, & Vocks (2011) conducted a study examining the effect of compassion on the relationship between self-esteem and depression and found that mindfulness interventions utilizing compassion and acceptance provided a buffer for low self-esteem. Other findings have shown that compassion based mindfulness intervention improves psychological resilience (Neff & McGehee, 2010), self-esteem (Michalak et al., 2011; Neff, 2009; Neff & Vonk, 2009) and self-reported well-being (Feldman, Greeson, & Senville, 2010; Joseph & Wood, 2010; Wood, Froh, & Geraghty, 2010).

### **History of Mindfulness and Western Culture**

From a philosophical perspective, it is somewhat unsurprising that modern Western psychology has taken such a pointed interest in the Buddhist mindfulness practices, largely because the central aims of both mindfulness and psychotherapy are the same. They both seek to understand the causes of human suffering and discover what is necessary to alleviate that suffering. Until recently, the psychology literature often cites the interest in examining how Buddhist philosophy might inform Western psychological theory as beginning with psychoanalysts in the 1920's who were interested in the similarities between Freud's psychic determinism and the laws of karma. However, it is likely that psychology's initial investigation of these intersections actually began with William James, who is often considered the pioneer of American psychology. James strongly agreed with the same pragmatic approach to deconstructing the mind and existence that Buddhism has practiced for centuries, which was very unpopular given the Anglican religious climate he was surrounded by at the time (Miller & Rose, 2009). As a

result, his writings that share consistencies with Buddhist philosophy have begun experiencing resurgence in popularity in the past ten years.

However, it was not until a meeting between Carl Jung and famous Zen scholar, Sini'ichi Hisamatsu, in 1958 when this dialogue became of sincere interest to many Western psychologists, including well-known psychologists Karen Horney and Erich Fromm (Miller & Rose, 2009). This meeting opened up interest in continued dialogue as Jung formed an appreciation for Eastern wisdom and recognized that modern science may translate this wisdom that has been developed over thousands of years so that it could be applied to the problems of a modern, increasingly Westernized world (Thera, 1992). When ideas about enlightenment became more popular within mainstream American culture during the 1960's, particularly with the influx of Eastern religious leaders to the West, such as Thich Nhat Hanh and D.T. Suzuki, practicing therapists began incorporating meditation into their own lives (Germer et al., 2005). Since the 1970's, Western psychologists have become more interested in exploring the use of meditative practices in clinical settings without the religious components in order to determine whether or not they could be used to reinforce self-regulation principles and improve overall well being (Didonna, 2011; Kabat-Zinn et al., 1985). Formal application of mindfulness-practices employed as an intervention for clinical problems began with Jon Kabat-Zinn's use of mindfulness-practices to treat clients with chronic pain, which is now known as Mindfulness-Based Stress Reduction (Kabat-Zinn et al., 1985).

### **Mindfulness-Based Stress Reduction**

The concept of applying mindfulness principles therapeutically began to receive more attention and support through the successes of Jon Kabat-Zinn's mindfulness-based

stress reduction (MBSR) program at the University of Massachusetts Medical Center in 1979 (Germer et al., 2005). Kabat-Zinn and his research team were interested in whether or not cultivation of detached observation of bodily sensations could alter the way in which chronic pain patients perceive and interact psychologically with pain. Essentially, the intention of their research was to determine if MBSR could be used as effective training of medical patients in mindfulness practices and how it could be applied to stress, pain, and illness for the relief of suffering. However, the purpose of MBSR was not to teach Buddhism, and as such, they sought to train patients in the core of mindfulness with the cultural, religious, or ideological components that are associated with the Buddhist origins of mindfulness removed. In order to do this effectively, MBSR instructors are required to have extensive training with mindfulness practice (Kabat-Zinn et al., 1985; Kabat-Zinn, 2003). This is very important from Kabat-Zinn's (2003) perspective because he argues that without a foundation in a personal mindfulness practice, the MBSR instructor may potentially miss the essence of mindfulness and become stuck with teaching the commonalities that exist between mindfulness practice and the relaxation strategies and self-monitoring tasks taught in cognitive-behavioral therapy. Removal of the Buddhist components associated with the origins of mindfulness is accomplished by translating the vocabulary and teachings of the interventions such that a secular, Western group of patients can easily connect what they are learning as a part of MBSR to their lives and struggles with illness (Kabat-Zinn, 2003).

The result of removal of these components leaves what Kabat-Zinn (1990) calls in the book *Full Catastrophe Living* the seven attitudinal factors, or pillars of mindfulness practice. These pillars are: nonjudging, patience, beginner's mind, trust, non-striving,

acceptance, and letting go. They are considered to be the foundation upon which mindfulness is cultivated while mindfulness in turn cultivates these attitudes.

*Nonjudgment* is an important attitudinal factor of mindfulness because the mind is constantly labeling and categorizing all our experiences, often placing each experience on a spectrum between unpleasant/unsatisfactory, to neutral, to pleasant/satisfactory.

Mindfulness cultivates the awareness of this stream of judgments and the somewhat programmed responses experienced as a result of those judgments. The nonjudgment component of mindfulness becomes important with increased awareness of when these judgments arise and intentionally choosing to remain an impartial witness to whatever is occurring in the present moment. *Patience* is a pillar of mindfulness because it sustains openness to each moment and the ability to accept things just as they are. Patience also allows for a resting in the wisdom and understanding that all things happen in their own time. This is important because practicing patience and mindfulness cultivates great patience and acceptance towards the mind and body. *Beginner's mind* is akin to a mind that is seeing everything anew as if for the first time and letting go of our thoughts and beliefs about what is already "known." Often times these preconceptions about reality prevent the ability to understand and observe reality simply as it is. As such, beginner's mind cultivates receptivity to new possibilities and opportunities.

*Trust* is cultivated as a part of mindfulness practice because in becoming more aware of what arises and passes away, one inherently becomes more connected to oneself, which aids the ability to trust in one's thoughts and feelings more fully. *Non-striving* is not about using mindfulness to accomplish something, but in mindfulness the only goal present is to simply be oneself. *Acceptance* is an attitude of willingness to



accept things as they are, but does not imply passivity to tolerance of self-destruction or abuse. Rather, acceptance is about acknowledging that whatever we are experiencing now will soon pass, as all things are impermanent, and something new will change and emerge in the next moment. *Letting go* is an important part of mindfulness because once one begins this process of opening awareness of the mind, one becomes more aware of the thoughts, feelings, beliefs, and situations that we wish to cling upon and continue to hold. At the same time, many people also experience a desire to expel or rid ourselves of unpleasant experiences, such as pain or fear. Letting go is the practice of accepting things just as they are in acknowledgement of inner judgments without holding on to them (Kabat-Zinn, 1990).

The structure of the MBSR program, as it exists today, consists of an eight-week group intervention intended for outpatient populations (both clinical and non-clinical) in which the group meets for two-and-a-half hours a week and members are encouraged to participate in mindfulness homework assignments. It also includes a six-hour full-day class that takes place during the sixth week on a weekend. At present it is a manualized intervention, with each group session centralized around learning a specific mindfulness practice, however the object or anchor of attention while participating in MBSR is a focus on the breath (Kabat-Zinn, 1990). Mindfulness practices include: mindful eating, sitting meditation, the body scan, hatha yoga, walking meditation, and loving-kindness meditation. In its formative stages, MBSR began in a hospital setting with patients with a variety of medical issues, but all of whom had the common experience of chronic pain that did not seem to be aided by other traditional forms of treatment. As such, MBSR was a voluntary treatment recommended to individuals as a complementary alternative

medicine that would assist in helping these patients improve their ability to relate with the physical and emotional experiences of pain. In their initial MBSR study, Kabat-Zinn et al. (1985) found statistically significant reductions in reported experiences of pain, physical and psychological symptoms, negative body image, and decreases in reported levels of anxiety and depression. In addition, pain-related drug use decreased and an increase in self-esteem was observed (Kabat-Zinn et al., 1985).

MBSR is now widely used to reduce psychological distress associated with chronic illness and the clinical scope of MBSR has broadened to include treatment of a wide range of emotional and behavioral disorders (Bishop et al., 2004; Kabat-Zinn, 2003; Lau & Yu, 2009). Since Kabat-Zinn's promising findings, contemporary psychology continues to explore the clinical utility of mindfulness to alleviate clinical conditions. The growing body of evidence for its effectiveness has led to a more formal adoption of mindfulness as an approach for increasing awareness and skillful responding to the mental processes that contribute to maladaptive behavior and emotional distress (Bishop, et al., 2004). As a result, other forms of mindfulness-based treatments designed to treat a variety of psychological problems have evolved out of the original MBSR program, such as: mindfulness-based cognitive therapy (MBCT; Segal et al., 2002), dialectical behavior therapy (Linehan, 1993), acceptance and commitment therapy (Hayes et al., 1999), and Compassion Focused Therapy (Gilbert, 2010).

### **Mindfulness-Based Cognitive Therapy**

Mindfulness-based cognitive therapy was developed as an adaptation of mindfulness-based stress reduction with the purpose of preventing relapse in clients with a history of depressive episodes (Segal, Williams, & Teasdale, 2002). Because MBCT is

an adaptation of MBSR, it is very similar in composition and structure to MBSR. MBCT is designed to be an eight-session group program, although it can be adapted for individual therapy. Just as in MBSR, it is also important the group therapist have a history of personal experience with mindfulness and training with teaching mindfulness to others. Segal et al. (2002) particularly recommend this because often the therapist is asked to address a client's difficulty that may arise as a part of the mindfulness practices. It only follows that an individual who has undergone a body of experiences with their own personal mindfulness practice would be better equipped to understand how to be helpful to this client.

MBCT is designed to be an eight-session, manualized group intervention although participants are also welcome to attend follow-up classes specific to the individual's circumstances. As a whole, MBCT is very much similar to MBSR, but it distinguishes itself in its specialization for the treatment of depression and because it specifically utilizes cognitive therapy exercises. These cognitive therapy exercises are incorporated into the treatment because they more explicitly reinforce some important mindfulness concepts, such as thoughts are not facts and therefore do not have to control one's behavior. The first four sessions of MBCT are focused on teaching participants the basics of mindful attention. This begins with learning how quickly the mind shifts from one thing to the next and learning to notice when their mind has wandered and how to bring it back to an anchor of focus, which in the case of MBCT is the breath. They then learn how the wandering of the mind can allow negative thoughts and feelings to become the focus of attention. The ability to become aware of a mood shift and then make a choice as to how to respond to that shift is practiced in sessions five through eight. Participants

are taught that whenever a negative thought or feeling emerges, they are to simply to acknowledge it in awareness, then redirect the focus of their attention back to their breathing. After focusing on the breath for a minute or two, they are asked to expand their focus of attention to the body as a whole. Upon opening and broadening their awareness, space is created between the distressing thought or feeling. Then, the individual may feel better prepared to choose how to respond to their experience, whether this means actually dealing with the unpleasant thoughts or feelings immediately or by acknowledging as simply a thought or feeling, then practicing observing that thought or feeling pass away (Segal et al., 2002).

There are several primary goals that MBCT aims to help participants accomplish. It is hoped that MBCT can help prevent depressive relapse by teaching individuals who have experienced depression in the past how they can help prevent depression from returning. MBCT also aims to improve moment-to-moment awareness of connection between the body, mind, and the environment. Further, MBCT aims to help group members break free from an automatic and habituated way of responding experience by cultivating acceptance and awareness of unpleasant sensations, thoughts, and feelings. This awareness and altered relationship will assist participants in their ability to be more skillful in their responses to unpleasant thoughts, feelings, or situations. This is consistent with the premise that depressive relapse is the result of a network of negative thoughts and feelings that is somehow reactivated, instigating the recurrence of a depressive episode (Kuyken et al., 2010; Segal et al., 2002).

MBCT has been shown to be effective in individuals with ongoing depressive symptoms (Barnhofer & Crane, 2009), as well as in reducing the risk of depressive

relapse (Fjorback, Arendt, Ornbol, Fink, & Walach, 2011), with consistent 50% reduction in relapse rates in comparison to treatment as usual (Teasdale et al., 2000). Another study demonstrated that MBCT may offer the same protection from depressive relapse that maintenance by antidepressant medication offers (Kuyken et al., 2010; Segal et al., 2010). MBCT has also been found to be effective with bipolar disorder, generalized anxiety disorder, binge eating, anxious children, and with older adults dealing with mixed depression and anxiety (Baer, 2010; Baer, Fischer & Huss, 2005). Suggestions as to possible mechanisms of change responsible for positive treatment outcomes using MBCT include the mediating effects of self-compassion (Kuyken, Byford, Taylor, Watkins, & Holden, 2008; Kuyken et al., 2010) and decentering (Segal, et al., 2010) and will be discussed in more depth in future sections of this dissertation.

### **Dialectical Behavior Therapy**

Dialectical Behavior Therapy (DBT) is a manualized treatment intervention that was developed by Marsha Linehan as the result of her work with women who engage in self-injury and suicidal behaviors, many who met criteria for borderline personality disorder. Since its inception, DBT has been reworked as a treatment that can be used in many therapeutic settings and with a variety of diagnoses, particularly with populations of individuals that are often resistant to treatment. In DBT, Linehan has incorporated acceptance-based principles from mindfulness skills and practices originating from Zen Buddhism, in addition congruent with traditional cognitive behavioral strategies and dialectical philosophy. The DBT approach to conceptualization is driven by what Linehan calls the biosocial theory of BPD and it views client behavior as a quite natural response to reinforcement that the client is obtaining from their environment (Lynch et

al., 2007). More specifically, this theory posits that an invalidating childhood environment, coupled with an innate biological propensity towards "emotional vulnerability" both elicit and reinforce the emotional and behavioral dysregulation observed in individuals in these treatment populations (Linehan, 1993). In particular, an invalidating environment results not only in distrust of one's own emotional reactions to events, which equates to a form of self-invalidation, but also lack the skills necessary to understand or manage their experiences (Feigenbaum, 2007).

Overall, the main goal of DBT treatment is to help the individual engage in more adaptive behaviors even when experiencing intense emotionality by providing the individual with a validating environment, while shaping and reinforcing functional and adaptive behavior. Structurally, DBT consists of interventions delivered in four modes of therapy. The second is the mode concerned with teaching individuals aspects of mindfulness and promoting improved distress tolerance, emotion regulation, and interpersonal effectiveness. This combination of skills emphasize learning awareness of present experience, letting go of attachments, nonjudgment, and radical acceptance of things that cannot be changed (Lynch et al., 2007).

More recently, the DBT literature has also taken care to begin examining potential mechanisms responsible for changes in the client as a result of DBT. Lynch, Chapman, Rosenthal, Kuo, & Linehan (2006) propose several mediators of change within DBT, however, the proposed mechanism of change revolving around the mindfulness components of DBT work via the construct of acceptance. It is possible that mindfulness mediates change for several different reasons: (1) behavioral exposure and learning new responses to previously avoided stimuli, (2) improved emotion regulation in response to

intense emotional pain as a result of increased (3) attentional control, and (4) reducing literal belief, particularly self-judgments, which reveals a more adaptive sense of self (Lynch et al., 2006).

Since DBT's formulation in 1993, there have been several studies investigating its effectiveness with a wide variety of diagnostic populations. A review of four randomized controlled trials investigating the efficacy of DBT with individuals with borderline personality disorder by Feigenbaum (2007) found that DBT continues to demonstrate considerable efficacy with this population. The Lynch et al. (2007) review concluded that DBT demonstrated effectiveness with chronically depressed older adults, older depressed adults with comorbid personality disorders, and individuals with eating disorders, but that investigatory studies using DBT with other diagnoses require further empirical validation. Many such studies include: substance abuse, intimate partner violence, attention deficit-hyperactivity disorder, and self-injurious behaviors (Feigenbaum, 2007; Lynch et al., 2007).

### **Acceptance and Commitment Therapy**

Acceptance and Commitment Based Therapy (ACT) was developed by Steven Hayes using the philosophy of functional contextualism in combination with relational frame theory and is now considered to be the "third wave" of the behaviorist movement (Hayes et al., 2006). Within this theoretical framework, ACT posits that psychological problems, or rather, psychological inflexibility, results "from the way in which language and cognition interact with direct contingencies to produce an inability to persist or change behavior in the service of long-term valued ends" (Hayes et al., 2006). Therefore psychological inflexibility emerges from "weak or unhelpful contextual control over

language processes (Hayes et al., 2006, p. 6)." There is promising research to support the use of ACT with depression, anger, pain, burnout among mental health professionals (Hayes & Feldman, 2004), polysubstance abuse, and generalized anxiety disorder (Roemer et al., 2009; Roemer & Orsillo, 2007, Roemer & Orsillo, 2002; Treanor, Erisman, Salters-Pedneault, Roemer, & Orsillo, 2009).

The goal of ACT as a treatment is to target three therapeutic areas. The first area involves working towards reducing strategies employed with the purpose to avoid parts of private experience, which might include thoughts, emotions, and bodily sensations. The second therapeutic goal encourages clients to view thoughts as mental events that just come and go and acknowledge that these events may not necessarily reflect reality or the truth and may not be reflections of one's self-worth. Therefore, the thoughts do not always need to influence behavior. The third therapeutic goal entails improving the client's individual ability to establish and maintain a commitment to desired behavior changes, founded in and congruent with the client's values (Roemer & Orsillo, 2002). This approach uses mindfulness to help clients to notice and identify troubling thoughts and then engage in adaptive coping behaviors while having these thoughts. Mindful awareness cultivates the ability to find acceptance in thoughts, emotions, and sensation, thereby creating space for an individual to choose a more effective and positive behavior consistent with one's goals and values.

As for propositions examining particular mechanisms of change, much of the ACT literature does coincide largely with the proposed mechanisms of change observed in MBSR and MBCT, such as decentering. However, Hayes & Feldman (2004) argue that rather there is a *process* of change occurring as the result of ACT. They note that it



is important to be attentive to this process because in some instances while working with a client, timing which mechanism of change is emphasized can be critical. As such, they caution therapists in their application of mindfulness to psychotherapy to assess the client's ability to tolerate the material they will soon be exposed to as a result of the mindfulness exercises and to ensure healthy and adaptive coping strategies are in place beforehand. Therefore, Hayes is more specific about how and when mindfulness is used during treatment, which is dependent on any number of factors, including client readiness and diagnosis (Hayes & Feldman, 2004).

ACT divides the mindfulness training into two stages: stabilization and destabilization. Stabilization occurs in the first eight-weeks of ACT and centers around the introductory teaching of mindfulness exercises, in addition to coping skills and adaptive problem solving, the development of healthy lifestyle habits and self-care principles, and ways in which clients can increase social support. The aim of the stabilization stage is essentially to stabilize the client by providing them with resources, coping skills, and increasing generalized resilience capabilities. The destabilization stage of ACT is a series of exposures intended to decrease experiential avoidance and improve emotional tolerance. This phase often results in a brief worsening of symptoms and is designed to "activate and destabilize the network of cognitions, affect, behaviors, and somatic responses" (Hayes & Feldman, 2004). However, the transition into the third stage of ACT, roughly three to five sessions, results in decreases in the client's distressing symptoms, such as depression or anxiety. These final few sessions center around assisting the client in solidifying the changes they have made from the stabilization stage,

helping the client to create goals congruent with their values, and explore and process emotional reactions relating to future positive experiences (Hayes & Feldman, 2004).

### **Compassion Focused Therapy**

Compassion Focused Therapy (CFT) is a therapy that is constructed around a range of different therapies. CFT was developed by Paul Gilbert for use with individuals who experience chronic and complex mental-health issues, primarily issues associated with shame and self-criticism surrounding exposure to traumas, such as neglect or abuse, especially in childhood or adolescence. CFT is designed around the connections between the psychology and the neuropsychology of caring and feeling cared for and accepted, while also fostering a sense of belonging and affiliation with others (Gilbert, 2010). Feelings of being cared for and a sense of belonging have been linked to well being (Siegel, 2007), positive affect (Depue & Morrone-Strupinsky, 2005), and increases in endorphins and oxytocin (Carter, 1998). CFT is designed to improve an individual's capacity to relate to painful and traumatic memories in a compassionate and nurturing way as opposed to increasing avoidance. However, there is little research outlining the effectiveness of this specific therapeutic approach, outside of prior research investigating the impact of the mental quality of compassion in association with mindfulness-based interventions, which will be discussed in more detail later in this dissertation (Gilbert, 2010).

### **Behavioral and Therapeutic Evidence Base of Mindfulness-Based Interventions**

With the increased popularity of mindfulness as a construct of mainstream psychotherapy in the past decade, there has been a growing body of research supporting its utility as a part of treatment for a wide range of psychological diagnoses that may

include psychosomatic components. It has also been shown to be helpful in other aspects of psychotherapy treatment, such as promoting healthy coping strategies, stress reduction, and teaching relapse prevention skills. Therefore, the following portion of this dissertation will include a summarization of prevailing research that has examined the impact of mindfulness in psychotherapy on a wide range of clinical issues including: anxiety, depression, trauma, eating disorders, attention deficit-hyperactivity disorder, self-harm and suicidal behavior, anger management and impulsivity, psychosis, bipolar disorder, substance abuse, psychological effects of pain, stress reduction and increased psychological resilience in healthy individuals.

**Anxiety and stress.** Anxiety and stress are natural and normal human psychological and physiological responses. Without the biological mechanisms responsible for anxiety and stress, humans would have a difficult time surviving because we would be unable to physiologically initiate the "fight or flight/tend or befriend" response that protect us from perceived threats in our environment. As a result, anxiety and stress might best be viewed as existing along a continuum of severity or intensity, from disordered to more normative levels. The difference between an individual experiencing a normative level of anxiety and an individual with an anxiety disorder is that the latter individual may be more likely to misperceive an experience that would be recognized by others as normative and respond to that that situation disproportionately with intense feelings of fear and panic. Even among individuals with anxiety disorders, there can be individual differences as to how that anxiety manifests itself, whether it might be more of a disturbance of thoughts, worries, and behaviors, or difficulties with regulating emotions or physical sensations of the body. It is important to make a

distinction about the continuum of anxiety because the mindfulness conceptualization of anxiety does not begin with the disordered variety mentioned in the aforementioned studies. However, this conceptualization is still applicable to disordered definitions of anxiety. As a result, all of the studies referenced in the remainder of this section of the dissertation discuss the efficacy of mindfulness-based interventions with generalized anxiety disorder, panic attacks, mixed anxiety, and social anxiety disorder (Schmertz, Masuda, & Anderson, 2012).

Research examining the efficacy of mindfulness-based interventions for the treatment of anxiety disorders began fairly early in the mindfulness literature. This is largely the result of Jon Kabat-Zinn's early MBSR research which looked at the efficacy of mindfulness in treating stress associated with chronic pain, which is biologically similar to anxiety. As a result, there is a considerable body of evidence in the mindfulness psychology literature that supports the efficacy of a wide range of mindfulness-based interventions in the reduction of anxiety and stress. The range of mindfulness-based interventions includes: Acceptance and Commitment Therapy (Hayes-Skelton, Usami, Lee, Roemer, & Orsillo, 2012), or a related acceptance-based therapy, MBCT, and MBSR (Hofmann, Sawyer, Witt, & Oh, 2010; Toneatto & Nguyen, 2007; Vollestad, Nielsen, & Nielson, 2012). A review by Hofmann et al., (2010) analyzed 39 studies in order to derive effect size estimates relating to the reduction of anxiety and depressive symptoms in populations of individuals with a mood or anxiety disorder. The anxiety disorders included in this review were generalized anxiety disorder, social anxiety disorder, and generalized anxiety disorder with comorbid panic attacks. They found that mindfulness-based therapy was associated with improvement of anxiety and

depressive symptoms across a wide range of symptom severity, including cases when those symptoms are associated with a medical diagnosis. Due to the similarity in improvements between both anxiety and depressive symptoms, the authors suggested that the therapeutic mechanisms responsible for the positive treatment outcomes were not simply specific to a particular diagnosis, but rather addressed processes that occur across anxiety and depressive disorders (Hofmann et al., 2010).

A review by Toneatto & Nguyen (2007) that examined 15 controlled studies, only one of which looked at anxiety, while another examined stress, concluded that mindfulness-based therapy does not have reliable effects on depression and anxiety, but this study did not conduct an effect size analysis and was based solely on patients without anxiety and depressive disorders, who were being treated for medical conditions. As a result, the Hofmann et al., (2010) review is superior in its specific examination of individuals with a diagnosed anxiety or depressive disorder. However, Hofmann et al., (2010) did not include acceptance-based treatments arguably due to similarities with cognitive behavioral therapy. As a result, the more recent review conducted by Vollestad et al. (2011) examined nineteen mindfulness *and* acceptance-based interventions (MABIs) to determine whether intervention type, design, treatment dosage, or patient sample was associated with systematic variation in effects sizes. They found no significant moderating effects for these variables, other than a superiority in effect sizes for clinical trials using samples of individuals with mixed anxiety disorders. Additionally, they found an advantage of individual over group treatment, as well as a benefit of incorporating added specific psychotherapeutic content in addition to mindfulness training.

So what is the theory behind why mindfulness-based interventions are being shown to be efficacious in the treatment of anxiety and stress? First, it may be helpful to explore what mindfulness-based interventions share in common with the empirically based interventions (EBIs) typically utilized in the treatment of anxiety disorders. In cognitive-behavioral therapy, one of the most common EBIs for anxiety, typically involves some form of exposure, while also examining beliefs surrounding contextually inappropriate emotional responses and resultant inflexible behavior patterns, which are then corrected via relaxation training, cognitive restructuring, and self-monitoring skills (Greeson & Brantley, 2010). The primary commonalities between the CBT and MBI conceptualization of anxiety treatment is that they are both informed by the same psychobiological formulation of the human fear response and anxiety. These result in treatment that incorporates both mental/emotional and physiological components of fear, some form of exposure, and relaxation skills.

Identification of the similarities between the EBI and mindfulness-based interventions is very important because comparison of the two likely illuminates a shared mechanism of change responsible for positive treatment outcomes. For the treatment of anxiety in particular, the construct of acceptance as it is related to exposure therapy has been identified as a potential mechanism of change (Hayes-Skelton et al., 2012; Treanor, 2011). This is important because exposure confronts a fundamental process of anxiety disorders called experiential avoidance. Experiential avoidance is described as a tendency to attempt to either avoid or alter one's internal experience, however, this often results in a paradoxical increase in distress. This occurs because avoidance of things over which the individual has no control to avoid contributes to a vicious cycle of wanting to

avoid and being unable to control the experience. The mindfulness-based intervention stance of accepting each moment just as it is, with nonjudgment, exposes clients to the experience itself as well as increasing the awareness of a desire to wanting to change or avoid without judging those feelings. Decentering has also been identified as a potential mechanism of change with generalized anxiety disorder and are most commonly associated with the Acceptance and Commitment Therapy literature (Hayes-Skelton et al., 2012). As anxiety is often perpetuated by a rigid and judgmental perspective of one's own internal experiences, decentering has been proposed as a means of helping an individual to learn how to create a space between oneself and one's rigid judgments of one's experience (Hayes-Skelton et al., 2012). Within cognitive behavioral therapy, this disturbance of thought or judgment is approached by examining it from a cognitive framework and connecting thoughts to the maintenance of beliefs. Mindfulness-based interventions accomplish decentering by constantly reinforcing the practice of awareness of the present moment without judgment (Hayes-Skelton et al., 2012).

Further, a potential mechanism for change in the treatment of anxiety disorders that is not plainly shared between cognitive behavioral therapy and mindfulness-based interventions is self-compassion, which is an important construct uniquely related to mindfulness-based interventions. Suggested as a mechanism of change within MBIs, self-compassion as the mechanism of change in treatment has received some support in a study that found that self-compassion was a better predictor than mindfulness of symptom severity and quality of life in individuals with mixed anxiety and depression (Van Dam et al., 2011).

Although mindfulness-based interventions and cognitive behavioral therapy share many commonalities and potential mechanisms of change responsible for positive treatment outcomes, it is important to distinguish how MBIs are unique in their approach to treatment and how they differ in comparison to cognitive-behavioral approaches. First, MBIs diverge by shifting the focus of treatment away from the emphasis on identifying and modifying the content of cognitions. Instead, the focus of treatment shifts into understanding and awareness of how the client relates to the anxiety. This awareness creates a space in which a client can realize that the anxiety itself does not have to be something which defines or controls them, nor does it shape who they believe themselves to be. Second, mindfulness interventions for anxiety do not center around some kind of systematic desensitization or exposure but views exposure in terms of promoting distress tolerance. Therefore, the function of exposure within a mindfulness-based intervention is to facilitate a person's ability to embrace distress without the specific aim to reduce or avoid distress (Vollestad et al., 2011). Greeson and Brantley (2010) summarize this concept very nicely by saying that:

mindfulness enables one to establish a radically different relationship to one's experience of internal sensations and outer events by cultivating present-moment awareness based on an attitude of allowance and a behavioral orientation based on wise responsiveness rather than automatic reactivity. (p. 178)

This definition is key because proponents of mindfulness-based interventions theorize that this altered relationship occurs because mindfulness addresses the psychological experience of anxiety by bringing an intentional and nonjudgmental awareness to the physiological anxiety response of the body. This would suggest that



mindfulness-based interventions offer the possibility for effective self-regulation of the mind-body connection (Kabat-Zinn, 2003). For more specific details as to how such a self-regulatory system has been proposed to operate, the reader is referred to Greeson and Brantley (2010). They have expanded significantly upon this idea by creating a model of the interdependent psychological and biological pathways through which mindful attention, increased awareness, along with the attitudes encouraged to be cultivated by mindfulness practice, can influence both brain and body functioning.

**Depression.** Depression, particularly major depressive disorder (MDD), is the most common depressive illness in the United States. The *DSM-IV-TR* (2000) suggests that community samples of women with MDD have a lifetime risk for MDD from 10 to 25% and a the general prevalence of MDD in women is between 5 to 9%. Community samples of men with MDD have a life time risk for MDD between 5% and 12% and the prevalence of MDD in U.S. men is between 2% and 3%. On the other hand, Kessler et al., (2003) found a 16.2% lifetime risk and 6.6% annual prevalence of MDD in the United States. In addition, the cases of MDD included in Kessler et al., (2003) were often associated with substantial impairment in functioning and symptom severity. MDD is differentiated from a major depressive episode in that MDD is composed of more than one major depressive episode. It is estimated that at least 60% of individuals who experience a single episode of MDD will have a second episode. A major depressive episode is characterized by an individual experiencing at least a two-week period of depressed mood or a noticeable disinterest in or loss of pleasure in almost all activities (APA, 2000). To meet the *DSM-IV-TR* (2000) criteria for the diagnosis, the individual must also experience at least four additional symptoms that relate to changes in eating

habits (appetite or weight), sleep, and psychomotor activity, as well as decreased energy, feelings of worthlessness, guilt, difficulty concentrating, indecisiveness, or recurrent thoughts of death or suicide, which may include plans or prior attempts. It must be accompanied by clinically significant distress in several important areas of functioning, such as social or occupational as it is often associated with social withdrawal. In addition, major depression is quite costly financially and in regards to loss of human capital. For example, depression is responsible for a large number of workplace absences, is the leading cause of disability in the United States, and is cited as playing a role in risks for heart attack, stroke, diabetes, and cancer. (Young, Rygh, Weinberger, & Beck, 2008).

Due to high prevalence rates, there are many efficacious treatments for depression in the literature. Treatments with the strongest research support include Cognitive-Behavioral Therapy (CBT) (Vittengl, Clark, Dunn, & Jarrett, 2007) and Interpersonal Therapy (IPT) (Cutler, Goldyne, Markowitz, Devlin, & Glick, 2004), while others include more modest research support, which includes Acceptance and Commitment Therapy (Forman, Herman, Moitra, Yeomans, & Geller, 2007). However, it is important to note that the cognitive-behavioral literature has assimilated the mindfulness-based intervention research and theory on depression, particularly depressive relapse, as a part of cognitive-behavioral therapy as a whole. These interventions have largely been incorporated into cognitive-behavioral therapy because Segal, Williams, Teasdale and Germer (1996) were able to explain the theoretical underpinnings for depressive relapse using the information processing theory of differential activation. This theory posits that associations are formed in the human memory network across depressive episodes,

connecting the memories of low mood and strong emotionality, like hopelessness, to cognitions and behaviors that frequently occur in individuals who are depressed. Further, these associations become strengthened across episodes because they become increasingly coherent and have a reduced activation threshold, which correlates to an increased likelihood of recurrence of the depressive episodes because the memory networks associated with previous depressive episodes are much more easily activated (Segal et al., 1996).

In addition, Segal et al., (2002) address two important components of the cognitive-behavioral conceptualization of depression, rumination and emotional avoidance, which they argue interact in such a way that the pattern and risk of depressive relapse observed in many individuals is perpetuated. Rumination is engaging in repetitive, abstract-analytical thinking in response to negative cognitions and unpleasant body states or symptoms. From an evolutionary perspective, rumination seems well-intentioned, meaning to assist in and promote efficient problem-solving, however, this form of repetitive analysis seems to actually hinder effective problem solving. Rumination appears to contribute to an increase in biases in negative thinking, leading to a greater deterioration in mood, and ultimately interfering in the cognitive processes responsible for effective coping. There has been evidence to suggest that rumination impairs retrieval of autobiographical memory and decreases one's ability to solve interpersonal problems. On the other hand, emotional avoidance, which is quite opposite of rumination, is also a very common experience of individuals who are depressed. Often, emotional avoidance is an attempt to cope with the overwhelming effects of rumination by trying to avoid negative thoughts, emotions, and body states. However,

emotional avoidance is seemingly just as ineffective as rumination. For example, attempts at thought suppression paradoxically result in an increased frequency of unwanted thoughts, feelings, and body states (Segal et al., 2002).

Ultimately, this theoretical integration of mindfulness-based interventions and cognitive-behavioral theory resulted in the formulation of Mindfulness-Based Cognitive Therapy (MBCT) by Segal et al., (2002). The primary difference between traditional cognitive-behavioral treatment and MBCT for depression is that cognitive therapy focuses on the content of thoughts and an examination of their meaning, while MBCT is more concerned with teaching participants to experience a difference perspective on one's thoughts and awareness (Barnhofer & Crane, 2009). In engaging in a constant practice of attending to the present moment, individuals are able to break free from the cognitive processes responsible for the perpetuation of depression, such as rumination and emotional avoidance. In their book *The Mindful Way through Depression*, Williams, Teasdale, Segal and Kabat-Zinn (2007) describe the cognitive processes responsible for sustaining and maintaining recurrent depression as "doing mode." Doing mode represents the mode in which individuals are focused more on how things should be and working towards changing them in some way. Whereas "being mode" represents when an individual is able to experience whatever is happening in the present moment, accepting it just as it is, without actively trying to change anything about that experience. Mindfulness is the key to becoming aware of when one is operating in doing mode and allowing an individual to switch into being mode.

Other individuals in the mindfulness literature, including Brown et al. (2007) suggest that mindfulness-based interventions are associated with improvements in

psychological functioning for depressed individuals in particular because they enhance regulatory processes that are hypothesized to buffer against mood disorders. Jimenez et al. (2009) developed a proposed model of affect regulation that involves dispositional mindfulness and depressive symptoms. Their model assumes that both dispositional mindfulness and symptoms of depression do exist within all individuals, but that the degree to which they are manifested is expressed along a continuum and is different across individuals. In their study, the authors tested this model in a non-clinical sample of college students, by examining the regulatory processes of emotion regulation, mood regulation, and self-regulation. All of these have all been shown to be aided by mindfulness through the generation of positive emotions and affect and decrease experiential avoidance and rumination (Jimenez et al., 2009). In an attempt to test their model, Jimenez et al. (2009) predicted and found that positive emotions mediate the relationship between depressive symptoms and dispositional mindfulness, as well as expectancies of mood regulation and self-acceptance. More specifically, higher levels of dispositional mindfulness are associated with higher levels of positive emotionality and mood regulation expectancies. Similar findings have also been reflected in a study that found that self-compassion, is a component of mindfulness-based interventions, associated with positive emotionality, is an important predictor of mental health that may mediate both anxiety and depressive symptoms (Van Dam et al., 2011).

Improving emotional regulation for depressed individuals is important because often depression is distinguished by a reduction in positive affect and difficulty in activating or sustaining positive emotions, as well as a reduction in response to pleasant stimuli. Mindfulness has been proposed to be a way in which individuals can generate

positive emotions, which improves emotion regulation via quicker recovery from negative affect, improved emotional awareness and affect labeling (Jimenez et al., 2009). Improved emotional awareness and affect labeling have been found to have important associations with neurobiological correlates of emotional regulation in the prefrontal cortex. When considering utilizing mindfulness-based interventions as a means to improving emotional regulation, this finding is significant given recent neurobiological evidence linking this same region of the brain responsible for affect labeling with increased brain activation to the brain regions activated as a result of dispositional mindfulness. These regions of the brain include the medial prefrontal cortex and the ventrolateral prefrontal cortex (Creswell, Way, Eisenberg, & Lieberman, 2007). Affect labeling is also associated with a deactivation of the amygdala, which may attenuate negative affect and allow more mental energy to be used for recovery from the physiological effects of those emotions (Creswell et al., 2007; Jimenez et al., 2009). Affect labeling is also a historical and contemporary component of mindfulness meditation practice that has been incorporated into Mindfulness-Based Cognitive Therapy (MBCT) (Segal et al., 2002). Essentially, affect labeling is the process of using words or phrases during the mindfulness exercises as a way to label emotional states (Creswell et al., 2007).

The model of affect regulation tested by Jimenez et al. (2009) also found that self-acceptance played a role in the mediation of dispositional mindfulness and depressive symptoms. They conceptualize how this occurs in terms of cognitive theory, in that individuals who suffer from depression may be strongly attached to negative self-perceptions. Mindfulness-based interventions can counteract these negative self-

perceptions through mindful self-acceptance, which is described as the nonjudgmental component of mindfulness practice. It is a nonjudgmental stance observed towards past, present, and future aspects of oneself, both good or bad. As increased levels of self-acceptance have been evidenced following mindfulness-based interventions in this study, as well as others, it is hypothesized that self-acceptance cultivates a change in the negative self-focused cycle of rumination over past/future conditions, also responsible for an increased vulnerability to depressive relapse, to a more nonjudgemental and present-focused stance towards oneself. Self-acceptance does appear closely related to self-compassion and in some respect, it could be argued that an attitude of self-compassion is helpful in attaining a self-accepting stance. In order to assume an attitude of nonjudgment towards self, self-compassion must occur in order to allow an individual to open up to whatever is happening in the present moment, whether good or bad. As a result, it is likely that mindfulness practices that cultivate self-acceptance are also simultaneously cultivating self-compassion. The primary difference between the two is that self-compassion could potentially be more directly associated with positive mental states or positive affect (Van Dam et al., 2011).

The empirical support for the use of mindfulness-based interventions with depression has been fairly well established (Barnhofer et al., 2009; Hofmann et al., 2010; Kenny & Williams, 2007). This is particularly so for the prevention of depressive relapse in individuals who have had three previous major depressive episodes. Research has been fairly well-established through several randomized controlled trials and popularized into clinical practice largely due to the excellent integration of mindfulness-based interventions and cognitive-behavioral therapy designed with Mindfulness-Based

Cognitive Therapy (Ma & Teasdale, 2004; Teasdale et al., 2000). Of particular significance in the research literature is a finding that MBCT offers equivalent protection against depressive relapse as would be found with maintenance of antidepressant pharmacotherapy with individuals with major depressive disorder (Kuyken et al., 2008; Segal et al., 2010). This would suggest that MBCT is just as effective at preventing the occurrence of a major depressive episode as maintenance of antidepressant medication, which not only has ramifications for individuals who struggle with major depressive relapse, but also improve cost effectiveness in the treatment of one of the most common and costly mental health issues in the world.

**Trauma.** Trauma can be described as an emotional reaction to an event, situation, or circumstance which has overwhelmed an individual's capacity to cope and later interferes with adaptive psychological functioning and future recovery from the impact of said traumatic event. Often, individuals respond differently to traumatic events, thus, exposure to trauma is best characterized as an interaction between the event and an individual's reaction to that event (Follette & Vijay, 2009). Some may recover from a traumatic event quickly, while others appear to struggle deeply with the emotional aftermath of the event. The latter response to traumatic distress is frequently characterized by the individual spending a great amount of time both processing the event and also actively seeking to avoid any reminders of the traumatic event (Herman, 1992). Rather than focus on the range of reactions individuals may experience in response to a traumatic experience, this section will highlight psychological trauma classified by the *American Psychiatric Association's DSM-IV-TR* (2000) as posttraumatic stress disorder and acute stress disorder.



Posttraumatic stress disorder, as characterized by the *DSM-IV-TR* (APA, 2000), is a combination of symptoms a person experiences following exposure to an extreme traumatic stressor. An extreme traumatic stressor is classified as such in that it involves either an actual or perceived threat of harm or death, either of oneself or of another individual. These events can either be directly experienced, witnessed, or experienced by another with whom the individual is very close. Examples of potential extreme traumatic stressors include: military combat, violent personal assaults, natural or manmade disasters, incarceration, torture, or motor vehicle accidents. Symptoms that an individual with posttraumatic stress disorder may experience include intense feelings of fear, helplessness, horror, and sometimes evidence of agitated or disorganized behavior. Individuals with posttraumatic disorder often struggle with the contrasted experience of continually re-experiencing the traumatic event, while also determinedly avoiding anything associated with the traumatic experience. Traumatic re-experiencing may manifest itself via nightmares experienced while sleeping or "flashbacks," in which the individual is essentially dissociated for a period of time in which they are re-experiencing the trauma. Avoidance behaviors often occur in response to situations, activities, or people who serve as reminders of prior traumatic experiences and serve as a trigger for associated physiological arousal of the event. Avoidance may also result in a generalized experience of numbness and noticeable decline in interest or pleasure in activities that the individual may have previously enjoyed (APA, 2000). The primary differentiating factor between posttraumatic stress disorder and acute stress disorder is that the emergence of symptoms for acute stress disorder must occur within 4-weeks of exposure to a traumatic stressor and also resolve within that 4-week period. Posttraumatic disorder is diagnosed

if the symptoms remain for longer than one month's time. Prevalence rates for posttraumatic disorder in the general adult population of the United States is somewhere between 6.8-8%, with women seemingly twice as more likely than men to have PTSD at some point in their lives (Gradus, 2007).

At present, the well-established evidenced based treatments with the strongest research support for use with individuals with posttraumatic stress disorder consists of Prolonged Exposure Therapy, Cognitive Processing Therapy, and Eye Movement Desensitization and Reprocessing (Foa, Hembree, & Rothbaum, 2007; Resick & Schnicke, 1996; Shapiro, 2001). Prolonged exposure therapy involves gradually engaging the individual in imagined exposure to the original traumatic memory and any other situations, thoughts, or environments that trigger an association to the original traumatic memory. Prolonged exposure also incorporates some cognitive-behavioral strategies to facilitate emotional processing of trauma and include psychoeducation about common reactions to trauma, relaxation techniques, and other coping strategies that can be incorporated as needed (Foa et al., 2007).

So why is prolonged exposure therapy effective? It is hypothesized that through continued, gradual exposure to these memories and experiences, the individual begins to fully process the traumatic experience. This occurs because the individual learns through the process of exposure that their memories of the trauma are not actually dangerous in the moment and is different than experiencing the trauma again. Individuals also learn through imagined exposure that anxiety related to their memories can be dealt with, without needing to escape and avoid the triggering situation, thought, object, or event entirely. Finally, prolonged exposure helps an individual experience their distressing

symptoms without feeling as though they have lost control of themselves in favor of their symptoms (Foa, et al., 2007).

Cognitive processing therapy is similar to prolonged exposure therapy in that they both contain components related to exposure, but cognitive processing theory relies more heavily on modification of the individual's beliefs about the meaning and implications of the traumatic experience. This emphasis on challenging and changing distorted beliefs and the self-blame associated with traumatic experiences through Socratic questioning is largely founded in information processing theory. Information processing theory is a way in which human memory is processed, encoded, stored, and how it is available for recall later. This theory argues that humans organize and categorize the vast amounts of sensory information we perceive through the development of schemata, or a generic body of knowledge that influences the processing of incoming information based on previous experiences stored in our memory (Resick & Schnicke, 1996).

However, when an individual has a traumatic experience, it is difficult for the brain to process this information for several reasons. The first reason is related to the social psychological concept that most humans subscribe to, which is known as the "just-world hypothesis." This is the belief that good things happen to good people and bad things happen to bad people. As a result, when an individual is faced with new information that does not fit into this belief, the individual either assimilates or accommodates the information to fit into previous schematic frameworks. Both strategies are commonly observed in trauma survivors. Assimilation is the process of distorting information to work with previous schemas. Accommodation is changing the pre-existing schemata in order to incorporate or accept the new information that was

incompatible with the old. These strategies of coping, although they may be important for successful integration of the traumatic experience, frequently contribute to posttraumatic symptom expression. For example, a survivor of sexual assault may alter their view of the world in ways that interfere with their ability to experience intimacy and trust others while also increasing the fear (Resick & Schnicke, 1996).

Secondly, it is hypothesized that in instances of traumatic exposure information is not adequately processed due to the elucidation of heightened affective responses necessary for survival in these situations that facilitate escape or avoidance behaviors. When information is inadequately processed, this often results in the symptomology most frequently associated with posttraumatic stress disorder, such as flashbacks and nightmares or cognitive avoidance. The concept of cognitive avoidance is crucial to the treatment and conceptualization of trauma utilized in cognitive processing theory. Essentially, cognitive avoidance is what prevents extinction of the strong affective responses that are activated when memory networks related to the traumatic incident are elicited by triggers encountered in the individual's environment. It is also what interferes in being able to fully process the trauma because the physiological arousal that results from this activation increases the likelihood that the individual will do whatever they can to avoid the triggering stimuli. When this cognitive avoidance mechanism is continually activated, the individual is never able to experience the event differently or in such a way that it can be fully integrated and processed into prior cognitive schematic frameworks. Therefore, the goal of cognitive processing therapy is to assist the individual in integrating memories of the events with complete emotional processing while accommodating prior schemata. The desired outcome for cognitive processing therapy is

helping the individual attain a healthy and balanced view of the world (Resick & Shnicke, 1996).

Eye Movement Desensitization Reprocessing (EMDR) is a treatment for posttraumatic stress disorder that pairs bilateral eye movements with cognitive processing of traumatic memories that follows several stages. EMDR conceptualizes PTSD symptoms as resulting from a lack of successful processing and integration of the sensory, cognitive, and affective elements associated with the traumatic memories. This conceptualization is quite similar to the cognitive processing therapy model in that it is founded on information processing theory. The first stage of EMDR involves teaching affect management coping strategies and relaxation. The processing stage begins with the therapist and client working together to identify and label images, beliefs, and physiological symptoms that are associated with the traumatic memory. The therapist then guides the client to focus on aspects of the traumatic memory while focusing their eyes on the therapist's finger, which is moved along a horizontal plane in front of the client's field of sight. These eye-movements are believed to aid in overcoming prior inefficient information processing of the memory and assist the individual in fully integrating all aspects of the memory (sensory, cognitive, and affective) (Shapiro, 2001). Despite evidence suggesting the efficacy of EMDR in the treatment of posttraumatic stress disorder, it remains highly controversial among researchers, largely because in comparison to prolonged exposure therapy, there is no difference in outcomes. This might suggest that the eye movement component of EMDR is unnecessary for successful treatment and that the true mechanism of change in the treatment of posttraumatic stress disorder is essentially exposure (Davidson & Parker, 2001).

Empirical research supporting the use of mindfulness-based treatments in treating post-traumatic stress disorder (PTSD) is quite limited, but studies examining the effects of mindfulness-based interventions with individuals with posttraumatic stress disorder suggest this is an area worth continued investigation. Research into the neurobiological correlates of posttraumatic stress disorder suggests that learning to observe and interpret thoughts, emotions, and bodily sensations may be of utmost importance in the treatment of posttraumatic stress disorder. Mindfulness-based interventions are seemingly equipped to address helping an individual with posttraumatic stress disorder learn how to observe and interpret cognitive, affective, and sensory experiences differently. Most research to this effect has thus far examined how mindfulness-based interventions can be used to both address the symptoms of posttraumatic disorder and supplement the exposure process common in effective treatments for posttraumatic stress disorder (Thompson & Waltz, 2009).

Although there remains little research examining the effect of mindfulness-based interventions specifically with treating the symptoms of posttraumatic stress disorder, Farb et al. (2007) proposed that mindfulness-based interventions may be helpful in aiding individuals to change the way in which they relate to themselves, to a more present-centered, objective, moment-to-moment experiencing. This altered relationship may then assist the individual's ability to engage or disengage with traumatic material throughout the process of therapy in such a way that an individual could participate in exposure at their own pace. In this light, mindfulness-based interventions could be viewed as another form of imagined exposure, similar to prolonged exposure, simply with additional coping

strategies in place to deal with unpleasant material (Baer, 2003; Batten, Orsillo, & Walser, 2006; Shapiro, Carlson, Astin, & Freedman, 2006).

Of particular interest in the mindfulness-based intervention literature with posttraumatic stress disorder is how mindfulness-based interventions can address the experiential avoidance commonly referenced in the trauma literature (Follette & Vijay, 2009). Similar to the concept of cognitive avoidance mentioned previously, experiential avoidance is an attempt to change, alter, or avoid some aspect of private experience. This occurs through a variety of strategies that individuals utilize to aid avoidance of triggering stimuli and might include: alexithymia, thought suppression, or avoidant coping. Although seemingly a natural and common responses to exposure to a traumatic situation, these strategies often have the unintended consequence of perpetuating a vulnerability to posttraumatic stress disorder (Thompson & Waltz, 2009).

Some studies have found that particular constructs that are cultivated by mindfulness practice, such as nonjudgment and acceptance towards one's experience was important in predicting variance in avoidance symptom severity (Thompson & Waltz, 2009; Vujanovic et al., 2009). These researchers postulated that because mindfulness teaches one to "let go" of experiences that might be negative and redirect one's attention to other healthier forms of coping, mindfulness would be predictive of lower severity of PTSD avoidance. This is particularly significant when taking into consideration some of the detractors to solely exposure therapy. Often, many clients refuse the exposure components of treatment utilized in the aforementioned empirically-based interventions (EBIs). As a result, it is extremely important to ensure that a client has the necessary self-regulation skills and adequate coping strategies in place prior to engaging in

treatment that involves exposure. Therefore, these findings are encouraging because it provides support for the logic behind many clinicians seeking ways in which to supplement the anxiety-provoking exposure process with coping skills. Mindfulness-based interventions that incorporate acceptance and non-judgmental attitudinal stance in trauma treatment may be beneficial in helping individuals learn how to relate to these experiences differently. This is consistent with findings from a study conducted by Follette, Palm, and Pearson (2006), in which they demonstrated that mindfulness is effective in helping prepare individuals in treatment for PTSD for exposure therapy. They suggested that it is through the cultivation of an attitude of nonjudgment and acceptance of experiences that the client remains in contact with the distressing experience while simultaneously decreasing avoidance and increasing the psychological flexibility needed for the individual to learn to relate to those experiences differently and in a way that promotes healing.

A preliminary study examining the efficacy of an MBSR program in the treatment of posttraumatic stress disorder with veterans found that the individuals who participated in the program experienced significant improvements on measures of mental health, particularly in relation to PTSD, depression, experiential avoidance, behavioral activation, and quality of life measures over a period of 6 months. This study largely provides support for the hypothesis that mindfulness-based interventions can be utilized as a type of exposure therapy and that it does lead to a decrease in avoidance behaviors. The authors speculate upon several potential mechanisms through which the mindfulness-based interventions produced change. First, the mindfulness-based interventions allowed participants to engage sustained nonjudgmental attention to negative affective states,



which alternately results in decreased emotional numbing and hypervigilance. Second, the mindfulness-based interventions resulted in decreased rumination and decreased experiential avoidance, which concurrently decreased the degree of posttraumatic stress disorder symptomology. This hypothesis would be consistent with findings of decreased rumination and experiential avoidance with other clinical disorders, most notably depression (Kearney, McDermott, Malte, Martinez, & Simpson, 2012).

**Eating disorders.** Mindfulness-based intervention research has more recently been explored for the treatment of eating disorders, including anorexia nervosa, bulimia nervosa, and binge eating. Before discussing in detail how mindfulness-based interventions are being applied to the treatment of eating disorders, it may be helpful to outline the specific definitions of each disorder. According to the American Psychiatric Association's *DSM-IV-TR* (2000), the essential features of anorexia nervosa "are that the individual refuses to maintain a minimally normal body weight, is intensely afraid of gaining weight, and exhibits a significant disturbance in the perception of the shape or size of his or her body." Many individuals with anorexia nervosa tend to lack insight into or express denial of their struggles with disordered eating. Anorexia nervosa tends to be more common in women than men, although the prevalence of anorexia nervosa in men appears to have increased in recent decades. The lifetime prevalence of anorexia nervosa in Western women as reported by the *DSM-IV* is approximately 0.5%, other estimates suggest between 0.46% to 3.2% (Makino, Tsuboi, & Dennerstein, 2004).

The diagnosis known as bulimia nervosa is characterized by binge eating and inappropriate compensatory methods designed to prevent weight gain (APA, 2000). bulimia nervosa is similar to anorexia nervosa in that individuals with bulimia nervosa

share a fear of gaining weight, dissatisfaction with their bodies, and a wish to lose weight. Although there is emotional lability and periods of dysphoria with both anorexia and bulimia nervosa, bulimia is more often associated with an increased frequency of depressive or anxious symptomology. Prevalence rates are much higher among women from most industrialized countries and range between 1% to 3% (APA, 2000).

A proposed definition for binge eating disorder is found in the appendix of the American Psychiatric Association's *DSM-IV-TR* (2000). This definition characterizes binge eating disorder by recurrent episodes of binge eating associated with impaired control over and significant stress about binge eating and an absence of compensatory behaviors. For some individuals, binge eating is reported to be triggered by dysphoric mood states, such as depression or anxiety, while others indicate that they experience a relief of tension by binge eating. The proposed definition for binge eating disorder in the *DSM-V* is essentially very much the same as the definition provided the *DSM-IV* for further study with differences only in the frequency of when binge eating occurs being changed from two days a week for 6 months to once a week for 3 months in the *DSM-V*. The *DSM-IV* (2000) reports that there is a prevalence rate of binge eating disorder nonpatient samples of 0.7%-4%.

At present there are several empirically-based interventions that have received strong research support in the treatment of eating disorders. In the treatment of anorexia nervosa, Family-Based Treatment (FBT) has received the strongest empirical support (Lock et al., 2010). FBT is an outpatient treatment program for adolescents that is designed to restore weight without resorting to hospitalization. FBT conceptualizes treatment from the perspective that parents of the adolescent should be viewed as a

resource for resolving the problem. Involving the family as a whole allows misperceptions of blame that may be directed either towards the parents or the adolescent to be addressed. FBT is conducted in several phases over the course of 20 months and begins with putting the adolescent's parents in charge of nutritional rehabilitation and weight restoration, under the guidance of professionals. During this time, the adolescent retains full autonomy of other areas of their life. The second phase of therapy involves returning control of eating back over to the adolescent. The final phase explores issues of family structure and normal adolescent development prior to termination of treatment. It is important to note that the focus of FBT is not on what has caused the individual to have anorexia nervosa but entirely on determining what needs to occur to successfully treat it (Lock et al., 2010; Lock, LeGrange, Agras, & Dare, 2001).

For the treatment of bulimia nervosa and binge-eating disorder, Cognitive Behavioral Therapy (CBT) and Interpersonal Psychotherapy (IPT) have received strong research support, although IPT has shown to have a slower effect than CBT in achieving equal treatment outcomes (Agras, Walsh, Fairburn, Wilson, & Kraemer, 2000). CBT treatment for bulimia nervosa and binge-eating disorder focus on how cycles of binge-eating are perpetuated and maintained in the present, rather than exploring how they formed in the past. Treatment targets both the disordered eating behaviors and beliefs surrounding bodily appearance and weight. CBT occurs in three phases, the first of which emphasizes psychoeducation about weight, the adverse effects of disordered eating behaviors and extreme dieting. It also establishes the individual on a regimented pattern of regular eating and weight monitoring schedule. The second phase focuses on addressing the individual's concerns about bodily appearance, weight, and dieting

behaviors. It is particularly concerned with identifying precipitating triggers that precede a binge-eating episode. The final phase is concerned with planning for maintenance of healthy habits and relapse prevention work (Agras et al., 2000; Fairburn, 1995).

Interpersonal Psychotherapy (IPT) was developed for treatment with bulimia nervosa and binge-eating disorder from the treatment intervention that was originally developed for depression. As a result, treatment focuses on interpersonal difficulties present in the individual's life. Therapy seeks to explore the connection between interpersonal difficulties and the development and maintenance of the disordered eating. IPT is known for exploration of interpersonal difficulties that fit into four domains: role transitions, role disputes, unresolved grief, and interpersonal deficits. In contrast to CBT, the symptoms of the eating disorder are actually never addressed, except when assessed at the beginning of treatment. IPT for bulimia nervosa and binge-eating disorder also occurs in three phases. The first of which is spent identifying the interpersonal difficulties that are presently affecting the individual. The therapist and client then discuss which of these difficulties might be most beneficial to focus on for the remainder of therapy and explore relevant precipitants to the binge eating behavior during this phase. The second phase emphasizes the client taking more control of facilitating change in their own interpersonal challenges with the therapist providing support for the client's efforts. The final phase is similar to CBT in that it is focused on maintenance (within the interpersonal domain) and relapse prevention (Agras et al., 2000; Fairburn, 1997).

Baer, Fischer, and Huss (2005) offer an interesting theoretical foundation for utilizing mindfulness-based interventions with eating disorders. First, the cognitive-behavioral model of eating disorders suggests that cognition is an important factor in the

initiation and maintenance of disordered eating. From a mindfulness perspective, these cognitions could be addressed using mindfulness and acceptance based strategies to treatment. In developing a nonjudgment stance towards sensations, feelings, and thoughts, mindfulness practices encourages learning a decentered perspective of cognitions. Meaning, thoughts are no longer viewed as facts of reality, but as fluctuating and impermanent events occurring in the mind. This stance towards one's thoughts can assist an individual in realize that a belief does not actually need to be responded to by a particular behavior and that other thoughts and behaviors can replace them. Second, another hypothesis posits that disordered eating arises as a desire to escape from negative emotional states and results in maladaptive emotion regulation. Thereby, binge eating, for example, can be viewed as an effort to reduce negative or unpleasant affect, which is known as experiential avoidance. Mindfulness-based interventions are largely equipped to promote coping skills surrounding negative affect in that it offers the individual a safe experience in which they can simply accept and observe the emotions they experience, which has an exposure-like function. It can also help an individual view the negative affect as a state, something which is not permanent and won't last forever. Thereby, no one specific response is needed or necessary to resolve that state because it is simply an experience that will eventually pass in time.

Although there has been an increased interest in applying mindfulness principles to the treatment of eating disorders, the empirical evidence necessary to support the effectiveness of these interventions has not yet been established. Preliminary studies examining the efficacy of mindfulness-based interventions for the treatment of anorexia nervosa, bulimia nervosa, and binge eating suggest that they may have some utility in the

treatment of eating disorders. A recent study by Lavender, Jardin, and Anderson (2009), offers empirical support for Baer et al.'s (2005) assertion that experiential avoidance, or more specifically thought suppression, may be mediated by dispositional, or trait mindfulness and account for variance observed in bulimic symptoms in a study of university students. Therefore, individuals who exhibited higher levels of trait mindfulness were less likely to experience disordered eating attitudes and behaviors. They hypothesized that individuals with higher levels of attention and awareness are more likely to be accepting of their inner experiences, thus they are less likely to respond to negative affect with maladaptive coping strategies that lead to disordered eating.

Further, some authors are beginning to propose formal mindfulness-based treatment programs designed for the treatment of eating disorders. For example, Kristeller and Wolever (2011) have developed a Mindfulness-Based Eating Awareness Training (MB-EAT) that was designed for the treatment of binge eating disorder. MB-EAT is based on several theoretical approaches to disordered eating, including the neurobiological and therapeutic models of mindfulness meditation. Specifically, it emphasizes the aspects of mindfulness surrounding increased self-acceptance and the emergent wisdom that follows from cultivating a nonjudgmental stance towards thoughts, feelings, and sensations. With increased awareness of one's internal experiences, automatic patterns related to eating, emotion regulation and self-acceptance are identified. As a result, the practitioner has an improved capacity to not respond to negative affect or thoughts with maladaptive behaviors, but rather choose a path of behavior that is "wiser." Of particular note is that the actual practice of mindful eating is a major component of several sessions. This practice is direct exposure to bringing

awareness to the internal processes involved in food choice, the decision to initiate eating, as well as cease eating. In effect, this program is viewed as a way in which the participant actually "re-regulates" their eating behavior (Kristeller & Wollever, 2011).

A systematic review of the literature on mindfulness-based interventions for eating disorders, which analyzed eight studies, indicated that mindfulness-based therapies may be effective in the treatment of eating disorders. Further, all studies reported statistically significant outcomes across the range of eating disorder diagnosis, including anorexia nervosa, bulimia nervosa, and binge eating. However, they reported that future research should improve upon the small sample sizes utilized in these studies and that the quality of the trials needs to be improved. The authors of this review also acknowledge that comparing these studies was limited by the differences in the types of populations used, the variability in type of mindfulness therapies, and methodology (Wanden-Berghe, Sanz-Valero, & Wanden-Berghe, 2011).

**Deficits of attention.** The American Psychiatric Association's *DSM-IV-TR* (2000) characterizes Attention-Deficit/Hyperactivity Disorder (ADHD) as a "persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequently displayed and more severe than is typically observed in individuals at a comparable level of development" (p. 85). Many individuals with ADHD experience difficulties with organizing tasks and activities and experience tasks that require substantial sustained mental effort as particularly taxing and aversive. In addition, individuals with ADHD are often easily distracted by extraneous irrelevant stimuli and are often forgetful in daily activities. Individuals with ADHD often also exhibit some hyperactivity and impulsivity, which can be manifested by impatience, difficulty in delaying responses and waiting

one's turn, interrupting others, and struggling with listening to directions. ADHD frequently impairs functioning in many different domains of the individual's life, such as academic/occupational, familial/relational, and social (APA, 2000). Often, these difficulties also contribute to feelings of inadequacy and/or low self-esteem. Further, these same difficulties may exacerbate feelings and fears relating to incompetence and may result in strategies aimed at controlling anxiety. As a result, there are increased rates of comorbidity between ADHD and depression or anxiety (Solanto, 2011). Prevalence rates of ADHD in school-age children are estimated to be between 3% and 10% while estimates presume that at least 5% of adults in the U.S. have ADHD (Mapou, 2009).

Generally, ADHD is considered to be the result of a combination of influences identified as crucial in both the development of ADHD and the variability observed across individuals with ADHD. Largely these influences can occur at a genetic, developmental, or environmental level, but ultimately all have a profound effect on the difficulties that individuals with ADHD have in their self-regulatory abilities (Zylowska, Smalley, & Schwartz, 2009). At present, there are several conceptualizations of the deficits observed in individuals with ADHD which most prominently include the theories of executive dysfunction, activation, comorbid anxiety and depression, and multiple pathways. It is largely held that deficits in organization and efficient management may be attributed to deficits in executive functioning. This would encompass such cognitive abilities as working memory, one's ability to shift attention, inhibition of impulses, susceptibility to distraction, as well as organizing, planning, and the ability to self-monitor and regulate one's emotions and behaviors. As a result, these deficits can and



have been observed on neuropsychological testing and neuroimaging. In particular, neuroimaging reveals deficits of brain volume and decreased activation in the prefrontal cortex which is associated with executive functioning control. Other affected brain regions implicated in ADHD include the amygdala, cerebellum, and basal ganglia (Zylowska, Smalley, & Schwartz, 2009). The activation understanding of ADHD also relies on an understanding of the subcortical regions of the brain responsible for the activation processes that instigate self-mobilization or initiation of a task in response to a stimulus and may also be associated with stress reactivity. Research suggests that individuals with ADHD exhibit difficulties with these tasks. The multiple pathways approach to understanding of ADHD tries to incorporate all of these possible conceptualizations to how an individual with ADHD may present for treatment in an attempt to accommodate the diversity evidenced in symptom expression in individuals with ADHD. This approach suggests that all of these theories describing the underlying mechanism responsible for ADHD can be considered together and entertains the possibility that they may co-exist or interact (Solanto, 2011).

At present, the evidenced-based psychotherapeutic intervention that has received the strongest research support in the treatment of adult ADHD is Cognitive Behavioral Therapy (CBT), which is typically administered in addition to psychopharmacological treatment. CBT treatment that is utilized concurrently with psychopharmacological intervention has been shown to have a greater effect in the treatment of ADHD symptoms than just medication alone (Emilsson et al., 2011). Further, some research suggests that drug treatment alone is not sufficient to remediate deficits of executive functioning alone, thus necessitating a strong concentration on providing the individual with coping

strategies and skills that address the symptoms of inattention, impulsivity, or hyperactivity when applying CBT. Treatment can also encompass any other areas of the individual's life that may be affected by the symptoms of ADHD, such as social or occupational/educational. CBT for ADHD specifically tries to address the executive dysfunction and cognitive activation deficits that are problematic for individuals with ADHD, including psychoeducation, training in time management, planning, improving problem solving skills, reducing distractibility, and increasing attention span, among others (Safren., Perlman, Sprich, & Otto, 2005).

Mindfulness-based interventions as applied to the treatment of ADHD has only more recently been proposed in the mindfulness literature as a potential complementary treatment for ADHD. Given that at its most basic level, mindfulness is wholly concerned with the basic human capacity to pay attention and develop this ability further, it may be uniquely capable to address deficits observed in individuals with ADHD. They also possess overlapping neuropsychological correlates in the prefrontal cortex relating to what is known as *conflict attention*. This is significant because conflict attention plays an important role in self-regulation of automatic responses. Individuals with ADHD often exhibit difficulty with tasks demanding conflict attention, by inhibiting automatic responses and requiring the person to try to focus on a less automatic stimulus, such as the Stroop task. The Stroop task is a test considered to assess components of selective attention, processing speed, and is frequently used in neuropsychological testing as an evaluation of executive functioning. The Stroop test exhibits a demand on participants conflict attention and selective attention by presenting participants with several trials. The first trial, has a long list of written color names, but the word is printed in a different

color than the word. In this trial, participants are asked to say the written word, not the color, under timed conditions. In the second trial, participants are asked to name the color of the ink, not the word, also under timed conditions. Such a task requires a great deal of self-regulation of automatic responses because participants tend to take longer to respond to naming the color of the word when it is printed in a different color than when the color and the word matches (Howieson, Lezak, & Loring, 2004). However, a study examining the impact of mindfulness practice on conflict attention suggests that mindfulness training does improve these self-regulated responses (Tang et al., 2007).

Zylowska et al. (2009) propose that mindfulness-based interventions may be beneficial as a part of complementary treatment with individuals with ADHD and a number of problematic areas associated with ADHD, particularly in addressing attention/cognition regulation, emotion regulation, stress regulation, and improved neuroplasticity. Several pilot studies using mindfulness-based interventions as a complement to other forms of treatment resulted in reductions in self-reported symptoms of ADHD, anxiety and depressive symptoms, and difficulties with conflict attention and attentional set-shifting (Hesslinger et al., 2002; Zylowska et al., 2008). In addition, a study by Smalley et al. (2009) also supports the proposition that mindfulness training may be beneficial as a complementary treatment for ADHD. In their study, Smalley et al. (2009) proposed that an inverse relationship exists between trait mindfulness and the personality traits associated with ADHD. Their findings concluded that individuals with ADHD had lower trait mindfulness than individuals without ADHD. Further, they found that mindfulness-training may particularly impact the two personality dimensions of self-directedness and self-transcendence. Both of these personality dimensions are associated

with overall mental health and well-being and may offer this potential improvement in well-being to individuals with ADHD (Smalley et al., 2009).

**Substance use disorders.** Research investigating the effect of mindfulness training as an intervention for substance use disorder treatment and addiction is still very much in the preliminary stages. Despite minimal research on the subject thus far, mindfulness does appear to have been used clinically by substance abuse therapists who integrated meditation practices into their programs, but largely went undocumented in the literature until more recently (Black, 2012). An initial study conducted in 2001 by Marcus, Fine, and Kouzekanani suggested that mindfulness-based interventions demonstrated potential in enhancing healthy coping styles and mitigating the hostility exhibited by individuals who struggle with alcohol, tobacco, and other drug(s) dependency. The findings of this study were also promising because they indicated that the participants of the treatment program would have likely dropped out of treatment if it were not for the meditation training. Because the focus of this study was centered around substance dependency, more recent studies have also investigated the effect of mindfulness-based interventions with substance abuse.

Before the more recent studies are explored, it may be helpful to be reminded of the definitions for Substance Dependence and Substance Abuse as specified by the American Psychiatric Association's *DSM-IV-TR* (2000). Substance dependence consists of a cluster of cognitive, behavioral, and physiological symptoms that identify an individual who engages in repeated use of a substance despite significant substance-related problems, often resulting in increased tolerance to the drug, withdrawal symptoms, and compulsive substance use. Many individuals express a wish to reduce

their use of the substance, but many have been unsuccessful in efforts to do so. Often the individual will continue to use the substance despite their awareness that the energy required to obtain, imbibe, and recover from use of the substance is significantly interfering in other important social, occupational, and familial responsibilities (APA, 2000). Substance abuse differs from dependence in that the characteristics of tolerance and withdrawal to the substance are not present. Rather, according to the *DSM-IV-TR*, substance abuse "is a maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to the repeated use of substances" (p. 198). The essential feature with substance abuse resides with repeated use that may be hazardous and result in legal, social, or interpersonal problems for the individual (APA, 2000). Alternatively, sometimes individuals will present for treatment with symptoms not entirely consistent with a formal diagnosis. As a result, some researchers and practicing clinicians suggest that alcohol and drug problems might best be conceptualized on a continuum of use. The continuum begins with abstinence, moving to nonproblematic use, and on to increasing types and degrees of problematic drug or alcohol use. In doing so, the emphasis is no longer centralized around the diagnosis itself but rather the individual, allowing an examination of the context of the individual as a whole to better inform treatment (McCrary, 2008).

At present, the well-established evidenced based treatments with the strongest research support for use with individuals with alcohol abuse/dependence and mixed substance abuse or dependence largely consists of Motivational Interviewing, Motivational Enhancement Therapy (MET), MET in combination with cognitive-behavioral interventions, and prize-based contingency management (Hettema &

Hendricks, 2010; Higgins, Sigmon, & Heil, 2008; Miller & Rose, 2009). It is hypothesized that motivational interviewing promotes behavior change in two primary ways. First, client's verbalize their own arguments for change, called "change talk," and second, by emphasizing the therapeutic alliance. It is believed that the therapeutic alliance, followed by expression of positive regard, accurate empathy, and congruence in the relationship are essential to foster an environment in which the client feels safe and accepted in a way that they are more free to explore the possibility of change (Miller & Rose, 2009). However, cognitive-behavioral treatment or cognitive-behavioral/relapse prevention therapy, 12-step facilitation treatment, behavioral couple therapy, cue exposure treatment, as well as the community reinforcement approach have all been identified as interventions that are moderately efficacious and helpful (McCrary, 2008).

One particularly important feature of substance use disorders is that they have relatively high relapse rates, often exceeding 60% fairly consistently across a wide range of substances (Zgierska et al., 2009). In order to address relapse specifically, a number of evidenced based interventions are commonly used, including behavioral, cognitive-behavioral therapy (CBT), and relapse prevention. Further, it is important to note that when selecting an appropriate treatment, the clinician will benefit from relying on one's own expertise and judgment of multiple factors relating to treatment in order to select the most appropriate treatment approach for that client. These factors might include client motivation and expectations for treatment, the therapeutic relationship, severity of the problem and other additional stressors, social support, factors contributing to the substance-use patterns, and the client's readiness and strategy for maintaining progress made during treatment (McCrary, 2008).

As mentioned earlier, recent studies examining the impact of mindfulness-based interventions with substance abuse treatment are suggestive of positive treatment outcomes with alcohol, tobacco, and other drug dependency and abuse (McCrary, 2008; Vieten, Astin, Buscemi, & Galloway, 2010; Zgierska et al., 2009). A review by Zgierska et al., (2009) found that the majority of studies they reviewed demonstrated, despite differences in study design, some positive outcomes among individuals with substance use disorders in comparison to standard treatment. In particular, they found that mindfulness-based interventions may be even more helpful for the treatment of individuals with a dual diagnosis, or a substance-related disorder and a mental health disorder. However, significant limitations still exist in the research including small sample sizes, a need for a specific and written intervention manual modified to address the needs of the treatment population, lack of control conditions, lack of assessment of change of clinical outcomes, and lack of assessment of the biological markers for change (Zgierska et al., 2009).

In addition, there is also preliminary discussion exploring the potential mechanisms of change operating in the application of mindfulness-based interventions to substance abuse and addictions treatment. With the success of mindfulness-based interventions in preventing relapse of major depression, it has been suggested that the same mechanisms applied to prevent relapse for depression might promote substance abuse recovery and prevent relapse. This has been proposed largely as a result of the evidence supporting the susceptibility of long-time substance users to increased depressive symptoms. This susceptibility to depressive symptomology tends to increase motivation for relief from those symptoms through the use of substances, which often has

the effect of increased intensity of craving for substances often leading to relapse (Witkiewitz & Bowen, 2010).

Zgierska et al., (2009) also suggested that mindfulness-based interventions offer some beneficial components of treatment that distinguish it from the most commonly applied treatment methodologies for substance use treatment. In particular, they suggest that mindfulness-based interventions may be a helpful complement when integrated with some of the skills taught during cognitive-behavioral therapy. For example, mindfulness-based interventions more often address emotional avoidance and impulse control through increasing awareness of sensations and emotions, which is more of a response-focused coping strategy. Cognitive-behavioral therapy teaches more antecedent-focused coping strategies. As a result, Zgierska et al., (2009) recommended that these strategies may arguably improve overall efficacy of substance-use disorder treatments when used in combination.

From a neurobiological perspective, there is also a structural correlation between the parts of the brain associated with substance use disorders and depression, which include the anterior cingulate cortex, the amygdala, subareas of the insula, and the prefrontal cortex. Interestingly, these brain regions have also been shown to be affected by mindfulness training (Lutz, Brefczynski-Lewis, Johnstone, & Davidson, 2008).

Theoretically, it has been suggested that mindfulness-based interventions promote the development of a detached and de-centered relationship to thoughts and emotions. This altered relationship with thoughts and feelings may prevent the escalation of thought patterns that often result in substance abuse relapse. The increased awareness, regulation,



and tolerance of potential triggers of relapse through mindfulness training may improve an individual's ability to cope with these triggers in a healthier way (Bowen et al., 2009).

As a result of both the theoretically hypothesized connection and neurobiological correlates between depression and substance abuse, a Mindfulness-Based Relapse Prevention program was developed by Bowen et al. (2009) based on the MBCT program designed by Teasdale et al. (2005) to address cognitive patterns that lead to depressive relapse. The Mindfulness-Based Relapse Prevention program is a mindfulness-based aftercare approach that utilizes aspects of relapse prevention with mindfulness training adapted from MBSR and MBCT. The central part of treatment is learning how to identify high-risk situations and early warning signs for relapse and developing coping skills via the mindfulness training. Mindfulness practices entail improved awareness of triggers, learning how to monitor one's internal reactions, and fostering healthier behavioral choices. They also emphasize increasing acceptance and tolerance to both positive and negative physical, emotional, and cognitive states, particularly cravings, which theoretically could decrease the need to alleviate discomfort via substance use (Bowen et al., 2009). In their pilot study with MBRP, Bowen et al., (2009) found that MBRP demonstrated significant improvement in comparison to a treatment as usual control condition in regards to participant report of days in which they used substances, experienced cravings, as well as levels of awareness and acceptance. However, the decrease in substance-related problems was not significantly different between conditions. They also found that participants remained compliant in attendance and continued mindfulness practice four months post-intervention. This is also reflected in the significant findings associated with decreases in overall days of substance use post

intervention in comparison to the control condition, but those gains began to diminish after four months, likely due to many participants returning to treatment as usual groups that did not facilitate continuation of practices learned from the mindfulness group. The authors of this study recommended follow-up care that includes maintenance and support for MBRP treatment may be helpful in improving the efficacy of the treatment intervention.

A follow-up evaluation study of the efficacy of MBRP with preventing substance abuse relapse was recently examined in a study by Witkiewitz and Bowen (2010). They argued that mindfulness-based techniques would attenuate conditioning among depressive symptoms, craving, and relief seeking through substance abuse via increased nonjudgemental awareness of patterns of thoughts and feelings with an emphasis on nonreactivity. Through the course of the program, repeated exposure to previously avoided experience, such as the depressive states, in the absence of habituated responses, like substance use, was shown to weaken the response of craving while the individual is experiencing negative affect (Bowen et al., 2009; Witkiewitz & Bowen, 2010).

Although few, there have been several other studies examining the efficacy of mindfulness-based interventions as a part of relapse prevention with substance abuse treatment and the findings are seemingly consistent with the previously mentioned findings. In particular, findings suggest that these interventions possess a great deal of promise for improving the affect of individuals prone to substance use, across a wide number of substances, and for reducing relapse. However, much research is still required to elaborate upon the specific mechanisms of change and there needs to be studies with

control conditions with treatments adequate to match mindfulness tracking as well as better assessment of tracking changes in clinical outcomes.

**Chronic pain.** Despite the great advances medical science has experienced in the last few decades, chronic pain remains a common complaint in primary health care settings, with roughly 20% of patients reporting pain in visits to their primary care physicians and in the general population (Cousins, Brennan, & Carr, 2004; Kabat-Zinn et al., 1985; McCaffrey, Frock, & Garguilo, 2003). As individuals age, the percentage of individuals who suffer from chronic pain increases to around 50% (Cousins et al., 2004). Other estimates report that at least 70 million Americans report chronic pain and of those 70 million, at least 50 million report partial or total disability (Fordyce, 1995). As a result, the extent of the medical, societal, and economic consequences needed to address the pain management needs of so many individuals are quite large (Eimer & Freeman, 1998).

There are many definitions of pain in the medical and health psychology literature. Pain has generally been defined as a combination of emotional and sensory experiences that are best characterized as unpleasant (Merskey & Bogduk, 1994). McCaffery et al. (2003) also allude to the mind-body connection and also the unique individual experience of pain in their definition of pain, which is "whatever the experiencing person says it is, existing whenever he or she says it does." This definition also suggests that individuals who may have the same injury or disease may also experience pain differently. This latter definition has come to be seen as a more accurate representation of the modern medical field's understanding of pain.

Chronic pain, on the other hand, is differentiated from acute pain because it persists for at least 6 months or more. Chronic pain is considered to be a multidimensional experience, meaning that there are sensory, affective, and cognitive components that interact and culminate into what might be considered the pain response. In fact, it is not altogether uncommon for individuals experiencing chronic pain to also struggle with anxiety or depression (Kabat-Zinn, et al., 1985; McCaffrey et al., 2003). In addition, there are many ways in which chronic pain can be classified. Many times, chronic pain is categorized in accordance with the underlying medical diagnosis associated with the pain, like pain due to cancer or arthritis. Other times chronic pain can be categorized based on the region of the body where the pain is experienced, such a neck or back pain or headaches. It can also be classified by a specific system of the body, like gastrointestinal pain (Lumley, 2012). This can be further characterized by descriptors commonly seen in the literature that include somatic pain, visceral pain, or neuropathic pain. Somatic pain describes pain that has occurred at some localized area on the skin or surrounding tissue or within muscles, ligaments, bones, and arteries. Visceral pain describes pain originating from internal organs and from pain receptors which transmit information about stretching of organs, inflammation, or infection. Many cancer patients experience forms of visceral pain. Neuropathic pain arises from damaged nerves or a dysfunction of the nervous system. Often, neuropathic pain results from over-excitation of nociceptors and is described like a burning or tingling. Examples of neuropathic pain include diabetic neuropathy and phantom limb pain (McCaffrey et al., 2003). Other times, chronic pain may be characterized by an environmental cause or a period of development with which the pain is associated (Lumley, 2012).

In traditional Western medicine, the focus of pain treatment/management has centered around the biological components of pain, while neglecting to incorporate the other aspects of human experience, such as emotional, psychological, and cultural variables, that we now know play a role in the differences people exhibit in their experience and perceptions of pain (Gardner-Nix, 2009; McCaffrey et al., 2003). Co-morbidity rates of anxiety and depression with chronic pain are relatively high (McCaffrey et al., 2003). There is also increasing evidence to suggest that cognitive and affective variables can mediate perception of the experience of pain (Zeidan, Gordon, Merchant, & Goolkasian, 2009). As such, much of the chronic pain literature is pointing to the importance of addressing the psychological components of pain management and treatment and was largely the rationale for exploring the efficacy of mindfulness-based interventions as a complementary medical treatment for management of chronic pain (Kabat-Zinn, 1982).

At present, the evidenced-based interventions which have received the strongest clinical psychology research support for the treatment for chronic pain are Cognitive Behavioral Therapy (CBT) and Acceptance and Commitment Therapy (ACT) which appear to have comparable treatment outcomes (Wetherell et al., 2011). CBT treatment typically centers on pain and distress reduction through the modification of physical sensations, maladaptive behaviors, and catastrophizing thoughts. However, randomized controlled trials evaluating the effectiveness of CBT with chronic pain are still needed (Wicksell, Olsson, & Hayes, 2011). ACT has been used successfully as a part of complementary pain management treatment for a variety of chronic pain conditions which includes, but is not limited to fibromyalgia, headaches, back problems, cancer, and

arthritis (Wetherell et al., 2011; Wicksell, Melin, Lekander, & Olsson, 2009).

Largely, ACT and CBT do share some similarities in that they both have an emphasis on exposure and share some of the same mechanisms to promote coping. However, ACT does not utilize interventions such as decatastrophizing or relaxation training to address maladaptive beliefs or reduce physiological responses to pain and emotions (Wicksell et al., 2011). The primary distinguishing featuring of ACT in comparison to CBT is that the goal of ACT is not to simply reduce symptoms, as is the case for CBT. In fact, the ACT model would argue that attempts to alter the a "negative" experience, of pain are not likely going to be helpful and may in fact increase the client's level of distress. According to ACT, avoidance of negative thoughts and emotions has a negative impact on behavior (Wicksel et al., 2009). Instead, ACT approaches treatment from a mindfulness-based perspective, teaching the principles of awareness and nonjudgmental acceptance of all experiences, increasing tolerance for both positive and negative, pleasant and unpleasant experiences. Therefore, the overall goal of ACT is to improve the overall functioning of the client through exposure to previously avoided situations (Wetherell et al., 2011; Wicksell, Lennart, Lekander, & Olsson, 2009). Improved functioning typically equates to working towards increasing the individual's overall psychological flexibility. Increased psychological flexibility would allow an individual who may be experiencing something that is altogether unpleasant or negative, such as pain, to continue to interact effectively with the world around them in accordance with their personal values (Lumley, 2012). Several studies support the use of both these exposure and acceptance-based strategies in improving the functioning and quality life of individuals struggling with chronic pain (Wetherell, et al., 2011; Wicksell et al., 2009).

At present, there are several proposed mechanisms responsible for the changes resulting in efficacious outcomes using ACT and CBT to treat individuals with chronic pain, although initial research suggests that the mechanisms of change may be different between ACT and CBT. One proposed mechanism of change for ACT is acceptance, which in this instance, would be referencing the task of accepting negative reactions or experiences that cannot be directly altered. This proposal appears consistent with the studies demonstrating that among individuals with chronic pain, acceptance of pain is associated with improved overall functioning for that individual, particularly in relationship with their work status, emotional and psychological health, and is correlated with decreased use of medications and reliance on health care services (McCracken & Eccleston, 2005). The only study thus far that has explored mediators of change using ACT in the treatment of chronic pain (for a pediatric population) was conducted by Wicksell et al. (2011), which examined the mediating effects of variables related to the mechanism of change known as psychological functioning, which was discussed earlier as the explicit goal of ACT. This study found that two of these variables seem to be responsible in some part for mediating the increased psychological flexibility in individuals with chronic pain who have completed ACT treatment. These variables included pain impairment beliefs and reductions in pain reactivity. This initial study does provide preliminary support for the theoretical processes underlying ACT treatment with chronic pain, but continued research is still needed (Wicksell et al., 2011).

The research examining the effectiveness of mindfulness-based interventions for the treatment of chronic pain is quite extensive as this is the treatment area with which the effectiveness of mindfulness-based interventions were first explored, beginning with

Kabat-Zinn (1982). Prior to this study, there had been no Western psychological research investigating the efficacy of mindfulness-based interventions in the treatment of issues that can be addressed by psychotherapy treatment. However, at this time, mindfulness meditation was beginning to be discussed as offering some helpful principles and techniques to the Western psychological treatment toolkit. Mindfulness was being touted as a different kind of strategy that may be helpful in promoting self-regulation and that Western psychology should explore what insights an ancient Buddhist psychology might provide to a still relatively young Western psychological tradition. At the time, much of the rationale behind exploring the use of mindfulness-based interventions in the treatment of chronic pain was to address a need for exploring other alternative treatments, aside from psychopharmacological intervention to manage pain.

The application of a mindfulness-based intervention to the treatment of chronic pain was also intended to address part of the pain management treatment model that up until this time was greatly lacking. This is what is now referred to as the mind-body connection and acknowledging the interaction between the biological, emotional, psychological, and cultural variables that culminate into an individual's unique experience of pain. Therefore, it was believed that mindfulness-based interventions might be better equipped to address the emotional and psychological dimensions of this mind-body connection, and offer a complementary alternative treatment in addition to traditional pharmacological intervention. Since this time, research has demonstrated that psychological variables such as mood changes and anxiety do indeed influence human perception of pain (Villemure & Bushnell, 2002). Further, pain management programs



that include psychological interventions demonstrate superior outcomes than those without psychological interventions (Hoffman, Papas, Chatkoff, & Kerns, 2007).

Kabat-Zinn (1982) hypothesized that cultivation of a detached observation of the pain experience could be attained through mindfulness practice. As he states it, this detached observation occurs "by paying careful attention to and distinguishing as separate events the actual primary sensations as they occur from moment to moment and any accompanying thoughts about pain." Using the MBSR program discussed previously in this paper, Kabat-Zinn (1982) observed significant reductions in measures designed to assess for present-moment pain, psychological symptomology often observed in chronic pain patients, such as anxiety and depression, negative body image, and inhibition of activity by pain. These findings in a follow-up study conducted by Kabat-Zinn et al. (1985) were similar. They also found that participant utilization of drugs decreased while their activity levels and self-esteem increased. Four years after the their initial study in 1982, Kabat-Zinn, Lipworth, Burney, and Sellers (1987) administered questionnaires to individuals who had completed the original MBSR course. Although this study may be potentially weakened by a response bias towards individuals responding to the questionnaire who had benefited from the program in comparison to those who didn't, the findings are significant. Forty percent of respondents reported that they felt as though they now had the ability to control, understand, or cope better with their pain and associated stress. Twenty percent reported that the training program resulted in the development of an entirely different perspective on their lives. Since Kabat-Zinn's research, other studies have emerged examining the efficacy of mindfulness-based interventions in the treatment of chronic pain, as well as other medical diagnoses that are

often accompanied by certain psychological co-morbidities (depression and anxiety), in addition to pain. Findings in meta-analytic review by Hoffman et al. (2007) supported the use of mindfulness-based interventions for anxiety and depression among populations of individuals with chronic pain, arthritis, fibromyalgia, traumatic brain injury, cancer, diabetes, and stroke, among others. A more recent study by Zangi et al. (2012) found that individuals patients with inflammatory rheumatic joint disease who reported experiencing serious psychological distress improved significantly even one year after completion of a mindfulness-based intervention program. These findings suggested that participants continued to incorporate mindfulness strategies learned in their program into the stress of their daily lives and likely reflects an improvement of psychological flexibility. Despite these findings, a review by Chiesa and Serretti (2011), concluded that there is only limited evidence at this time to support mindfulness-based interventions having a specific effect in pain reduction and the improvement of depressive symptoms in individuals with chronic pain. However, it does acknowledge that there is a nonspecific effect which is associated with patient report of a reduction in pain symptoms and improved psychological functioning. As a result, more studies exploring the efficacy of mindfulness-based interventions for the treatment of chronic pain are needed, particularly those with larger sample sizes and randomized controls.

Recent studies have explored the idea that mindfulness-based interventions may actually be influencing the experience of chronic pain by targeting higher cognitive centers involved in chronic pain rather than influencing the actual sensation of pain or an individual's attention to the pain (Baliki et al., 2006; Brown & Jones, 2010; Millecamps et al., 2007) It may be that the actual effect of meditation experience on pain

unpleasantness ratings is derived from lowered emotional responses to the actual pain stimulus, as well as a lower negative emotional appraisal of pain that participants anticipate, or a reporting bias related to other cognitive factors. Whereas neuroimaging studies have correlated the experience of chronic back pain to increased activity in the regions of the prefrontal cortex that are imprinted with memories of fear of pain, meditation was associated with lower activation of right (ipsilateral) S2 and left (contralateral) insula (Baliki et al., 2006; Brown & Jones, 2010). This suggests that experienced meditators seem to anticipate pain differently from non-meditators, thus accounting for the differences in perceived unpleasantness between groups. Therefore, meditation training can be viewed as improving functioning of cognitive control networks (Brown & Jones, 2010; Gardener-Nix, 2009). Brown and Jones (2010) proposes two specific aspects of training with meditation that reduces anticipation of pain. Acceptance promotes cognitive control through reduced engagement with emotional assessments of perceived events and would serve as a precursor for cognitive control. Acceptance is learned by meditators when they learn to control attention. The regions of the brain activated by acceptance also result in decreased activity in areas of the brain responsible for attending to future emotional appraisals of pain, thus impacting the perception of the experience of pain so it is not experienced as unpleasant compared with how a non-meditator would experience the same stimulus. Therefore, meditation training reduces both the anticipation of pain and negative emotional appraisals of pain, suggesting that this kind of meditation training would be beneficial to individuals who struggle with strong anticipation of the pain experience (Brown & Jones, 2010). Gardner-Nix (2009) also points out that mindfulness-based interventions also have

demonstrable physiological effects and induce a more physiologically relaxed state, which may mediate some of the improvements observed in these interventions for the treatment of chronic pain. This hypothesis would appear to be supported by several studies which explored and demonstrated a positive impact of mindfulness-based interventions on immune response with clearing psoriasis lesions, oncological treatments, and T cell counts of men diagnosed as HIV positive (Davidson et al., 2003; Hoffman et al., 2007; Kabat-Zinn et al., 1987).

**The benefits of mindfulness practice for therapists.** There has been quite a bit of debate and curiosity regarding the impact of the therapist's own mindfulness practice on therapy outcomes with clients, as well as on therapist performance. More recently, studies have begun investigating the relationship between mindfulness and the cultivation of qualities in the therapist, such as empathy, compassion, reduced anxiety, decreased anxiety, self-efficacy, self-insight, increased patience, intention, and gratitude. All are considered helpful to the therapeutic process (Davis & Hayes, 2011). MBSR training has been found to enhance self-compassion in health care professionals (Shapiro, Astin, Bishop, & Cordova, 2005) and therapist trainees (Davis & Hayes, 2011; Shapiro, Brown, & Biegel, 2007). At present, there is truly only one study that examines whether or not the benefits of mindfulness meditation as practiced by the therapist have an impact on psychotherapy treatment outcomes. Conducted in Germany by Grepmaier et. al. (2007), counselor trainees were randomly assigned to either practice Zen meditation for nine weeks or a control group who did not practice Zen. It was hypothesized that mindfulness practice by therapists may influence treatment results with their clients. By the end of the 9 week Zen meditation training period, these trainees reported higher levels

of self-awareness than the trainees in the control group. They then compared the overall symptoms, rates of change, and assessed self-report of well-being and effectiveness of treatment for the trainee's clients. Overall, results found that the clients who had meditated for 9 weeks exhibited greater overall symptom reduction, faster rates of change, scored higher on measures of wellbeing, and they perceived their treatment as being more effective than the clients of trainees who had not meditated for 9 weeks.

However, a study by Stanley et al. (2006), found that therapist trainee mindfulness predicted less improvement in global functioning and less reduction in client symptom severity at termination in a community mental health treatment setting that utilized manualized, empirically supported therapies. It is important to note that the trainees received no mindfulness training prior to this research study and therefore this study was measuring trainee trait mindfulness rather than state mindfulness. The authors of this study suggested that although these findings are counterintuitive, it may be the result of beginning therapists experiencing greater difficulty in adhering to a manualized treatment because that aspect of treatment has not yet been committed to procedural memory. Therefore, although they may be paying attention to more aspects of the therapeutic process, attention may be divided in a counterproductive manner. These findings may be different with a group of experienced mindful therapists. A study such as this also has certain limitations surrounding the self-report of degree of mindfulness because a more mindful person may actually rate themselves lower because they are aware of the degree to which they are mindless, while a less mindful person may not realize the opposite.

## **Neurobiological Research on the Effect of Mindfulness-Based Practices**

In order to improve our understanding of the various theoretical psychological constructs of mindfulness, conducting neurobiological research is essential in developing a biological body of evidence that might explain how these constructs operate. In the last 5 years alone, the amount of neurobiological research investigating various brain functions has grown exponentially. Several attempts have been made to synthesize the diverse body of neurobiological research, beginning with Cahn and Polich (2006), Chiesa, Calati, and Serretti (2011), and Chiesa and Serretti (2010). The Chiesa et al. (2011) review examined the impact of mindfulness on attention, memory, and executive functions. They found that early phases of mindfulness training were associated with significant improvements in selective and executive attention and the later phases are associated with improved sustained attention abilities. Speculation is also made in regards to how mindfulness-based practices may have potential for impacting working memory capacity and other executive functions.

The Chiesa and Serretti (2010) review of neurobiological and clinical features of mindfulness meditations reveals mindfulness-based interventions and meditation are associated with changes in activation of specific regions of the brain. Further, they concluded that despite evidence to suggest the efficacy of mindfulness-based practices for many psychiatric and physical conditions, prevailing neurobiological research studies of mindfulness are laden with limitations due to a lack of randomized control. The Cahn and Polich (2006) review attempts to summarize the psychological and clinical effects of mindfulness-based practices in respect to neuroimaging studies. Overall, it summarizes increasing evidence indicating that there are both short and long term neurobiological

changes that occur amongst individuals who practice mindfulness meditation, which largely appear beneficial to long-term meditators. They found that meditation reflects changes in the anterior cingulate cortex and dorsolateral prefrontal areas. Further, they found that event-related potential studies evaluating the impact of mindfulness demonstrate an increased regional cerebral blood flow during meditation. Research has also been able to associate theta and alpha activation on measures of electroencephalographic data to proficiency of meditative practice.

In addition to these reviews, there is new research that has not been encompassed by these reviews. Particularly, new neurobiological studies with mindfulness are exploring the concept of neuroplasticity (Slagter, Davidson, & Lutz, 2011), increased cortical thickness in brain regions associated with attention to internal experiences and long-lasting changes in the brain's physical structure (Lazar et al., 2005), emotional regulation (Farb et al., 2010; Garland, Boettiger, & Howard, 2010), and improved intrinsic brain connectivity (Kilpatrick et al., 2011). Jacobs et al. (2011) also published a very interesting preliminary study that investigated the effects of meditation on telomerase activity, which is a predictor of long-term cellular viability, which decreases chronic psychological distress. They found that meditation did increase telomerase activity and that the impact of mindfulness practice can be observed on a cellular level. However, in spite of the research up to this point, little is known or understood about the neuropsychological processes that compose meditation and mindfulness practices. There remains much to be learned about the neurobiological mechanisms that are involved in mindfulness meditation and what long-term impact mindfulness meditation has on the brain. Synthesizing these recent findings may be helpful in helping to clarify what

biopsychosocial mechanisms are responsible for the processes of change observed as the result of mindfulness-based interventions.

**Cognitive processes and attention.** The study of attention and its importance in guiding goal-directed behavior, has facilitated a great interest among Western psychology and neuroscience researchers. With the established effectiveness of mindfulness-based interventions in the clinical psychology research, cognitive researchers are taking note. Research investigating the effects of mindfulness-based interventions largely begins with the inherent human capacity for attention and what will be referred to here as attentional control. Attentional control, is the ability to focus and sustain attention on an object involving the use of several skills: monitoring the focus of attention while simultaneously detecting distraction; after detecting a distraction, having the ability to disengage attention away from that distraction; then redirecting and reengaging attention upon the original object of attention (Lutz, Slagter, Dunne, & Davidson, 2008). Several research studies have identified a positive benefit of mindfulness on attentional control (Jha, Krompinger, & Baime, 2007; Lutz et al., 2008; Wenk-Sormaz, 2005; Valentine & Sweet, 1999). A study by Lazar et al. (2005) found that in comparison to a group of nonmeditators, individuals with several years of formal meditation practice exhibited increased cortical thickness in brain regions associated with attention and largely involved in processing of sensory information. Specific brain regions included the prefrontal cortex and the right anterior insula. Attentional control has also been demonstrated to have an ameliorating effect on rumination, depression, and anxiety (Rueda, Posner, & Rothbart, 2004). It is hypothesized that improved attentional control gives way to an increased ability for self-regulation, having a positive impact on overall



well-being (Chambers, Lo, & Allen, 2008). Lutz et al. (2009) addressed the neuropsychological effects of mindfulness meditation training on attention in a study they conducted while measuring participants' performance on a dichotic listening task with electroencephalography. They found that even just three months of intensive meditation training enhances attentional stability, reduces effort required to engage with the attention task, and improves consistency of brain responses to sensory stimuli. A study by Pagnoni & Cekic (2007) explored how regular Zen meditation practice might affect normal age-related decline often observed in the cerebral gray matter volume and correlated attentional processes. They found differences in the age-related decline rate of cerebral gray matter volume of the putamen, which is strongly correlated with attentional processing functions in the brain. These findings, although preliminary, are significant in that they suggest regular meditation practice offers neuroprotective effects and may be capable of reducing cognitive decline in normal aging (Pagnoni & Cekic, 2007).

In an attempt to clarify some of the underlying theoretical mechanisms of attention that might be helpful to further investigate, Bishop et al. (2004) deconstructed attentional control into four components. They argued that mindfulness involved a self-regulatory aspect of attention, meaning that the practitioner must practice retaining attention on immediate experience. The ability to maintain awareness on the present involves the cognitive mechanism of *sustained attention*. Sustained attention composes the foundation of other attentional processes, including selective and divided attention and is an important component of learning and memory (Posner, 1994). In terms of psychopathology, impairments in sustained or selective attention are often implicated in ADHD, schizophrenia, and the cognitive impairments observed in Alzheimer's and

Parkinson's disease (Lawrence, Rossy, Hoffman, Garavan, & Steiny, 2003). Chambers et al. (2008) found that mindfulness training significantly improved participants' capacity for sustained attention during an attentional shifting task.

Attention switching, also known as set-shifting, is the mechanism that allows an individual to bring attention back to the present moment. Attention switching can externally be assessed with number of neuropsychological tests, such as the Trail Making Test, the Wisconsin Card Sorting Test, and the Stroop, among others. The internal cognitive processes of how attention switching occurs is not well understood (Chambers et al., 2008). However, difficulties with attentional shifting are observed in clinical populations that exhibit rumination tendencies and experiential avoidance (Jimenez et al., 2009; Treynor, Gonzales, & Nolen-Hoeksema, 2003). Inhibition of elaborative processing becomes the process involved in overall attentional control when the mindfulness practice discourages straying away from the present moment. The other component to this cognitive mechanism was built around cultivating an open, curious, and accepting attitude so that an awareness of present experiences can occur, which is a form of the cognitive mechanism known as non-directed attention (Bishop, et al., 2004). Others in the literature have also referred to a concept known as cognitive flexibility, which may be closely related to attentional control (Moore & Malinowski, 2009).

Cognitive flexibility is defined as the ability to adapt cognitive processing strategies in order to meet novel and unpredictable conditions that are dependent upon attentional processes (Canas, Quesada, Antoli, & Fajardo, 2003). Similar to other attentional processes that are developed via mindfulness meditation, cognitive flexibility could theoretically also be increased while decreasing habitual responding (Moore &

Malinowski, 2010; Wenk-Sormaz, 2005). Cognitive flexibility has been examined by three studies thus far, all of which engaged experienced meditators and nonmeditators in a Stroop interference attentional task. The study by Anderson, Lau, Segal, and Bishop (2007) hypothesized that mindfulness practice would be associated with improved performance on tasks that measure these four cognitive mechanisms proposed by Bishop et al. (2004) and intended to test the construct validity of the cognitive mechanisms of mindfulness proposed above. In their findings, they found that an 8-week MBSR group demonstrated no evidence that participation in this group affected attentional control. However, they did detect small consistency effects in object detection capabilities, which might suggest that the non-directed attentional aspects of mindfulness were helpful in improving an ability to detect objects. This is in contrast to the two other studies which found that mindfulness training reduced habitual responding and improved participants' performance on attentional tasks, suggesting that mindfulness could potentially be capable of improving attentional capacity and cognitive flexibility (Moore & Malinowski, 2010; Wenz-Sormaz, 2005) However, Anderson et al. (2007) suggest that although there may not have been behavioral changes evident on attention tasks, perhaps there were changes that occurred at the neurophysiological level and should be investigated further. Further, it is possible that the differences in findings may be related to the importance of the role of awareness in mindfulness, rather than attention alone, and that further research may be needed to elucidate any other cognitive processes that may be activated by mindfulness meditation.

**Working memory.** Few studies to date have investigated the impact of mindfulness meditation on the cognitive processes involved with memory.

Hypothetically, it would seem logical that if mindfulness appears to positively impact higher attention processes which are necessary to translate information into human memory that improvements in memory may be possible (Jha et al., 2010; Lykins, Baer, & Gottlob, 2012). A study by Chambers et al. (2008) showed that mindfulness training significantly enhanced working memory capacity and improved capacity for sustained attention. Jha et al. (2010) explored the protective effects that mindfulness training may have on working memory capacity and affective experience in a group of military service members prior to their deployment. They hypothesized that mindfulness training may mitigate a decline in working memory capacity observed as the result of the cognitive demands of stress and negative emotional experiences. Overall, they found that participants who had more practice time with mindfulness training showed increased working memory capacity and lower levels of negative affect with higher levels of positive affect. These findings have implications for those interested in preventing future psychological distress because mindfulness training may help others increase their cognitive resources in stressful environments (Jha et al., 2010). A recent study conducted by van Vugt & Jha (2011) examined the impact of mindfulness training on information processing in a working memory task with complex visual stimuli. They found that although accuracy on this working memory task with complex visual stimuli was not different between the experimental and control conditions, response times were significantly faster and less variable with individuals who had received mindfulness training. Further, Lykins et al. (2012) conducted a study that investigated the impact of mindfulness meditation on performance-based tests of attention and long-term memory. Although there were significant differences between short-term memory (free and cued

recall) and long-term recall (free recall only), there were not many differences between the two groups. The authors cited the fact that this study had a relatively small sample size, low statistical power, and lack of appropriate demographic matching as potential explanations for why a greater difference between groups was not observable. Overall, they concur that more research is needed to illuminate the impact of mindfulness meditation on memory.

**Executive functioning.** In terms of the impact of mindfulness training on executive functioning, there is little research as of yet. However, in their recent review, Chiesa et al. (2011) suggest that that this is an area of research worth developing. Some of the studies reviewed offer that mindfulness training may be associated with enhanced verbal fluency. Others offer conflicting findings as to whether or not mindfulness training can improve inhibition of habitual cognitive responses.

### **Introduction to the Mechanisms of Psychological Change Processes in Mindfulness**

Currently, there is a wide research base supporting the use of mindfulness-based interventions in psychotherapeutic treatment for a range of presenting clinical issues. As a result, more and more practitioners are seeking training in the administration of these interventions and trying to adapt them to their clinical practice. However, although there is plenty of research demonstrating the effectiveness of mindfulness-based interventions, little research exists examining exactly *how* and *why* they work. Baer (2010) offers an excellent example in her book when she posits the legitimate question as to whether or not what is assumed about how mindfulness training works is in effect true. She notes that mindfulness training is theorized to lead to individuals experiencing more

mindfulness in their daily lives, which should lead to reductions in suffering, while increasing overall well-being. The problem is, that until this point, our understanding of how mindfulness actually improves well-being and reduces suffering remains an assumption. As a result, it is important to develop a better understanding of how and why mindfulness-based interventions and concepts specifically work. An understanding of what components are responsible for the changes observed in therapy could potentially increase their effectiveness by improving upon the components known to be helpful, while disposing of components of the intervention that are not beneficial. Aided by this understanding, clinicians will be better equipped to enact mindfulness-based interventions more appropriately for particular clients and hopefully with greater therapeutic effect (Baer, 2010; Chambers et al., 2009).

At present, there are many psychological processes that are being examined as potential processes responsible for the changes observed as a result of mindfulness-based interventions and mindfulness training that lead to reduced psychological distress and improved well-being. Some suggest that the process of change is mindfulness itself and that perhaps mindfulness is actually a common factor present in other forms of psychotherapeutic interventions (Anderson, 2005; Baer, Smith, Krietemeyer, Hopkins, & Toney, 2006; Martin, 1997). However, it has been suggested that several constructs often associated with mindfulness-based interventions could be potential mechanisms of change. These constructs include many which have been previously mentioned in earlier sections of this dissertation: emotion regulation, self-compassion, decentering, psychological flexibility, as well as two topics previously discussed: changes in the brain/neuroplasticity and changes in higher cognitive processes like attention, executive

functions, and working memory (Baer, 2010; Chambers et al., 2009). Others have suggested that psychological processes relating to self-control, objectivity, flexibility, improved concentration and mental clarity, emotional intelligence, and the ability to relate to one's self with kindness, acceptance, and compassion may be responsible for change (Davis & Hayes, 2011).

**Emotion regulation as a mechanism of change.** Emotion regulation has been identified as a potentially unifying function of diverse symptom presentations, and emotional dysregulation may be at the root of behaviors and psychological difficulties experienced by individuals with a wide range of presenting clinical issues. Research largely suggests that emotion regulation is essential to mental health and plays an important role in various forms of psychopathology that are often associated with problems of emotion regulation (Chambers et al., 2009; Davidson, 2000; Hayes & Feldman, 2004; Hofmann & Asmundson, 2008). Some of the psychological issues which have been attributed to difficulties with emotion regulation include: depression and anxiety (Roemer et al., 2009; Zvolensky, Vujanovic, Bernstein, & Leyro, 2010), binge eating (Baer et al., 2005; Kristeller & Wollevar, 2011), substance use (Bowen et al., 2009), generalized anxiety disorder (Roemer et al., 2009), attention-deficit/hyperactivity disorder (Zylowska et al., 2009), post-traumatic stress disorder (Gratz & Tull, 2010), borderline personality disorder, and deliberate self harm (Gratz & Roemer, 2008; Gratz & Tull, 2010). Due to the large role that emotion regulation difficulties appear to play in all of these psychological issues, treatments for a wide variety of psychological issues are seeking to incorporate ways in which to improve emotion regulation and teach healthier, more adaptive emotion regulation skills (Gratz & Tull, 2010).

However, when attempting to define what exactly emotion regulation consists of, the existing literature is wrought with disagreement as to an appropriate definition. Largely, this disagreement centers around two very important questions: (1) does emotion regulation refer to the control and reduction of negative emotions or does it refer to the control of behavior when experiencing negative emotions and rather that emotions are functional in nature, and (2) is emotion regulation dependent upon the temperament of the individual or is emotion regulation separate from one's emotional temperament? At present, research tends to be in support of the latter half of each question, in that emotion regulation is separate from the individual's emotional temperament and is more concerned with behavioral control while experiencing emotions (Gratz & Tull, 2010). Gratz & Roemer (2004) have tried to conceptualize emotion regulation within the context of these arguments in order to provide a clinically relevant understanding of adaptive emotion regulation. They argue that emotions serve a functional purpose and as such, emotion regulation is viewed as a multidimensional construct involving the awareness, understanding, and acceptance of emotions. It involves the ability to engage in goal directed behaviors and inhibit impulsive behaviors when experiencing negative emotions. Emotion regulation also involves flexible use of situationally appropriate strategies used in order to modulate the intensity or duration of emotional responses, rather than to eliminate emotions entirely. Finally, emotion regulation is associated with a willingness to experience negative emotions as part of pursuing meaningful activities in life (Gratz & Roemer, 2004; Gratz & Tull, 2010).

Although some of the definitions in the literature suggest that emotional regulation is involved with controlling emotions, there has been a great deal of research



support suggesting that efforts to control, suppress, or avoid unwanted experiences, which include negative affect or thoughts, may have the opposite effect as intended. Thus, emotional avoidance may actually increase the intensity, frequency, severity, and accessibility of those experiences or negative emotions (Gratz & Tull, 2010; Hayes et al., 2006). This phenomena is important to note as emotional avoidance may actually place one at risk for emotional *dysregulation* and has been implicated in maintaining and sustaining clinical symptomology for a wide range of psychological disorders (Gratz & Roemer, 2004), including: depression (Teasdale et al., 2002), anxiety (Hayes-Skelton et al., 2012; Treanor, 2011; Soenke, Hahn, Tull, & Gratz, 2010), substance use disorders (Zgierska et al., 2009), posttraumatic stress disorder (Follete & Vijay, 2009; Thompson & Waltz, 2009), and eating disorders (Baer et al., 2005).

There are many ways in which mindfulness-based interventions may potentially be helpful in improving emotion regulation and facilitating adaptive responding to unwanted emotional experiences. Simply labeling emotions as a part of mindfulness-based interventions is hypothesized to help individuals decenter from their experiences so they might observe them more objectively. This observational stance, which is also taken in with an attitude of nonjudgment, is intended to increase the client's tolerance for and acceptance of interacting with difficult emotions and experiences (Gratz & Tull, 2010). Deepened willingness or openness in engaging with affect may also be viewed as a form of exposure, which ultimately reduces avoidance of unpleasant experiences and dysfunctional behaviors aimed at control (Linehan, 1993; Treanor et al., 2011). Mindfulness may also be useful in teaching clients that emotions do not have to control behavior and that they can be experienced and tolerated without acting on them. Further,

some of the acceptance-based interventions use psychoeducation to teach clients about how emotions evolved in order to offer humans an evolutionary advantage to promote survival (Gratz & Tull, 2010; Linehan, 1993; Roemer & Orsillo, 2007). In understanding the functional nature of emotions, clients may be more effective in the responses that they choose to make dependent on their environment. Farb, Anderson, and Segal (2012) offer an interesting neuropsychological model as to how mindfulness impacts emotion regulation. They argue, based on research demonstrating that mindfulness training is associated with developing a prefrontal cortex network, that mindful emotion regulation increases emotional awareness by reducing midline prefrontal cortex activity while maintaining sustained activation of the limbic system. In doing so, mindful awareness may result in disruption of automatic reactions and create room for more adaptive reactions, such as acceptance or self-compassion.

At present, there is only preliminary evidence suggesting that mindfulness-based interventions are capable of promoting adaptive emotion regulation across diagnostic populations. However, several studies do report that mindfulness or acceptance-based interventions resulted in improvements in emotion regulation (Gratz & Gunderson, 2006; Gratz & Tull, 2010; Leahey, Crowther, & Irwin, 2008; McDermott, Tull, Gratz, Daughters, & Lejeuz, 2009; Tull, Schulzinger, Schmidt, Zvolensky, & Lejeuz, 2007). Finally, it is significant to note that research in this area has largely been affected by difficulties in measuring emotion regulation. However, Gratz and Roemer (2004) have released a measure called the Difficulties in Emotion Regulation Scale (DERS) which is based on the definition of emotion regulation cited earlier. The DERS is a 36-item self report measure that examines the respondent's typical level of difficulties with emotion

regulation across several dimensions. An final score is provided that reflect the respondent's overall difficulties in emotional regulation.

**Self-compassion as a mechanism of change.** Prior to defining self-compassion, it may be helpful to distinguish the differences between the Buddhist conception of compassion and the Western understanding of compassion. In Buddhism, compassion arises from awareness and understanding of the suffering of others and is followed by a desire to alleviate said suffering. It also acknowledges that suffering is a universal human experience and assumes the stance of open willingness to face that suffering, rather than seeking to avoid it (Baer, 2010). This conceptualization of compassion stands in contrast to the Western concept of self-compassion which often mistakes self-compassion for self-centered concern for oneself, self-pity, or self-indulgence. Neff (2011) has accommodated this understanding of compassion into a Western psychological context in her definition of self-compassion, which states self-compassion "is the ability to hold one's feelings of suffering with a sense of warmth, connection, and concern." Self-compassion is composed of three major components: self-kindness, a sense of common humanity, and mindfulness, which are combined in mutual interaction in order to evoke self-compassion.

As discussed earlier in this dissertation, compassion is considered to be associated with a variety of aspects of healthy psychological functioning, and client participation in mindfulness-based interventions demonstrated increases in levels of self-compassion (Neff, 2009). In particular, self-compassion is correlated with psychological well-being and associated constructs such as happiness, optimism, personal initiative, and connectedness (Baer, 2010). At the same time, self-compassion is also associated with

decreases in anxiety, depression, neurotic perfectionism, and rumination (Neff, 2009; Neff & McGhee, 2010), and negatively correlated with self-judgment and isolation (Iskender & Akin, 2011). Self-compassion may also be important in bolstering self-esteem, without also increasing narcissism (Leary, Tate, Adams, Allen, & Hancock, 2007; Neff & McGhee, 2010; Neff & Vonk, 2009; Michalak et al. , 2011). Further, high levels of self-compassion are related to feelings of autonomy, competence, optimism, wisdom, and positive emotions (Jimenez et al., 2010). Due to the findings that self-compassion is overwhelmingly associated with improved psychological well-being, there is growing interest as to why and how self-compassion appears to enact change as a part of mindfulness-based interventions. However, it is important to note that there is disagreement in the literature as to whether or not mindfulness and self-compassion are separate constructs. It does seem clear that they do interact to some degree and that it may be that they must co-exist in order to co-facilitate the process of the other. In fact, one study found that self-compassion may have been the mechanism through which participants of an MBSR group experienced reductions in perceived stress (Shapiro et al., 2005), although other similar studies had mixed findings (Moore, 2009, Shapiro et al. , 2007).

At present, it is altogether still unclear as to exactly how self-compassion may facilitate improved well-being in individuals who have received mindfulness training. However, Baer (2010) postulates that mindfulness may evoke adaptive, healthy and wise behavior in mindfulness practitioners because of two key components of self compassion. The first, is that self-compassion is not founded upon judgment or evaluation of oneself, but rather nonjudgemental and nonevaluative acceptance for oneself and for one's

suffering. Mindfulness practice inherently exposes practitioners to a nonjudgmental and nonevaluative acceptance for oneself and one's suffering. It is from this nonjudgmental radical acceptance of self and suffering that self-compassion naturally arises. The second key component of self-compassion is the understanding that suffering is a shared human experience, helping the practitioner to feel connected to others, feel compassion for the suffering of others, ultimately helping the practitioner to connect to compassion for one's own suffering. Baer (2010) proposes that nonjudgmental acceptance of oneself and one's suffering and the understanding that suffering is a shared human experience helps connect mindfulness practitioners with their own motivation for self-caring. A consequence of which is often practitioners learning to respond towards themselves and others with more compassion both behaviorally, mentally, and emotionally, rather than from a place of perceived self-judgment or self-centeredness. Initial research suggests that mindfulness training does enhance self-compassion, as two studies showed that long-term meditators score higher on self-assessments of compassion than nonmeditators (Lykins & Baer, 2009; Neff, 2003). A study by van Dam et al. (2011) found self-compassion to be a better predictor than mindfulness of symptom severity and quality of life self-report in individuals with mixed anxiety and depression. Studies examining the effects of loving-kindness meditation training, which wholly centers around cultivation of self-compassion, have found that these practices may reduce pain, anger, and psychological distress in pain patients (Carson et al., 2005) and may be helpful to individuals with schizophrenia (Johnson et al., 2009). Loving-kindness meditation training was also associated with increases in positive affect and improved adaptive functioning (Frederickson, Cohn, Coffey, Pek, & Finkel, 2008). Interestingly, Lutz et al.

(2008) conducted a neuroimaging study on novice and expert practitioners of loving-kindness meditation and found that experience cultivating positive emotions, such as self-compassion, appears to alter activation of regions of the brain, including the limbic regions, that have been previously correlated to empathy. However, it is clear that much more research is necessary to understand how and why self-compassion is associated with psychological well being and how mindfulness training cultivates self-compassion.

To facilitate future research aimed at investigating how and why self-compassion may be effecting change in therapeutic outcomes, Neff (2003b) has developed a measure to assess for three components of self-compassion in her definition of self-compassion: self-kindness, connectedness to humanity, and mindfulness. Based on preliminary research, the Self-Compassion Scale (SCS), appears to be sufficiently reliable and valid to justify its continued use in future research studies examining the impact of self-compassion on improving psychological functioning and overall well-being (Baer, 2010).

**Decentering as a mechanism of change.** Within the acceptance and mindfulness-based intervention literature, decentering is defined as the ability to assume a stance of objectivity and nonjudgment and to simply observe thoughts as transitory events of the mind. Decentering also involves the acknowledgement that these thoughts/events do not necessarily reflect reality or an accurate view of the self. As a result, these events do not require any particular behavior in response. The emphasis of decentering is learning how to change one's relationship with one's thoughts rather than attempting to alter whatever thoughts may be occurring (Feldman et al., 2010; Fresco et al., 2007; Safran & Segal, 1990). In the early days of cognitive therapy, decentering was the mechanism presumed to be responsible for preventing depressive relapse by changing

the content of depressive thinking (Hollon & Beck, 1979). This is the theory that inspired the development of Mindfulness-Based Cognitive Therapy (MBCT) (Teasdale et al., 2002). However, the MBCT conceptualization of decentering is different from the cognitive theory notion of decentering in that the MBCT conceptualization of decentering emphasizes practicing a decentered relationship with not just cognitions, but also bodily sensations and emotions. It also encourages an attitude of openness, acceptance, and curiosity towards the experiences. Considering the efficacy of MBCT in preventing depressive relapse, the process of decentering may be the mechanism of change that results in decreases in depressive rumination (Feldman et al., 2010). This is significant, as depressive rumination appears to have a role in a variety of psychological disorders, including depression (Teasdale et al., 2002), anxiety (Hayes-Skelton et al., 2012), binge-eating (Baer et al., 2010), substance use disorders (Witkiewitz & Bowen, 2010), and self-harm (Grantz & Roemer, 2008) However, it remains unclear as to how or why decentering appears to have a therapeutic effect in the treatment of depressive rumination (Feldman et al., 2010; Sauer, & Baer, 2010).

Decentering is closely related to mindfulness in that it is believed to play a central role in accounting for benefits observed from mindfulness training. In fact, most definitions of mindfulness and decentering are often very similar (Sauer & Baer, 2010). As a result, it is difficult to understand whether or not they are separate constructs and several researchers in the literature suggest that this is an area in which more research would be helpful. There are really only two studies that have investigated the effects of mindfulness training on decentering up to this point. These studies were only able to demonstrate that mindfulness interventions lead to an increased ability to decenter from

thoughts and feelings and, thus, mindfulness and decentering in combination resulted in reduced psychological symptoms and stress. However, neither study included a way in which to determine if it was the process of decentering apart from the construct of mindfulness that was responsible for the changes in psychological symptoms and stress (Carmody, Baer, Lykins, & Olendzki, 2009; Teasdale et al., 2002). Therefore, further research is needed with this construct in order to understand what role decentering plays in mindfulness-based interventions and practices.

At present there are two assessment tools which can be used to measure decentering. The first, called the Measure of Awareness and Coping in Autobiographical Memory (MACAM), was developed by Teasdale et al. (2002) as a semi-structured interview in which individuals are asked to imagine themselves in a mildly distressing situation and allow themselves to experience the feelings that arise in response to the situation. They are then asked to remember specific occasions from their own lives that are brought to mind by the vignettes and to describe their feelings in response to those memories. Teasdale et al.'s (2002) use of this measure supports the importance of decentering in recovery from depressive relapse. However, this measure is cumbersome to administer and a more quickly administered self-assessment alternative is the Experiences Questionnaire (EQ) (Fresco et al., 2007). Although more research is needed, it appears to have sufficient psychometric properties to assess decentering (Sauer & Baer, 2010).

**Psychological flexibility as a mechanism of change.** Most studies investigating the role of psychological flexibility have been conducted within the realm of Acceptance and Commitment Therapy. This is largely because helping the client develop increased



psychological flexibility is a central therapeutic goal to the approach. Psychological flexibility is defined as "an individual's ability to connect with the present moment fully and consciously and to change or persist in behavior that is in line with their identified values" (Ciarrochi, et al., 2010, p. 53; Hayes et al., 1999). Psychological inflexibility occurs when an individual becomes "entangled in experiential avoidance and cognitive fusion" while also experiencing difficulties in connecting with the context of a situation, which ultimately impairs the individual's ability to choose behavior that is aligned with their values and goals (Ciarrochi et al., 2010, p. 53; Hayes et al., 1999;). ACT theorists posit that psychological inflexibility results from processes such as experiential avoidance and cognitive fusion that begin to dominate an individual's experience. Both of these processes are associated with the underlying psychopathology for a wide range of psychological disorders because individuals begin to engage in self-destructive behaviors in an attempt to control their private experiences. Instead, the behaviors have quite the opposite effect. (Ciarrochi et al., 2010). Some of the psychological disorders associated with experiential avoidance and cognitive fusion include depression (Teasdale et al., 2002), anxiety (Hayes-Skelton et al., 2012; Treanor, 2011; Soenke et al., 2010), substance use disorders (Zgierska et al., 2009), posttraumatic stress disorder (Follete & Vijay, 2009; Thompson & Waltz, 2009), and eating disorders (Baer et al., 2005).

As a result, ACT practitioners and theorists believe that helping clients increase their psychological flexibility helps individuals escape the cycle of experiential avoidance and cognitive fusion by learning to relate mindfulness to all aspects of their experience (Ciarrochi et al. , 2010; Ciarrochi & Blackledge, 2006). ACT attempts to increase psychological flexibility by building six processes: acceptance, defusion, contact with the

present moment, self-as-context, values, and committed action. Acceptance involves developing willingness to accept private experiences. Defusion is concerned with weakening the language processes responsible for cognitive fusion by helping clients to be a neutral observer of their thoughts, which appears similar to the concept of decentering mentioned previously. Contact with the present moment is akin to mindfulness, in which clients are taught to build their awareness of whatever they are experiencing. Self-as-context helps people realize they can let go of unhelpful self-judgments while still retaining a sense of self. Values are similar to goals but different in that values are directions a client wants to work towards rather than something that can be achieved. Committed action is concerned with helping people to strive to work through difficult emotions and experiences by helping the client see that a choice can be made again and again (Ciarrochi et al., 2010). However, certainty as to which of these mechanisms is responsible for the psychotherapeutic outcomes observed in ACT requires more research. A recent study by McCracken and Guterrez-Martinez (2011) seems to suggest that changes in psychological flexibility in a population of clients with chronic pain were mediated by psychological acceptance and in fact predicted improvements in client outcomes. Their findings suggest that the ACT treatment lead those with chronic pain to increase their willingness to experience many difficult aspects of dealing with chronic pain, including the psychological and emotional experiences, as well as physical symptoms.

Several important findings supporting the effectiveness of acceptance-based interventions in effecting changes in psychological flexibility include changes in psychological flexibility occurring prior to changes in symptoms (Dalrymple & Herbert,

2007), individuals low in psychological flexibility demonstrate greater distress during laboratory induced physical stress (Feldner, Zvolensky, Eifert, & Spira, 2003), and psychological flexibility has been shown to predict levels of mental health in the future (Baer, 2010; Ciarrochi, Heaven, & Supavadeeprasit, 2000).

There is currently one measure of psychological flexibility present in the literature to assess for psychological flexibility as a part of psychotherapy, and it is now in its second edition. The Acceptance and Action Questionnaire-II (AAQ-II) is designed to evaluate psychological flexibility and has been deemed sufficient for assessment of positive and negative aspects of psychological flexibility (Bond et al., 2009). Studies with the AAQ demonstrated moderate to high positive correlations with emotional well-being, while moderate to high negative correlations with stress and negative affect were found (Hayes & Strosahl, 2004). Other research suggests that the AAQ can be used to predict future mental health (Bond & Bunce, 2003; Ciarrochi et al., 2010). However, the AAQ does have some problems with item complexity and internal consistency levels.

### **Mindfulness: A Common Therapeutic Factor**

In contrast to the mechanisms of change discussed previously that suggest that mindfulness offers something unique and new to psychotherapy treatment that no other form of psychotherapy has before, some researchers propose that mindfulness is actually a common factor and that the core of mindfulness already exists within all of the other psychotherapeutic approaches (Anderson, 2005; Martin, 1997). A recent meta-analytic review by Hoffman et al. (2007) concluded that mindfulness-based interventions have general applicability in the treatment of psychological disorders. This study examined the efficacy of mindfulness-based interventions across a wide range of diagnoses,

including generalized anxiety disorder, social anxiety disorder, panic disorder, depression, pain disorders (arthritis, fibromyalgia, and chronic pain), cancer, traumatic brain injury, stroke, diabetes, and organ transplant. Although they were primarily examining the effectiveness of using mindfulness-based interventions in the treatment of anxiety and depression, they concluded that their pattern of results suggests that mindfulness-based training may not be diagnosis-specific. Instead, mindfulness-based training likely addresses processes that occur across a wide range of psychological disorders. They propose that mindfulness-based training accomplishes this via intervening across a range of emotional and evaluative dimensions upon which human well-being is founded.

Central to both psychotherapy and meditation/mindfulness is the desire to alleviate suffering and increase awareness and understanding with whatever it is that contributes to it. Logically, it would seem that with a shared common goal, perhaps through similar or different mechanisms, they both would be capable of achieving the alleviation of suffering. With the growing trend towards psychotherapy integration and a common factors approach to psychotherapy, this proposal seems worth investigating further. However, it is not necessary to look far to see how mindfulness has already been integrated with great success to other forms of psychotherapeutic treatment, such as CBT, MBCT, ACT, DBT, and CFT, among others.

### **Buddhist Psychology and Processes of Change**

According to Rubin (2003), Buddhism can both facilitate and impede with the process of change in psychotherapy. In terms of how Buddhist practices can facilitate change processes with clients, meditation practice is helpful in cultivating self-

observational abilities and increasing awareness of self and others, as well as improving attention. It can also foster a stance of non-judgment and a safety surrounding the exploration of difficult experiences and emotions in such a way that improves a client's ability to tolerate discomfort to a degree that they can work through important material. This is also easily translated into day-to-day experiences outside of the therapy relationship in which tolerance for difficult experiences and affect is increased. Another helpful outcome of meditation practice is improved cognitive insight which occurs after one has spent time cultivating a stance of acceptance and nonjudgment towards oneself. This stance allows room for an individual to become more open to understanding previously troubled aspects of experience and the past. Meditation is also helpful to the therapist because the same impact that mindfulness can have on a client is happening with the therapist, such as improved self-observational capacity and greater tolerance for client affect, ambiguity, complexity, and uncertainty in the therapy process. This can improve a therapist's ability to simply sit with and through a wide range of therapy experiences and affect without needing to protect oneself from an unknown outcome. In addition, the concept of "beginner's mind" is also beneficial to cultivating change processes in therapy because the therapist does not need to be hinged to any particular conception about treatment or therapy in general.

Although Rubin (2003) argues that some aspects of Buddhist practice can hinder the change process of psychotherapy, he concedes that an integration of Buddhist principles and psychotherapy together often find ways to overcome any potential barriers that might interfere with an individual's process of change with either Buddhism or psychotherapy alone. First, psychotherapy, particularly traditional psychodynamic

therapy, is focused on exploring the meaning of thoughts, feelings, and experiences. While the practice of meditation itself seems to make thoughts and feelings more available to our conscious mind, Buddhism does not encourage us to explore what we may have discovered during our meditation. This may be an instance in which integrating the insights attained from meditation practice with the investigative aspects of psychoanalysis help us improve our understanding of ourselves. Second, psychotherapy is largely built around the context of a relationship between the client and therapist who can explore interpersonal dynamics and transference and counter transference. The therapeutic relationship is an important part of helping a client to develop insight into how they relate to themselves and others. Within Buddhism, while there is a strong relationship between a student and a teacher, it is more structured around the teacher challenging the student's beliefs. Rubin argues this relationship is limited in its ability to deepen a client's change process because it lacks the process of illumination of interpersonal process making it difficult for the student to better understand how they relate to others. Without illumination of these dynamics, a student may not be able to be free of habituated patterns of relating with others. Finally, Rubin posits that clients are often in need of self-creation in addition to the deconstruction that Buddhism offers, but that self-creation is necessary because one needs to build a life based on one's values and ideals in addition to letting go of illusions of self and the world. Thereby, psychotherapy and meditation are both important in providing someone with direction and skills to build a meaningful life (Rubin, 2003).

## **Literature Review Conclusions**

This literature review was intended to identify critical factors that might exist between mechanisms of change in mindfulness-based interventions and evidenced-based interventions for a variety of diagnoses. Interestingly, many of the psychopathological processes implicated as being addressed by both the empirically based interventions which were shared by mindfulness-based interventions appear to be similar across diagnostic categories. One such process that appears to be common across all of the diagnostic categories discussed in this dissertation, is some form of experiential, emotional, or cognitive avoidance. In mindfulness-based terms, this would be the desire to alter or avoid some aspect of experience that is perceived as unpleasant or negative. Although many other forms of psychotherapy address these kinds of avoidance via some form of exposure to the unpleasant experiences, mindfulness-based interventions may be equipped to do this with greater ease and improved client compliance because its emphasis is on cultivating a tolerance level in which the client feels empowered to engage or disengage in treatment, as in life, at their own pace and comfort level.

Another process that appears to be common between empirically evidenced interventions and mindfulness-based intervention is that of emotional dysregulation, particularly with depression, eating disorders, ADHD, substance use disorders, and borderline personality disorder and self-harming behaviors. It is likely that an integration of mindfulness-based interventions with the treatment of eating disorders, ADHD, and substance use disorders will be beneficial to the empirically-based intervention of CBT typically used to treat these three disorders. The research has demonstrated an improved efficacy in treatment of depression, borderline personality disorder, and self-harming

behaviors with the incorporation of a mindfulness component. This would suggest that mindfulness-based interventions further promote appropriate emotion regulation and adaptive coping responses in comparison to traditional treatment methods alone.

However, other proposed processes of change that may influence treatment outcomes as the result of mindfulness-based interventions, such as decentering, psychological flexibility, and self-compassion, have not necessarily been identified as addressing specific processes of psychopathology. Rather, it may be that these components are addressing some facet of psychological distress that results in improved outcomes or perhaps are all working to improve emotion regulation. As these are all interconnected aspects of mindfulness and taught as a part of most mindfulness-interventions, it would be difficult to separate which constructs are responsible for change in therapy. In contrast, it is significant to note that decentering, psychological flexibility and acceptance, and self-compassion are all constructs that have not been emphasized in other forms of psychotherapeutic treatment. Thus, using mindfulness-based interventions integrated with other forms of treatment may increase the overall effectiveness of the therapy by overcoming any barriers that prevent change when an intervention is applied singularly. Although, it is quite possible that a client whose level of psychological distress has resolved to a degree that their emotion regulation abilities are restored, constructs such as decentering, objectivity, acceptance, and self-compassion are easier coping strategies to employ. In order to understand more about how these other proposed processes of change are working, it may be helpful to reexamine the origins of these processes in their original context within Buddhist psychology.



Further, this literature review was intended to inform a conceptual model as to how the proposed mechanisms of change that exist within the Western psychological mindfulness-based intervention literature are connected to their original Buddhist psychology constructs. This model can be found in Chapter IV of this dissertation.

Alternatively, perhaps there is no one right way to administer a mindfulness-based intervention in treatment. When examined from a Buddhist perspective, trying to find "one right way" of doing something could be viewed as a way in which the therapist or client attempts to control or change an aspect of experience. Therefore, when thinking about what mindfulness-based intervention to use, the clinician will need to understand how to implement mindfulness practice and exercises, maintain an awareness and consideration of what mechanism of psychopathology each particular mindfulness practice might be addressing, and balance all of this with a conceptualization of what unique tendencies the client may have for self-judgments, attempts to control their experience, or avoidance and thought suppression. Based on these variables, a clinician may be able to choose a particular intervention that may be more specific to that client. For example, a client who struggles with intense self-judgment may benefit from loving-kindness practices, while someone who struggles with depressive rumination may benefit from practicing mindful awareness in order to work towards decentered awareness. However, this author does agree with the assertion that it is important for clinicians to develop their own formal mindfulness meditation practice. A therapist who has had their own journey into mindfulness will be more effective in genuinely conveying the principles of nonjudgment, acceptance, and self-compassion based on their own personal experience.

## **Chapter III**

### **Method for the Development of the Conceptual Model**

#### **Identifying the Purpose**

The purpose of this conceptual model is to provide clinically relevant, evidenced-based resources to clinicians who are interested in utilizing mindfulness-based interventions in treatment, whether in isolation or as an integration with other interventions. This conceptual model is based on the literature review included earlier in this dissertation, which sought to outline the underlying mechanisms mediating the processes of change observed in the empirically-based interventions for specific diagnoses that currently have the strongest research support in comparison with the mechanisms mediating processes of change observed in mindfulness-based interventions within the same diagnostic category. At present, there have been theoretical developments on ways to merge Buddhist and Western psychology in psychotherapy, but there is a paucity of literature on what this could look like in a session when a therapist uses mindfulness approaches to treat specific clinical issues (Davis & Hayes, 2012).

#### **Target Audience**

The audience targeted to utilize this conceptual model is mental health professionals who want to learn more about mindfulness-based interventions and how they can be applied in clinical practice to greatest effect based on the current research literature. It is hoped that clinicians will find this conceptual model useful in making

more informed selections of appropriate mindfulness-based interventions with an understanding of mechanisms of change underlying mindfulness-based interventions when used with a specific diagnosis.

### **Research Process on Existing Conceptual Models**

The development of this conceptual model entailed a search of previous theoretical formulations concerning the integration of Buddhist psychology and Western psychology. The formulations observed in the literature at this time largely seek to integrate Buddhist psychology and psychodynamic theories or cognitive-behavioral approaches, but no integrative models have been discussed in the literature. Further, there are no conceptual models available for clinicians at this time that break down the empirical evidence behind the use of mindfulness-based interventions with specific diagnoses and also include an analysis of the mechanisms that mediate the processes of change. Therefore, it was necessary to review models similar in nature that were also geared for the same audience. This process informed much of the structure and layout of the present conceptual model.

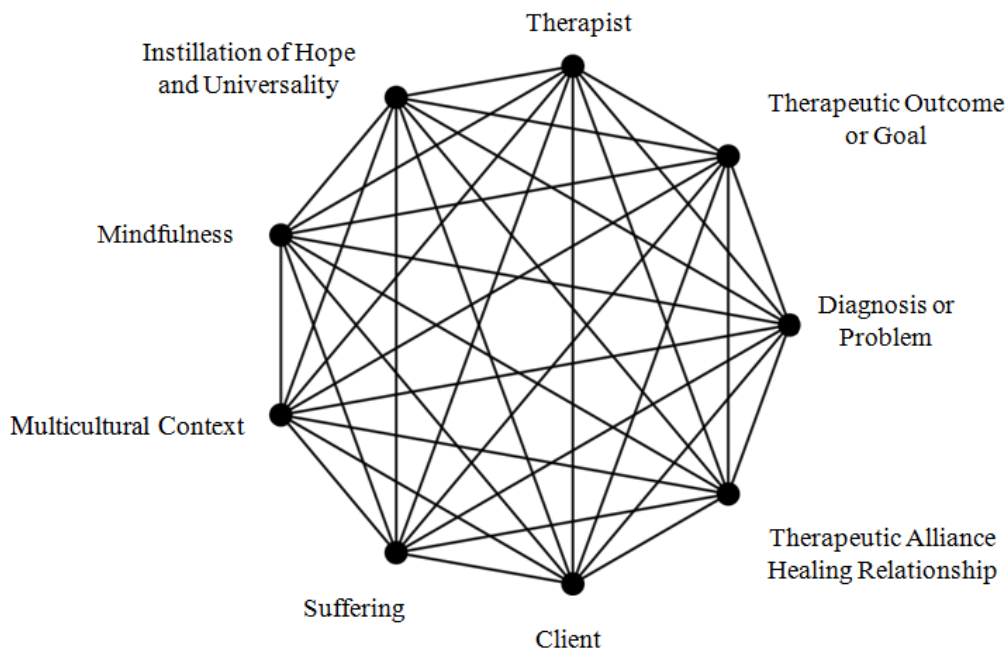
### **Development of Content**

The development of this conceptual model needed to be appropriate and user-friendly for mental health practitioners and was informed by the content of the literature review of this dissertation.

## Chapter IV

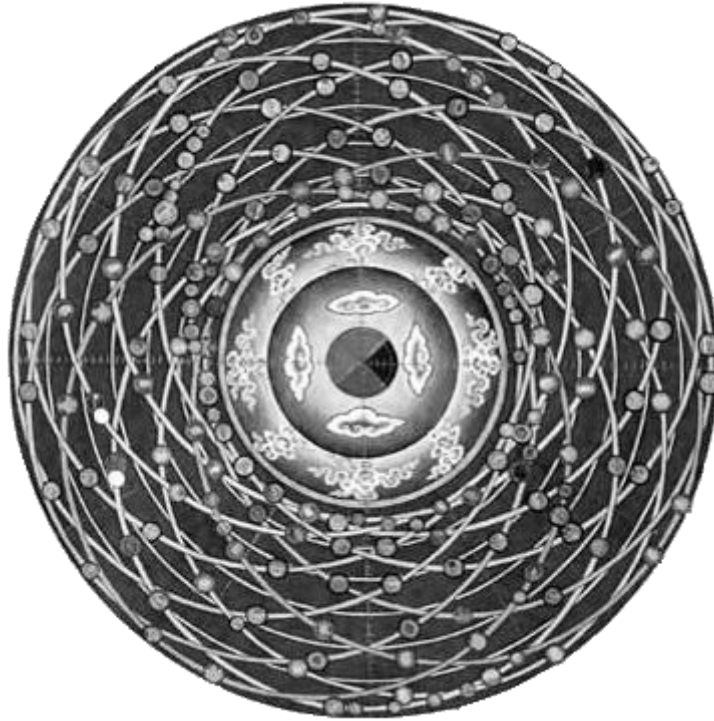
### The Conceptual Model

The conceptual model presented represents a framework from which all clinicians at all levels of training with mindfulness and mindfulness-based interventions may conceptualize how to use mindfulness and mindfulness-based interventions in psychotherapy, providing the foundation for a mindfulness-informed psychotherapy. This model attempts to integrate the Buddhist psychological perspectives that strive for and support the development of happiness, healing, and the cessation of suffering with a Western psychological understanding of how and why healing relationships, such as psychotherapy are helpful.



*Figure 1.* A conceptual model of mindfulness in psychotherapy.

The three dimensional representation of this model, as shown above in *Figure 1.*, was inspired largely from a metaphor taken from Buddhist philosophy known as Indra's net (See *Figure 2.*).



*Figure 2.* Tibetan mandala incorporating Indra's Net motif.

The metaphor of Indra's net is used to illustrate several important Buddhist concepts, including emptiness, dependent origination, and most importantly for our purposes, interpenetration. A particularly succinct explanation of Indra's net can be taken from Brook (2009), who writes about how Buddhism uses the image of Indra's net to describe the interconnectedness of all things. He writes the following:

"When Indra (king of the gods in Hindu mythology) fashioned the world, he made it as a web, and at every knot in the web is tied a pearl. Everything that exists, or has ever existed, every idea that can be thought about, every datum that is true--every dharma, in the language of Indian philosophy--is a pearl in Indra's net. Not only is every pearl tied to every other pearl by virtue of the web on which they hang, but on the surface of every pearl is reflected every other jewel on the net. Everything that exists in Indra's web implies all else exists.(p. 22)

As illustrated by the metaphor, the concepts of interpenetration and interconnectedness express the idea that everything in this universe contains everything else, as observed in the reflections of all the other pearls within just one pearl on the net. And yet at the same time, each individual pearl on the net is a universe to itself, unique, and not to be confused by the other pearls in the net. Just as with Indra's net, this conceptual model acknowledges the interconnectedness and interdependence of various equally important ongoing processes and constructs within the psychotherapy relationship. As such, it is important to view this model as fluid and dynamic and to recognize that the very nature of this model challenges the clinician to be mindful and pay attention to and awaken to what is unfolding in the present moment.

The spokes that appear on the star polygon representing the "Indra's net of psychotherapy" in *Figure 1* were selected in an attempt to coherently conceptualize the aspects of healing and healing relationships that permeate both Buddhist psychology, as outlined by the Four Noble Truths and the Eightfold Path, and the Western psychological literature. These spokes include: the therapist, the client, the therapeutic alliance, the multicultural context, the common human experience of suffering, a diagnosis or

presenting problem, mindfulness and mindfulness-based interventions, universality and the instillation of hope, and the therapeutic outcome, whether that may be improved client well-being or a healthy psychological adjustment, among other potential outcomes. However, just because they are denoted by this model as "spokes" on a wheel, they are in fact much more flexible than having a fixed place within this "net," and at times, they will shift into or out of greater focus dependent upon timing, need, and the therapist's clinical judgment. However, they are all given equal status in terms of their importance and significance because they should and can be occurring and attended to at all times; they are viewed as necessary ingredients for effective utilization of mindfulness and clinician mindful presence in psychotherapy. The flexibility and flow within this model is meant to allow the clinician to quickly adapt to client needs, modality (group or individual), diagnostic issue, the dynamics of the therapeutic relationship and strength of the therapeutic alliance, all within the context of the conceptualization of the client's problem.

First, it is helpful to note that this conceptual model is intended to facilitate evidenced-based practice in psychology. Evidenced-based practice in psychology is defined by the American Psychological Association Task Force on Evidence-Based Practice (2006) as an integration of the best available research as to what works in psychotherapy with an application of the clinician's expertise within the context of each client's unique characteristics, culture, and preferences. Since the emphasis on the importance of evidenced-based practice began, there has been a gradual trend in the research that emphasizes the examination of treatment methods separately from the therapy relationship itself. Unfortunately, this trend has begun to impede collaboration

between clinicians and researchers in designing the most efficacious approach to psychotherapy because it has pitted the treatment method and therapy relationship against one another. This tendency to place greater emphasis on the significance of the treatment method is an emphasis which is also reflected within the mindfulness research (Norcross & Lambert, 2011).

As the mindfulness literature base has grown, recent research has begun to be heavily focused on breaking down the interventions into the processes of change. The purpose of this research is to determine what and why the techniques utilized in mindfulness-based approaches work the way they do, with the hope that clinicians can begin to use this knowledge to improve the efficacy of interventions. While this research is needed and is informative for clinical practice, it is unbalanced because it is examining the processes of change independently of the relationship aspects of the therapeutic environment. This is troubling, as both clinical and research findings highlight that the therapy relationship accounts for as much of the outcome variance as particular treatment methods (Lambert & Barley, 2002). Indeed, the success of therapy is not dependent on the treatment method alone but also factors that include the client, the therapist, the therapy relationship, and the context within which all are occurring (APA, 2006; Norcross & Wampold, 2010;). There is an inseparable context and practical interdependence of the relationship and the treatment methods. Given this intervention-oriented emphasis observed in the mindfulness research and literature, this model aims to provide balance and equal consideration of evidenced-based relationship and evidenced-based intervention. It is with this intention that clinical practitioners may find this conceptual model of mindfulness in therapy helpful. In sum, evidenced-based practice in



psychology provides much of the rationale for acknowledging the therapist, the client, the therapy relationship, the context, and the treatment methods, as equally important factors within this conceptual model.

### **Therapist**

The first spoke on the conceptual model begins with the *therapist*. The therapist is acknowledged first because this is the component of the model over which you, as the clinician have the most control and ability to adjust. It is also emphasized initially based on the research indicating that therapist personal factors account for the second largest proportion of change in psychotherapy and the finding that 7% of the unexplained variance in psychotherapy outcome is attributable to the therapist alone (Lambert & Barley, 2002; Norcross & Lambert, 2011; Wampold et al., 1997; Wampold, Minami, Baskin, & Tierney, 2002). Therefore, some basic responsibilities and qualities of the successful psychotherapist are emphasized and necessary for this model to work, which include: (1) the ability to establish a relationship or alliance with the client. (2) The therapist must be able to make an accurate diagnosis and develop a conceptualization of the problem that explains the client's distress in order to alleviate the client's suffering. (3) The therapist must have an understanding or conceptualization of *how* a client will change in order to best select a treatment approach, including how to incorporate mindfulness in therapy. (4) The therapist must be actively developing competency with mindfulness-based interventions and preferably, be engaged in their own formal mindfulness practice.

**Relationship.** First and foremost, the therapist must be capable of establishing a relationship or alliance with the client, which is closely associated with the section related

to the therapeutic alliance and will be discussed in greater detail as a part of that spoke within this conceptual model. However, within the therapist's capacity to establish a relationship, there are certain interpersonal skills that therapists can cultivate within themselves which improve their ability to develop a strong therapeutic alliance with clients. Some of these interpersonal skills include: empathy, positive regard or affirmation, and congruence and genuineness. All of these skills should be viewed as ingredients and best employed interactively. Before we move on to the other responsibilities and qualities that a therapist must possess to effectively use this model, it may be helpful to discuss some of the interpersonal skills mentioned previously that are important for developing strong therapeutic relationships in psychotherapy.

*Empathy.* Empathy has been identified as an important component of healing relationships within both Buddhist psychology and Western psychology. In Buddhist psychology, the construct of empathy is encompassed by the term, compassion, which literally means "to suffer with." Interestingly, recent neuroimaging studies have found that regions of the brain activated in association with empathy, particularly within the limbic regions, are also correlated with positive emotions, such as self-compassion (Lutz, Brefczynski-Lewis, Johnstone, & Davidson, 2008). This is how His Holiness the Dalai Lama (2011) describes the Buddhist conception of compassion,

Compassion is an aspiration, a state of mind, wanting others to be free from suffering. It's not passive--it's not empathy alone--but rather an empathetic altruism that actively strives to free others from suffering. Genuine compassion must have both wisdom and loving-kindness. That is to say, one must understand that the nature of the suffering from which we wish to free others (this is

wisdom), and one must experience deep intimacy and empathy with other sentient beings (loving-kindness). (p. 52)

Within Buddhism, compassion towards self and others is viewed as an important requirement on one's path towards liberation from suffering and necessary for the cultivation of a happier, healthier life. This is largely because compassion is necessary in order to notice and acknowledge pain and suffering. This noticing and acknowledgement of suffering is what makes the healing process possible and opens the door for the ability to respond with warmth and sympathy (Neff, 2011).

Historically within Western psychotherapy, the notion that empathy was an important part of the therapeutic change process was first popularized by Carl Roger's client-centered psychotherapy (Elliot, Bohart, Watson, & Greenberg, 2011). Modern research continues to provide evidence supporting the importance of empathy in psychotherapy, even suggesting that therapist-to-client empathy is critical for effective mental health practice (Gerdes, Jackson, Segal, & Mullins, 2011). Further, empathy has been shown to account for about 9% of the variance in therapy outcome and typically even accounts for more outcome variance than the treatment methods themselves, which range between 1% and 8% (Elliot et al., 2011). In addition, emerging cognitive neuroscience research in the last decade suggests that there is even a biological basis for the human experience of empathy. According to the cognitive neuroscience research, empathy consists of three major neuroaffective subprocesses: (1) emotional simulation, which is the neurological process that mirrors the emotional elements of the other person's bodily experience, (2) perspective taking, one of the most commonly emphasized therapeutic approaches in the clinical psychology literature, involves the

therapist's attempt to understand the client's point of view and way of experiencing the world, and (3) emotion-regulation, the way in which people reappraise or soothe their own experience of distress at the other person's suffering, thus mobilizing compassion and helping behaviors for the person who is suffering (Elliot et al., 2011; Gerdes et al., 2011). This cognitive neuroscience research would seem to affirm the importance of utilizing the basic human biological capacity for empathy in healing relationships.

Therefore, based on both the Buddhist emphasis on the importance of compassion as necessary for healing and the evidence observed as to the significance of empathy in psychotherapy treatment outcomes, empathy is an important skill that therapists must develop in order to improve their effectiveness (Elliot et al., 2011). So how might a student therapist begin to develop empathy as a part of their clinical practice and what might an experienced clinician do to continue deepening their empathetic practice? First, it may be helpful to summarize important factors associated with empathy that have been identified in the literature. Empathic therapists are perceived as nonjudgemental and attentive. They also evidence skills in employing nonlinguistic and paralinguistic communication (i.e. posture and vocal quality, etc.) to convey empathy. Empathic therapists also frequently use appropriate emotion words to encourage the client's exploration in therapy. Further, the level of empathy experienced in the therapeutic relationship is influenced by the degree of similarity experienced between the therapist and client, client perception of the therapist as being open to conflictual feelings, and openness to discussing any topic (Elliot et al., 2011). Skilled utilization of empathy in therapy acknowledges that the clinician often has to tailor their empathic responses and level of empathy communicated to the client as appropriate for the client's personality

and context. It also implies that the therapist has a knowledge for knowing when and when not to respond to clients with empathy and to what degree (Elliot et al., 2011). As such, there are many different ways of expressing empathy in therapy, including empathic questions, conjectures, reflections, experience-near interpretations, and others. Further, there are three main modes of therapeutic empathy that involve developing empathic rapport, communicative attunement, and person empathy. Empathic rapport is promoted by the therapist conveying a compassionate attitude that expresses they are attempting to understand the client's experience. Communicative attunement is an ongoing process the therapist engages in, in which one attempts to "attune" to the client's moment-to-moment communications and experience. Person empathy consists of the therapist attempting to understand what in the client's previous experiences has shaped their current understanding of the world that is shaping their present experience.

Second, it may be beneficial to integrate the aforementioned factors associated with empathy with a framework developed by Gerdes et al. (2011). Using this framework, practitioners and students can develop an empathetic practice with their clients that is largely based on the cognitive neuroscience research related to empathy. The three main components of this framework include: (1) the therapist's affective response to the client's emotions and actions, (2) the therapist's cognitive processing of the client's affective response and the client's perspective, and (3) the therapist's conscious decision making surrounding the choice of what, when, how, and why to take empathetic action (Gerdes & Segal, 2010). This framework appears remarkably compatible with the Buddhist conceptualization of compassion and shares parallels with core tenets of cognitive-behavioral therapy because it asks the therapist to notice,

investigate, and respond to the *emotions, thoughts, and behavior* of both oneself and the client. As such, this framework may be viewed as a mindfulness-practice in and of itself, aligning with the clinician's intention to open to the therapeutic process and offering a reminder to pay attention and simply notice what is happening in the here-and-now. For example, as the therapist practices communicative attunement with the client in session, the therapist may first notice that the client is exhibiting sad and tearful affect. Next, the therapist may quickly shift the focus of their attention inward, and identify what emotional response is being elicited by this sad and tearful affect. Then, the therapist can investigate their own internal thought process related to both the affect of the client and the therapist in the moment and connect this with the therapist's practice of person empathy, or their comprehension of the client's past and present experiences and context and how those factors are playing out for the client in the present. Finally, the therapist would integrate all of this information to inform their empathic response, further developing empathic rapport within the therapeutic relationship.

Third, the clinician seeking to deepen their empathetic practice with clients may find it quite helpful to develop a formal mindfulness practice that regularly incorporates compassion-based mindfulness exercises as a means to cultivate compassion and empathy for self and others. A growing body of Western psychological studies examining the construct of self-compassion or compassion based mindfulness interventions are beginning to demonstrate support for the efficacy of compassion in healing in psychotherapy in several areas, including improvements in psychological resilience (Neff & McGhee, 2010), self-esteem (Michalak et al., 2011; Neff, 2009; Neff & Vonk, 2010), and self-reported well-being (Feldman, Greeson, & Seniville, 2010;

Joseph & Wood, 2010; Wood, Froh, & Geraghty, 2010). Given this evidence, it is possible that these practices may also be helpful in developing clinician therapeutic empathy and may even develop a type of clinician psychological resiliency which could prevent burnout. There are many traditional Buddhist practices that are centered around developing compassion towards self and others, including loving-kindness (*metta*) meditation and *tonglen*. Practitioners of these types of meditation often report feeling that they feel more open, accepting and understanding towards oneself, as well as towards others, and are often more forgiving of others' mistakes. At the same time, these positive emotions also offer comfort and safety during times of insecurity. There are many resources available on the internet and through a variety of Western mindfulness books on the topic to provide clinicians interested in these practices with further information.

***Positive regard and affirmation.*** The next therapist interpersonal skill identified as being particularly beneficial to therapeutic outcomes is known within Western psychology as positive regard and affirmation . In Buddhist psychology, these two constructs may be best encompassed by the concepts of warmth and acceptance. His Holiness the Dalia Lama (2011) describes the warmth and acceptance felt from positive regard, as the attitude behind compassion and also offers some insight as to how to demonstrate warmth and acceptance to others. He writes,

If you approach others with the thought of compassion, that will automatically reduce fear and allow an openness with other people. It creates a positive, friendly atmosphere. With that attitude, you can approach a relationship in which you, yourself, initially create the possibility of receiving affection or a positive

response from the other person. And with that attitude, even if the other person is unfriendly or doesn't respond to you in a positive way, then at least you've approached the person with a feeling of openness that gives you a certain flexibility and the freedom to change your approach as needed. The kind of openness at least allows the possibility of having a meaningful conversation with them. (p. 69)

As Jon Kabat-Zinn was adapting mindfulness as a part of Mindfulness-Based Stress Reduction, he noted that one of the attitudinal foundations of mindfulness, is the attitude of acceptance (Kabat-Zinn, 2003). In Buddhism, acceptance is not discussed separately from mindfulness because it is a major component of how mindfulness is put into practice and is also cultivated by the mindfulness practice. In the mindfulness practice, acceptance is cultivated by allowing each moment to be just as it is, embracing it. It is in this embrace and acceptance of what is that actually alleviates suffering, rather than attempts aimed at resisting or avoiding reality. The mindfulness practice itself offers a reminder to be open and receptive to whatever it is that we may thinking, feeling, and experiencing, and rather than trying to impose our own ideas about what we should be thinking, feeling, or experiencing, instead we are to simply accept all of our experience, just as it is, right now. Simply, acceptance within the mindfulness practice is an openness and willingness to see things as they actually are in the present moment (Kabat-Zinn, 2003). Western psychological researchers have proposed that acceptance may be a useful alternative to the psychopathological mechanism of emotional avoidance, (which will be discussed in greater detail below). As a result, acceptance has become a core therapeutic process in Acceptance and Commitment Therapy (Luoma, Hayes, &



Walser, 2007) and Dialectical Behavior Therapy (Linehan, et al., 2002), where it is referred to as radical acceptance.

Interestingly, positive regard and affirmation in Western psychotherapy, which evolved from Carl Rogers' thoughts on the conditions necessary and sufficient for therapeutic change, capture the ideas of both warmth and acceptance as being key components of positive regard. For Rogers, positive regard is a "warm acceptance of each aspect of the client's experience" including both the negative and positive aspects of the client and their experiences (Farber & Doolin, 2011, p. 225). Within Western psychotherapy, the mental health provider's ability to provide positive regard within the therapy relationship is significantly associated with therapeutic success. It is theorized that positive regard and affirmation creates a foundation within the relationship to introduce changes in the relationship or implement new interventions. Positive regard may also serve an important alliance building function to bridge diversity variable differences between the therapist and the client. It also serves important functions related to positive reinforcement for the client's engagement in the therapy process and the client's belief in his/her capacity to be engaged in an effective relationship, ultimately cultivating the client's tendency to want to achieve his/her potential. The primary way a clinician can communicate positive regard is in communicating a "caring, respectful, positive attitude that serves to affirm the client's basic sense of self worth" (Farber & Doolin, 2011, pp. 184). At the same time, just as with empathy, the therapist should be responsible for monitoring and adjusting the amount of positive regard conveyed, dependent upon the client and context (Farber & Doolin, 2011).

***Congruence and genuineness.*** The last therapist interpersonal skill identified as beneficial to overall therapeutic outcomes involves congruence and genuineness, which are interestingly closely associated with mindfulness and often discussed within Buddhist psychology as genuineness and openness. In fact, from a Buddhist perspective, openness, honesty, and a genuine acknowledgement of reality is necessary for freedom from suffering. This is reflected in this quote attributed to Siddhartha Gautama, "When words are both true and kind, they can change the world" (Saddhatissa, 1998, p.92). Within Western psychotherapy, therapist genuineness with clients relates to the therapist's acceptance of and receptivity to experiencing whatever arises with the patient and a willingness to utilize that information during therapy. Congruence in therapy serves as a way to allow attachment or bonding to occur in therapy and guides behavior by modeling ownership of feelings within the therapy relationship. Forms of congruent responding in therapy might include self-disclosure, articulation of thoughts and feelings, opinions, questions, and feedback relating to client behavior. Congruent responses offer honesty and authenticity and are founded in the therapist as a real human being. Therefore, congruent responses are not disrespectful or insincere. A therapist can work to develop their skills with congruence by soliciting feedback from colleagues, supervisors, and clients (Kolden, Klein, Wang, & Austin, 2011).

**Conceptualization of the problem or diagnosis.** Secondly, just as with any form of psychotherapy, a therapist must be able to develop a conceptualization of the problem or diagnosis that explains the client's distress in order to alleviate the client's suffering. Many studies have shown that clinician adherence to a carefully constructed case conceptualization is predictive of treatment processes and outcomes (Eels &

Lombart, 2003; Crits-Christoph, Cooper, & Luborsky, 1988; Silberschatz & Curtis, 1993). The topic of case conceptualization and diagnosis will be discussed in further detail in the relevant section below.

**Conceptualization of how change will occur in therapy.** Third, the therapist must have an understanding or conceptualization of *how* a client will change in order to best select a treatment approach, including how to incorporate mindfulness in therapy. There are many factors that affect how a client changes, and this model as a whole will attempt to address all of these areas throughout the explanation of this model. As such, clinicians are encouraged to evaluate their understanding of the client and the client's context continually throughout the process of applying this model, so as to better conceptualize how change will occur in therapy. At the same time, clinicians are reminded to remain aware of the dynamic, ever fluctuating nature of how change may best be evoked in the therapeutic process maintaining the ability to be flexible and adapt to the client's context and needs. Although much of the *how* may be based on theoretical orientation, this model will hopefully provide clinicians with an understanding of how mindfulness promotes change in psychotherapy and will be discussed in greater depth in the mindfulness section.

**Therapist competency with mindfulness.** Finally, the therapist must be actively developing competency with mindfulness-based interventions and preferably be engaged in their own formal mindfulness practice. Within Buddhism, the model of teaching mindfulness has always been centered around students working with a more experienced practitioner with many more years of experience with mindfulness practice. It is argued that in order to guide another individual through their own journey with mindfulness one

must be walking their own journey as well. This sentiment is echoed by the Dalai Lama, quoted as saying, "If you don't love yourself, you cannot love others. You will not be able to love others. If you have no compassion for yourself, then you are not able to develop compassion for others." In walking on one's own journey of mindfulness, or in the case of this quote, the path of self-compassion, the "teacher" will hopefully be able to understand or recognize issues that may arise as a part of the "student's" practice and be able to guide the student with progressing forward on their path because they have already been down the path. This model within Buddhism is not altogether dissimilar from the training model employed by Western psychotherapy.

When considering psychotherapy independently of mindfulness for just a moment, the research on evidenced-based relationships suggests that therapist competence accounts for around 6-9% of the variance in treatment outcomes. Further, the research also suggests that therapist allegiance to their own belief in the efficacy of treatment may account for almost 70% of the variance in treatment outcomes (Wampold, 2001). Mental health professionals spend years in classes and under supervision learning the art of therapy, so it would follow that it is also important for therapists interested in utilizing mindfulness as a part of their therapeutic practice to be developing a competency with mindfulness by progressing on their own independent journey with mindfulness. That same journey may also reinforce the therapist's allegiance to the efficacy of the use of a mindfulness-perspective or mindfulness-based interventions, hopefully increasing the efficacy of the therapy as a result.

Consequently, developing a competency with mindfulness may mean seeking out a more experienced peer or colleague from which to learn, attending mindfulness

workshops or retreats, reading the literature, as well as learning how to incorporate and benefit from what mindfulness has to offer the therapist. There are many resources available to clinicians at this time that can facilitate one's own mindfulness practice, some of which will be listed at the end of this model. Also, a more detailed understanding of what mindfulness is and how it works will be described in the appropriate section below. From a Buddhist perspective, having one's own formal mindfulness practice makes one a better therapist because one has had formal practice paying attention. Improved attentional capacity could theoretically help the therapist to be open and attuned to the timing of the processes within the therapy relationship and better able to intuitively estimate when it is appropriate to utilize the interpersonal skills known to be associated with good therapists, including genuineness, openness, empathy, and warmth. Not only would Buddhism propose that it will improve one's therapy skills, but that it will have a positive effect on one's personal life. As mindfulness interventions in clinical populations have exhibited positive mental health improvements and reduction in stress, clinicians would also experience similar benefits. Mindfulness practiced in the clinician's personal life can offer a source of positive-self-care, an increased and renewed sense of well-being, and potentially offer a buffer from the negative effects of compassion fatigue.

### **Therapeutic Alliance and a Healing Relationship**

The experience of a healing relationship is emphasized as of utmost importance within Buddhism and a necessary part of the journey to alleviate suffering. This is evidenced by its prominent inclusion in the three phrases typically repeated by those proclaiming that they desire to officially become Buddhist. Known as "taking refuge in the Three Jewels," the three phrases are "*May I take refuge in the Buddha. May I take*

*refuge in the Dharma. May I take refuge in the Sangha.*" These refuges are what a Buddhist references when needing guidance along their journey to alleviate suffering. The third refuge, *sangha*, is translated into English as the word "community." The *sangha* is the community of individuals who have perhaps attained enlightenment, or freedom from suffering, and may assist other human beings in also doing the same. The emphasis on requiring a *sangha* as necessary along the path to freedom from suffering stresses the importance of developing loving, compassionate, emotionally intimate relationships with others as a part of this journey. Many Buddhists argue that for most people, it is impossible to attain freedom from suffering independent of other people because we do not have independent existences, but rather interdependent ones. Just as relationships can be the key to alleviating suffering, from a Buddhist perspective, conflicts with other human beings can also be the source of one's suffering. Buddhism encourages practitioners to attempt to connect with others in meaningful ways because they believe that it is through this human connection that conflict with others is reduced, resulting in decreased suffering that arises from poor communication in relationships (Gyatso & Cutler, 2009).

Dzogchen Ponlop Rinpoche (2008) writes:

From a Buddhist point of view, relationship is a great mirror....When we sit by ourselves, it's easy to enjoy our mental games, fantasies, ego trips, and so forth. We can go on and on without any problem. But try that with a friend, who acts as your mirror. The mirror will reflect who you are and your ugly ego trips. At the same time, a mirror is very neutral--it just reflects. It doesn't take any sides....In this mirror, we discover ourselves--our tendencies, our weaknesses, and our

strengths. We discover our good qualities as well as our negative qualities...The mirror of relationship becomes a very precious teaching for us to discover who we really are and where we are on the path and in the world altogether....If we can practice while being in this present moment, relationship can become a path and the mirror a great teacher.

Further, Sharon Salzberg illuminates the unique place that a psychotherapy relationship can offer those on a spiritual path as she describes this "mirroring relationship" in a 2012 interview with the Omega Institute:

It can certainly have a place. Even on the spiritual path, we have things we'll tend to cover up or be in denial about. In the past, training in meditation would be done with a teacher, often in a very close relationship. They would sometimes help and support you by challenging you or provoking you to see something that you weren't seeing. Since most of us don't practice in that way today, a psychologist can help play that role.

Just as in Buddhism, since the inception of psychotherapy, it has also adhered to the idea that a healing relationship is necessary for the alleviation of suffering or successful treatment outcomes. In modern Western psychotherapy, the importance of a healing relationship is reflected in the research suggesting that the therapeutic relationship accounts for 12% of variance in psychotherapy outcomes (Norcross & Lambert, 2011). The therapeutic relationship is not to be confused with the therapeutic alliance, however, so it may be helpful to briefly demarcate the difference between the two, as the constructs are often confused. The therapy relationship is composed of

several elements that the therapist enacts, such as empathy, responsiveness to the client, and creating a safe therapeutic space. The alliance, on the other hand, is a way of conceptualizing what has been achieved as a result of the appropriate use of these elements. According to Horvath, Del Re, Fluckinger, & Symonds (2011), fostering the therapeutic alliance is not at all separate from the interventions that therapists utilize in therapy. Instead, the alliance is an inseparable part of everything that happens in therapy.

Many definitions of the therapeutic alliance have been posited in the past. The frequently cited definition of Bordin's (1994) working alliance seems particularly apt for the purposes of this conceptual model because there is some evidence to support it in the evidenced-based relationship literature (Norcross & Lambert, 2011). Bordin (1994) describes the working alliance in therapy as the achievement of a collaborative stance in therapy. This stance is built upon an agreement between therapist and client as to the therapeutic goal and consensus on tasks that compose the work conducted in therapy. It concludes that all of these components of the working alliance are dependent upon and cultivate a bond between the therapist and client.

Goal consensus and collaboration on the tasks within therapy are also shown to have a moderate effect on psychotherapy treatment outcomes. Therefore, therapist's utilizing this model should take care to follow Shick Tryon and Winograd's (2011) recommendations for establishing goal consensus, which include (1) establishing agreement on the goals between therapist and client; (2) the therapist taking care to explain the nature and expectations of therapy and the client's resultant understanding of this information; (3) goals are discussed and the client believes that the goals are clearly specified; (4) the client is committed to the goals of therapy; (5) the therapist and patient



experience congruence on the origin of the client's problem and on who or what is responsible for the solution to the problem. Collaboration should be encouraged as a part of this model of therapy by educating the client about the importance of their contribution to the success of therapy and by encouraging feedback, insight, and reflections from the client throughout the therapy process. At the same time, the therapist can work to engage the client in updates about their motivation to change, current functioning and social support, as well as providing them with feedback about their progress (Shick Tyron & Winograd, 2011).

Additionally, it may also be important to distinguish that when the modality of therapy is group therapy, the therapeutic alliance, while still important, is deemphasized and more attention is given to group cohesion. Cohesion is a common factor identified in the literature as reliably associated with group outcomes when that outcome is related to a reduction in symptom distress or an improvement interpersonal functioning (Burlingame, McClendon, & Alonso, 2011). As a result, if you are utilizing a mindfulness-based approach as a part of group therapy, it is important that you, as the group facilitator are working to actively foster group cohesion and perhaps utilizing assessment measures throughout the group process to assess group cohesion.

### **Client**

Buddhism places a very strong emphasis on the unique journey of each individual in their path to be free from suffering, instilling a hope that human beings are capable of opening the pathway to freedom from suffering entirely on their own through their mindfulness practice. The Vietnamese Zen monk, Thich Nhat Hahn (1975), describes this hope in his book *The Miracle of Mindfulness*:

Mindfulness is the miracle by which we master and restore ourselves...mindfulness is at the same time a means and an end, the seed and the fruit. When we practice mindfulness in order to build up concentration, mindfulness is a seed. But mindfulness itself is the life of awareness: the presence of mindfulness means the presence of life, and therefore mindfulness is also the fruit. Mindfulness frees us of forgetfulness and dispersion and makes it possible to live fully each minute of life. Mindfulness enables us to live (p.14-15).

His Holiness the Dalai Lama also offers similar wisdom surrounding the "certain inner discipline" (p. 15) that arises through regular mindfulness practice:

...We can undergo a transformation of our attitude, our entire outlook and approach to living...one begins by identifying factors which lead to happiness and those factors that lead to suffering. Having done this, one sets about gradually eliminating those factors which lead to suffering and cultivating those which lead to happiness. (p. 15)

This capacity for self-healing is reinforced by the Western psychotherapy finding that, overall, the client's contribution to psychotherapy, including the severity of their disorder, explains around 30% of the variance observed in psychotherapy outcomes (Norcross & Lambert, 2011). Therefore, it is very important for the therapist to attend to the client-specific factors that may impact the type of interventions and therapeutic stance that you assume throughout the psychotherapy process. Some things that may be useful to pay attention to in particular over the course of treatment include the client's

personality, multicultural/diversity variables, interaction between therapist and client multicultural/diversity variables, situation and client context, diagnosis, identified problem, coping style, level of distress and impairment in functioning, motivation and readiness for change, risk factors for relapse, protective factors, learning style, and attachment style. The more experienced a clinician becomes with utilizing mindfulness-based interventions and a mindfulness perspective with clients, it may become easier to identify particular aspects of mindfulness that might be helpful and concepts that may be particularly impactful for that person.

### **Suffering**

Suffering, which is closely linked to the client's diagnosis, distress, or presenting problem, is identified separately in acknowledgment that suffering is common to all human experience. This acknowledgment works to foster compassion and empathy within the therapist for the client's suffering. It also encourages the therapist to strive towards decreasing power differentials in the therapy relationship through exploration of the commonalities in shared experiences of human suffering.

Next, in order to make more informed choices about which mindfulness-based interventions to utilize in therapy, it may be useful to understand more about the Buddhist conceptualization of suffering. In Buddhism, suffering, or *dukkha*, is the first of the Four Noble Truths, and could be translated also as stress, anxiety, or dissatisfaction. There are several different categories of *dukkha*. The first is physical suffering or pain, associated with illness, aging, and dying. The second is the anxiety or stress evoked when humans try to attach or hang on to things that are constantly changing. The third category of *dukkha* is a basic dissatisfaction that pervades all of life simply due to the reality that life

is impermanent and always changing. It could also be described as a resentment that builds because situations in life never seem to add up to the expectations we have for them. It may be useful for the therapist to have an understanding of these various types of suffering because various mindfulness-based interventions may be better suited than others in addressing particular forms of suffering.

### **Diagnosis or Problem**

Diagnosis and case conceptualization should be a collaborative process undertaken with the client diagnostic classification system that is appropriate for the professional's setting. The diagnosis, distress or presenting problem is elucidated and agreed upon in a collaborative manner through therapist exploration of the issue with the client and can be based upon the clinician's preferred theoretical orientation of choice. Diagnosis, distress, or presenting problem can be a significant piece of the therapist's conceptualization and is essential for being able to inform mindfulness relational approaches to treatment, as well as mindfulness-based interventions that may be helpful. It is also significant because there are several mechanisms commonly observed in psychopathology that can be addressed by different aspects of mindfulness-based interventions. Several commonly observed processes of psychopathology observed in the literature that may benefit from being addressed by a mindfulness-based intervention include: experiential avoidance, rumination, emotional dysregulation, increased physiological arousal, deficits of executive functioning, and cognitive dysregulation. These processes of psychopathology will be discussed in further detail in the subsections following this one.

The idea of developing a conceptualization of the client's presenting problem is quite consistent with core tenets of Buddhism. This is largely because Buddhism offers a way in which to conceptualize human suffering and how to alleviate it using four interconnected propositions known as the Four Noble Truths. They contain the assertion that: (1) life is suffering, whether this may mean physical or biological suffering or pain, such as sickness, aging, or death. This may also mean emotional and psychological forms of suffering and pain, such as despair, sorrow, or grief. It may also be referring to existential pain, which is related to a generalized disillusionment with life when it does not go the way one may have wanted. (2) Suffering is caused by craving and is in reference to three things: 1) craving for sensual pleasure or gratification, 2) craving for existence, which drives us to new experiences and life, and 3) craving for non-existence, which drives us to destroy, deny, reject, or avoid anything in life that is unpleasant or unwelcome. (3) Suffering can have an end and be alleviated because craving can be extinguished. (4) There is a path, called the Noble Eightfold Path, which leads to the cessation of suffering. This path is composed of (1) right understanding/view, (2) right resolve, (3) right speech, (4) right action, (5) right livelihood, (6) right effort, (7) right mindfulness, and (8) right meditation. (Keown, 2000).

**Experiential avoidance.** Experiential avoidance is a process of psychopathology that occurs when an individual is unwilling to remain in contact with particular personal experiences. These experiences may range from bodily sensations to thoughts, feelings, and memories. However, this unwillingness to connect with these personal experiences is extended into the individual actively trying to alter the form or frequency of those experiences, as well as the contextual situations that are associated with them. The term

experiential avoidance also encompasses terms acknowledged as psychopathological process by a variety of theoretical orientations, such as emotional avoidance or cognitive avoidance and thought suppression, as these may be more specific in particular instances, rather than the more general expression of experiential avoidance. However, across all of these terms, it is evident that the individual is engaged in trying to escape, avoid, or modify, whatever is happening to, within, or around them. Experiential avoidance is observed in many different forms of psychopathology and it may be that experiential avoidance may result in psychopathology itself, as many of the behaviors associated with psychopathology are forms of unhealthy forms of experiential avoidance (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). In other words, experiential avoidance may actually increase the intensity, frequency, severity, and accessibility of those experiences or negative emotions (Gratz & Tull, 2010; Hayes et al., 2006). This phenomena is important to note as emotional avoidance, in particular, may actually place one at risk for emotional dysregulation as well, and has been implicated in maintaining and sustaining clinical symptomology for a wide range of psychological disorders (Gratz & Roemer, 2004). These include depression (Teasdale et al., 2002), anxiety (Hayes-Skelton et al., 2012; Treanor, 2011; Soenke, Hahn, Tull, & Gratz, 2010), substance use disorders (Zgierska et al., 2009), posttraumatic stress disorder (Follete & Vijay, 2009; Thompson & Waltz, 2009), and eating disorders (Baer et al., 2005).

**Rumination.** Rumination, or a rumination response style, is the tendency to focus repetitively on symptoms of distress, as well as possible causes and consequences of these symptoms without engaging in active, productive problem solving that results in changing the circumstances surrounding these symptoms (Nolen-Hoeksema, Stice, Wade,

& Bohon, 2007; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). It has also been referred to as a process of thinking perseveratively about one's feelings and problems, rather than thinking of the specific content of one's thoughts and is often associated with a variety of maladaptive cognitive styles, including hopelessness, pessimism, self-criticism, dependency, neediness, and neuroticisms, among others (Nolen-Hoeksema, et al., 2008). Often, individuals engage in this maladaptive response style because they believe it will solve their problems, but instead, an individual who is ruminating undergoes a deteriorated ability to solve problems.

Unsurprisingly, rumination has been implicated in the psychopathology associated with anxiety, eating disorders, and substance abuse disorders (Aldao, Nolen-Hoeksema, & Schweizer, 2010) and is the form of self-focused attention that is most strongly and consistently related to depressive symptoms (Nolen-Hoeksema et. al., 2008). According to the research, the process of rumination actually exacerbates and prolongs the distress associated with depression in particular because it enhances the effects of depressed mood on thinking, as a result, it becomes more likely that the individual will continue to use the negative thoughts and memories activated by their depressed mood to understand their present circumstances. Further, because one of the effects of rumination is increased pessimism and fatalistic thoughts, it can interfere in effective problem solving. Finally, rumination can actually lead to an increase in stressful circumstances because it can interfere in the person's ability to engage in behaviors that will be helpful to them. For example, an individual who chronically ruminates may eventually lose social supports around them, which can in turn result in increased depression. Due to this combination of the effects of rumination, depression often becomes more severe over

time and evolves into multiple episodes of depression (Nolen-Hoeksema et al., 2008; Williams, Teasdale, Segal, & Kabat-Zinn, 2007).

**Emotional dysregulation.** Problems with emotional regulation characterize more than 75% of the diagnostic categories included in the DSM-IV-TR (Werner & Gross, 2009). Generally human emotions offer an adaptive response to problems and opportunities that humans encounter in our environment and promote survival. However, emotions become problematic, or dysregulated, when they are the wrong type of emotion, they occur in an inappropriate context, are too intense, or last too long. When emotions are problematic, the individual often tries to influence or change their emotional reaction (Werner & Gross, 2009). Generally, emotion dysregulation can be divided into two categories, (1) difficulties modulating emotional experiences and expressions and (2) frequent or automatic attempts made by the individual to control or suppress emotional experience or expression, essentially trying to prevent the emotion from being experienced at all (Cicchetti, Ackerman, & Izard, 1995). The characteristics of emotion dysregulation are implicated in several types of psychopathology that are characterized by deficits in emotion regulation. Some of these disorders include generalized anxiety disorder, panic disorder, social anxiety disorder (Mennin, Heimberg, Turk & Fresco, 2005; Cox, Swinson, Shulman, & Bourdeau, 1995), as well as posttraumatic disorder (Roemer, Litz, Orsillo, & Wagner, 2001). Other disorders also characterized by emotion dysregulation include depression (Flett, Blankstein, & Obertynski, 1995), borderline personality disorder (Wagner & Linehan, 1999), and eating disorders (Westen & Harnden-Fischer, 2001). In the treatment of psychiatric disorders in which emotional dysregulation may be prevalent, such as generalized anxiety disorder, attention to



emotions themselves has been hypothesized as an important variable in the emotion regulation process. As a result, mindfulness-based approaches to psychotherapy and intervention may be poised to address emotion dysregulation in this regard by utilizing interventions that facilitate the client's ability to pay attention to their emotions (Mennin et al., 2005).

**Increased physiological arousal.** Increased physiological arousal is equated with the biological alarm systems that are wired into the human body and help prepare the body to react physically and mentally to potentially harmful circumstances. Particularly with an anxiety response, a healthy individual experiences increased muscle tension, activation of the sympathetic and parasympathetic nervous systems, followed by an increase in blood pressure, heart rate, respiration, sweat gland activity, and gastrointestinal and bladder activity. Most humans experiences these things as feeling tense and flushed, heart palpitations, increased perspiration, shortness of breath, and in severe instances, a need to defecate or urinate. Moderate levels of anxiety have an important survival function in human beings because they direct the person's attention to the perceived danger and motivate a responding coping behavior. However, when anxiety reaches severe levels, it overwhelms the person physiologically and results in mental and emotional disorganization, which is counterproductive to the person's ability to enact an appropriate coping behavior (Hoehn-Saric & McLeod, 2000). This can become particularly problematic for the individual when they begin to misperceive the reason why they experiencing the anxiety. For example, an individual who is experiencing a panic attack prior to public speaking who may indicate that they feel like they are about to have a heart attack and request to be taken to the emergency room.

Therefore, it is hypothesized that mindfulness may instruct individuals how to pay attention to their physiological reactions in their body and connect the reaction to the appropriate congruent thought or feeling associated with that experience.

**Deficits of executive functioning and cognitive dysregulation.** It is largely held that deficits in organization and efficient management may be attributed to deficits in executive functioning. This would encompass such cognitive abilities as working memory, one's ability to shift attention, inhibition of impulses, susceptibility to distraction, as well as organizing, planning, and the ability to self-monitor and regulate one's emotions and behaviors. Deficits of executive functioning are implicated across a variety of mental health diagnoses, including cognitive developmental disorders, psychotic disorders, affective disorders, conduct disorders, neurodegenerative diseases (such as Parkinson's), and acquired brain injury. At present, there is very limited research in exploring the effectiveness of mindfulness-based approaches and interventions as supplementary interventions to address deficits of executive functioning. However, it is hypothesized that as mindfulness is wholly concerned with the basic human capacity to pay attention and developing this ability further, it may be uniquely capable to address deficits observed in individuals with attention deficit/hyperactivity disorder and other forms of executive dysfunction. Further, mindfulness activates regions of the brain that are implicated as areas of dysfunction, particularly for individuals with attention deficit/hyperactivity disorder, including the prefrontal cortex, amygdala, cerebellum, and the basal ganglia (Zylowska, Smalley, & Schwartz, 2009). Mindfulness-based interventions as applied to the treatment of ADHD has only more recently been proposed in the mindfulness literature as a potential complementary treatment for ADHD.

Preliminary studies suggest that mindfulness interventions may be a beneficial supplemental treatment intended to address deficits of executive functioning with attention deficit/hyperactivity disorder (Tang et al., 2007; Zylowska, Smalley, & Schwartz, 2009), co-morbid attention deficit/hyperactivity disorder and mood disorders (Hesslinger et al., 2002; Zylowska et al., 2008), psychotic disorders (Gaudiano & Herbert, 2006), developmental disabilities (Hwang & Kearney, 2013, Singh, et al., 2011), and Parkinson's disease (Fitzpatrick, Simpson, & Smith, 2010).

### **Multicultural Context**

Further, it is important to be reminded of the ethical obligation to engage in multiculturally competent diagnosis, conceptualization, and interventions with our clients (APA, 2010). Every individual exists with certain sociopolitical, historical, and economic contexts that influence the behavior of ourselves and our clients. Clinicians must remain cognizant of how the intersection of variables such as age, gender, sexual orientation, race, ethnicity, national origin, socioeconomic status, educational attainment, religious/spiritual orientation, and ability status can enhance the understanding and treatment of our clients. Given the role and impact of psychologists in society, psychologists are in a unique position, capable of promoting issues of social justice (APA, 2002). Therefore, it is important to identify the intersection of these variables as a part of case conceptualization and diagnosis, as well as have the ability to identify and acknowledge issues related to bias and prejudice, within the medical model of diagnostic classification used in Western psychotherapy, within the practitioner themselves, and the systems and institutions in which both the client and therapist interact. Even further still, it is important to acknowledge that the process of "diagnosis" itself involves mental

health professionals having the power to label a behavior pathological as opposed to normative behavior and that the resultant label can carry extraordinary weight within dominant culture (Ballou, Hill, & West, 2008; Brown, 2010; Evans, Kincade, & Seem, 2011). Diagnosis is a grave responsibility wherein the social context surrounding the client's distress should be carefully examined by the therapist prior to making a specific diagnosis because sexism, racism, heterosexism, ableism, classism, and ageism can all be found embedded in current diagnoses (Caplan, 1999; Kaplan et al., 1983). Further, diagnosis goes beyond a simple label and places the person within a broader societal hierarchy in a manner that is often immovable and may subject the person to exclusionary dominant attitudes toward the normative behaviors of a marginalized and oppressed social group. Diagnosis also frequently neglects attending to the sources of strength, resilience, and resistance present in a client's life, culture, and immediate environment. Therefore, the culturally competent therapist should be encouraged to think diagnostically through a contextual lens that acknowledges issues of power, oppression, and social control, while also examining client distress within the context of strength, resilience, and resistance. This simply means that the therapist and client work together to develop hypotheses about the nature, origins, and meanings of the client's distress (Ballou, Hill, & West, 2008; Brown, 2010; Evans, Kincade, & Seem, 2011). The hypotheses allow a goal to be developed surrounding the focus of treatment, contextualizes and names the distress for the client, and reinforces the collaborative and more egalitarian nature of a productive therapeutic relationship. It is important to point out that at times, this model does utilize language such as "diagnosis" and "psychopathology," which are terms common to the medical model of diagnostic

classification. These are the terms predominant in the mindfulness-based research and are used to reflect the research appropriately and also communicate common terms with which most mental health professionals are familiar. However, they should be viewed within the context of the power inherent in these labels and with the understanding that they are not to be viewed independently of the sociocultural context of the client.

Buddhism also promotes the basic human responsibility to act as an agent for social justice. Although Buddhism has a reputation as being a rather introspective religion, contemporary Asian Buddhism is quite active with both Asian and global sociopolitical issues and crises. In fact, Buddhist contributions to the international community in regards to actualizing nonviolent action for social justice have resulted in two Buddhist leaders, the Dalai Lama of Tibet and Aung San Suu Kyi of Myanmar, receiving Nobel Peace prizes (Queen & King, 1996). Further, there is ample Buddhist literary and philosophical justification for the importance of engaging in social justice issues. In particular, Buddhists often apply the principle of interdependence to justify social activism. The principle of interdependence posits that all living beings share the world and therefore the acts of each of us affects all the others (King, 1996). The Dalai Lama (2008) communicates the principle of interdependence quite effectively in his challenge to the world to become engaged in social justice issues on the Anniversary of the Universal Declaration of Human Rights:

At birth, all human beings are naturally endowed with the qualities we need for our survival, such as caring, nurturing, and loving kindness. However, despite already possessing such positive qualities, we tend to neglect them. As a result, humanity faces unnecessary problems. What we need to do is make more effort

to sustain and develop these qualities. Therefore, the promotion of human values is of primary importance. We also need to focus on cultivating good human relations, for, regardless of differences in nationality, religious faith, race, or whether people are rich or poor, educated or not, we are all human beings. When we are facing difficulties, we invariably meet someone, who may be a stranger, who immediately offers us help. We all depend on each other in different circumstances, and we do so unconditionally. We do not ask who people are before we offer to help them. We help because they are human beings like us.

### **Mindfulness-based Treatment Approaches and Mindfulness-based Intervention**

The concepts of mindfulness and mindfulness practice referred to in the psychological literature originate from ancient contemplative spiritual traditions, particularly as adapted from Buddhism, as well as aspects of both the Sāṅkhya and Yoga schools of Indian philosophy (Baer, 2003; Barua, 1990; Bishop et al., 2004; Kabat-Zinn, 1985; Kalupahana, 1987; Seigel, Germer, Olendzki, 2008). Mindfulness is a 2,500 year old practice that has been referred to as the 'heart of Buddhist meditation.' It is considered the foundational stance of attention aimed at striving towards the state of cessation and freedom from suffering, or *nibbāna* (Kalupahana, 1987; Thera, 1992). Buddhist's believe that continued engagement in the practice of mindfulness meditation teaches one how to eliminate needless suffering, while simultaneously cultivating the components of awareness, attention, and remembering. It is through mindfulness practice, that insight into the nature of the mind and the environment may be found. As insight is attained, mindfulness exposes habits of the mind that perpetuate suffering and

unhappiness, such as greed, anger, or various harmful behaviors (Seigel, Germer, Olendzki, 2008).

**What is mindfulness?** A very simple definition of mindfulness by Brown and Ryan (2003) describes mindfulness as the basic human capacity to maintain a quality of conscious attention and awareness to the present, moment-to-moment unfolding of experience. When illuminating the linguistic roots of the original Pali word for mindfulness, 'sati', the word mindfulness evokes meaning relating to a combination of awareness, attention, and remembering (Seigel, Germer, Olendzki, 2008). Brown and Ryan (2003) describe this *awareness* by likening it to “the background ‘radar’ of consciousness” which is continually monitoring the inner and outer environment. *Attention* is a process of focusing conscious awareness so as to provide increased or heightened sensitivity to a much smaller range of experience (Westen, 1999). *Remembering*, on the other hand, is the intention to engage in mindfulness practice, and remembering to open oneself to awareness and pay attention (Seigel, Germer, Olendzki, 2008).

However, the aforementioned definition of mindfulness only encompasses its linguistic components, but mindfulness is in fact much more nuanced. As a result, there are many definitions of mindfulness observed in the psychological literature on the topic. This is largely because there is a great deal of diversity amongst the various Buddhist traditions relating to what factors should be included in descriptions of mindfulness. This diversity is also reflected in the ongoing debate within the psychological literature as to what exactly constitutes the construct of mindfulness (Carmody, 2009). As a result of this debate, there has been a historical difficulty with prevailing research studies

investigating the effects of mindfulness practice because studies potentially employed and measured different constructs of mindfulness. Much of this debate is centered around whether or not mindfulness refers to mental skill utilized as a part of practicing mindfulness, or rather a state or trait that emerges as a result of mindfulness practice (Brown, Ryan, & Creswell, 2007). Therefore, it continues to be difficult to generalize and compare research findings when differing definitions of mindfulness have been used and this should be considered while comparing and contrasting the research findings contained within this dissertation (Chiesa & Malinowski, 2011; Bishop et al., 2004).

One of the most commonly observed definitions used in the literature was coined by Jon Kabat-Zinn (1993), and supported by Baer (2003), as an appropriate operationalized working definition of mindfulness. According to this definition, mindfulness is "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgementally to the unfolding of experience moment by moment." This is also the most commonly used working definition of mindfulness utilized in research studies. It is important to note that use of this definition implies that mindfulness is a *state* rather than a trait and that while mindfulness may be promoted by certain practices or activities, such as meditation, mindfulness is not equivalent to those practices (Davis & Hayes, 2011). Carmody's definition of mindfulness is slightly different in that it attempts to describe what mindfulness cultivates. Her definition of mindfulness is "intentionally paying attention to present-moment experience (physical sensations, perceptions, affective states, thoughts and images) in a nonjudgemental way and thereby cultivating a stable and nonreactive awareness." Another commonly referenced definition of mindfulness was the basic Brown and Ryan (2003) definition



noted earlier, which Germer et al. (2005) somehow simplifies further by defining mindfulness as "moment-by-moment awareness." Martin's (1997) definition expresses the relationship that mindfulness has to the Buddhist concept of *attachment*, which says: mindfulness is "a state of psychological freedom that occurs when attention remains quiet and limber, without attachment to any particular point of view.

### **Why should mindfulness be integrated into Western psychotherapy**

**approaches?** Buddhist psychology and Western psychotherapy actually share a great deal in common, the first of which is that both share a common goal of alleviating human suffering. Within Buddhism, it is believed that the practice of mindfulness is the path that leads to an unfolding of events that alleviate human suffering. This path begins with mindfulness and is sustained by the practice of mindfulness. Mindfulness is used as a vehicle to bring the body and mind into a calm and relaxed state. According to Buddhism, this calm and relaxed mind is necessary on the path to the alleviation of suffering because it has the effect of an increased awareness and attention, which results in a deepened mental concentration. Deepened concentration occurs because the calm mind state that arises from mindfulness practice closes off sensory experiences that diminish the quality of awareness. So rather than becoming quickly distracted by physical, visual, or audible etc. sensations in our environment, the mind is more free to fully attend to whatever the practitioner would like to attend to in that moment. As a result of this deepened concentration, one is able to attend better to our behavior and actions. Practicing this kind of devoted attention and deepened concentration to whatever arises in the present moment, creates a space for developing a deeper understanding of the patterns of thoughts, feelings, and behaviors that precede what unfolds in the next

moment of our experience. Within Buddhist psychology, this combination of mindfulness, increased ability to attend to our behavior and actions, and an intention to calm the mind and develop concentration are all ingredients for the gradual attainment of wisdom. What exactly that wisdom may be may be unique and different for each person. For example, it may mean an improved understanding of self, experience, and the world. Regardless of the personal meaning of the wisdom attained, it is this wisdom that is said to be responsible for the cessation of suffering (Olendzki, 2003).

In addition, Buddhist psychology and Western psychology share several important beliefs about how behavioral, social, and emotional conditioning shape the beliefs that we have about ourselves and the world. In fact, when discussing achieving freedom from suffering, Buddhists often refer to this as sustaining mental effort so as to decondition old patterns and habits of the mind. In breaking free of those old patterns and habits, it is possible to condition the mind with new ways of being in the world. This is not altogether dissimilar from the cognitive-behavioral model of psychotherapy that addresses faulty cognitions and tries to replace them with new ones. Therefore, both mindfulness-based treatment approaches and mindfulness-based interventions, should address the three domains of human experiencing: (1) behavior, or the actions that we "do" and associated physical sensations, (2) emotions, or what we "feel," and (3) the mind, or what we "think."

**Evidence to support the use of Mindfulness-based approaches and interventions.** There is a growing body of research suggesting that mindfulness-based interventions such as mindfulness-based cognitive therapy (MBCT; Segal, Wililams, & Teasdale, 2002), acceptance and commitment therapy (ACT, Hayes, Strosahl, & Wilson,

1999); and dialectical behavior therapy (DBT; Linehan, 1993) lead to clinically significant improvements in psychological and physical functioning, as well as promote stress reduction in healthy individuals (Carmody & Baer, 2008; Grossman, Neimann, Schmidt, & Walach, 2004; Salmon et. al, 2004; Hayes, et al., 2006; Chiesa & Serretti, 2010; Lynch, Trost, Salsman, & Linehan 2007; & Pull, 2009). Recent reviews of the literature suggest that mindfulness is positively associated with psychological health and that training in mindfulness may improve subjective well-being, reduce psychological symptoms and emotional reactivity, and improve self-regulation of behavior (Keng, Smoski, & Robins, 2011; Chiesa & Serretti, 2010; Davis & Hayes, 2011; Grossman et al., 2004). It has also been shown to be helpful in promoting healthy coping strategies, stress reduction, and teaching relapse prevention skills. Mindfulness and mindfulness-based interventions have been found to have a positive impact on a treatment of a wide range of clinical issues, including: anxiety, depression, trauma, eating disorders, attention deficit-hyperactivity disorder, self-harm and suicidal behavior, anger management and impulsivity, psychosis, bipolar disorder, substance abuse, psychological effects of pain, and stress reduction and increased psychological resilience in healthy individuals. In addition, neurobiological findings demonstrate that mindfulness meditation practices are associated with changes in the activation of specific regions of the brain and preliminary evidence indicates that mindfulness meditation practices could enhance cognitive functions (Chiesa, Calati, & Serretti, 2010; Chiesa & Serretti, 2010; Ivanovski, & Malhi, 2007; Jha, Stanelly, Wong, Gelfand, & Kiyaoonaga, 2010; Cahn & Polich, 2006).

**Mindfulness-based interventions and processes of change.** As mentioned before, there is a wide research base supporting the use of mindfulness-based

interventions in psychotherapeutic treatment for a wide range of presenting clinical issues. As a result, more and more practitioners are seeking training in the administration of these interventions and trying to adapt them to their clinical practice. However, although there is plenty of research demonstrating the effectiveness of mindfulness-based interventions, little research exists examining exactly *how* and *why* they work. Baer (2010) offers an excellent example in her book when she posits the legitimate question as to whether or not what is assumed about how mindfulness training works is in effect true. She notes that mindfulness training is theorized to lead to individuals experiencing more mindfulness in their daily lives, which should lead to reductions in suffering while increasing overall well-being. The problem is that at this time, our understanding of how mindfulness actually improves well-being and reduces suffering remains an assumption. As a result, it is important to develop a better understanding of how and why mindfulness-based interventions and concepts specifically work. An understanding of what components are responsible for the changes observed in therapy could potentially increase their effectiveness by improving upon the components known to be helpful, while disposing of components of the intervention that are not beneficial. Aided by this understanding, clinicians will be better equipped to enact mindfulness-based interventions more appropriately for particular clients and hopefully with greater therapeutic effect (Baer, 2010; Chambers et al., 2009).

At present, there are many psychological processes that are being examined as potential processes responsible for the changes observed as a result of mindfulness-based interventions and mindfulness training that lead to reduced psychological distress and improved well-being. Some suggest that the process of change is mindfulness itself and

that perhaps mindfulness is actually a common factor present in other forms of psychotherapeutic interventions (Anderson, 2005; Baer, Smith, Krietemeyer, Hopkins, & Toney, 2006; Martin, 1997). However, it has been suggested that several constructs often associated with mindfulness-based interventions could be potential mechanisms of change. These constructs include: emotion regulation, self-compassion, decentering, psychological flexibility, as well as changes in the brain/neuroplasticity and changes in higher cognitive processes like attention, executive functions, and working memory (Baer, 2010; Chambers, Gullone, & Allen, 2009). Others have suggested that psychological processes relating to self-control, objectivity, flexibility, improved concentration and mental clarity, emotional intelligence, and the ability to relate to one's self with kindness, acceptance, and compassion may be responsible for change (Davis & Hayes, 2011).

*Emotion regulation as a mechanism of change.* Emotion regulation has been identified as a potentially unifying function of diverse symptom presentations and that emotional dysregulation may be at the root of behaviors and psychological difficulties experienced by individuals with a wide range of presenting clinical issues. Research largely suggests that emotion regulation is essential to mental health and plays an important role in various forms of psychopathology that are often associated with problems of emotion regulation (Chambers, 2009; Davidson, 2000; Hayes & Feldman, 2004; Hofmann & Asmundson, 2008). Some of the psychological issues which have been attributed to difficulties with emotion regulation include depression and anxiety (Roemer et al., 2009; Vujanovic, Zvolensky, & Berstein, 2008), binge eating (Baer, Fischer, & Huss, 2005; Kristeller & Wollevar, 2011), substance use (Bowen et al., 2009),

generalized anxiety disorder (Roemer et al., 2009), attention-deficit/hyperactivity disorder (Zylowska, Smalley, & Schwartz, 2009), post-traumatic stress disorder (Gratz & Tull, 2010), borderline personality disorder, and deliberate self harm (Gratz & Roemer, 2008; Gratz & Tull, 2010). Due to the large role that emotion regulation difficulties appear to play in all of these psychological issues, treatments for a wide variety of psychological issues attempt to incorporate ways in which to improve emotion regulation and teach healthier, more adaptive emotion regulation skills (Gratz & Tull, 2010).

However, when attempting to define what emotion regulation exactly consists of, the existing literature of the topic is wrought with disagreement as to an appropriate definition. Largely, this disagreement centers around two very important questions: (1) does emotion regulation refer to the control and reduction of negative emotions or does it refer to the control of behavior when experiencing negative emotions and rather that emotions are functional in nature? and (2) is emotion regulation dependent upon the temperament of the individual or is emotion regulation separate from one's emotional temperament? At present, research tends to be in support of the latter half of each question, such that emotion regulation is separate from the individual's emotional temperament and is more concerned with behavioral control while experiencing emotions (Gratz & Tull, 2010). Gratz & Roemer (2004) have tried to conceptualize emotion regulation within the context of these arguments in order to provide a clinically relevant understanding of adaptive emotion regulation. They argue that emotions serve a functional purpose and as such, emotion regulation is viewed as a multidimensional construct involving the awareness, understanding, and acceptance of emotions. It involves the ability to engage in goal directed behaviors and inhibit impulsive behaviors

when experiencing negative emotions. Emotion regulation also involves flexible use of situationally appropriate strategies in order to modulate the intensity or duration of emotional responses rather than to eliminate emotions entirely. Finally, emotion regulation is associated with a willingness to experience negative emotions as part of pursuing meaningful activities in life (Gratz & Roemer, 2004; Gratz & Tull, 2010).

There are many ways in which mindfulness-based interventions may potentially be helpful in improving emotion regulation and facilitating adaptive responding to unwanted emotional experiences. First, it is hypothesized that simply labeling emotions as a part of mindfulness-based interventions help individuals decenter from their experiences so they might observe them more objectively. This observational stance, which is also taken with an attitude of nonjudgment, is intended to increase the client's tolerance for and acceptance of interacting with difficult emotions and experiences (Gratz & Tull, 2010). Deepened willingness or openness in engaging with affect may also be viewed as a form of exposure, which ultimately reduces avoidance of unpleasant experiences and dysfunctional behaviors aimed at control (Linehan, 1993; Treanor et al., 2011). Mindfulness may also be useful in teaching clients that emotions do not have to control behavior and that they can be experienced and tolerated without acting on them. Further, some of the acceptance-based interventions use psychoeducation to teach clients about how emotions evolved in order to offer humans an evolutionary advantage to promote survival (Gratz & Tull, 2010; Linehan, 1993; Roemer & Orsillo, 2007). In understanding the functional nature of emotions, clients may be more effective in the responses that they choose to make dependent on their environment. Farb, Anderson, & Segal (2012) offer an interesting neuropsychological model as to how mindfulness

impacts emotion regulation. They argue, based on research demonstrating that mindfulness training is associated with developing a prefrontal cortex network, that mindful emotion regulation increases emotional awareness by reducing midline prefrontal cortex activity, while maintaining sustained activation of the limbic system. In doing so, mindful awareness may result in disruption of automatic reactions and create room for more adaptive reactions, such as acceptance or self-compassion.

*Self-compassion/compassion as a mechanism of change.* Compassion is considered to be associated with a variety of aspects of healthy psychological functioning, and client participation in mindfulness-based interventions demonstrated increases in levels of self-compassion (Neff, 2009). In particular, self-compassion is correlated with psychological well-being and associated constructs such as happiness, optimism, personal initiative, and connectedness (Baer, 2010). At the same time, self-compassion is also associated with decreases in anxiety, depression, neurotic perfectionism, and rumination (Neff, 2009; Neff & McGhee, 2010) and negatively correlated with self-judgment and isolation (Iskender & Akin, 2011). Self-compassion may also be important in bolstering self-esteem without also increasing narcissism (Leary, Tate, Adams, Allen, & Hancock, 2007; Neff & McGhee, 2010; Neff & Vonk, 2009; Michalak, Teismann, Heidenreich, Strohle, & Vocks, 2011). Further, high levels of self-compassion are related to feelings of autonomy, competence, optimism, wisdom, and positive emotions (Jimenez et al., 2010). Due to the findings that self-compassion is overwhelmingly associated with improved psychological well-being, there is growing interest as to why and how self-compassion appears to enact change as a part of mindfulness-based interventions. However, it is important to note that there is



disagreement in the literature as to whether or not mindfulness and self-compassion are separate constructs. What does seem clear is that they do interact to some degree and that it may be that they must co-exist in order to co-facilitate the process of the other. In fact, one study found that self-compassion may have been the mechanism through which participants of an MBSR group experienced reductions in perceived stress (Shapiro, Astin, Bishop, & Cordova, 2005), although other similar studies had mixed findings (Moore, 2009, Shapiro, Brown, Biegel, 2007).

At present, it is altogether still unclear as to exactly how self-compassion may facilitate improved well being in individuals who have received mindfulness training. However, Baer (2010) postulates that mindfulness may evoke adaptive, healthy and wise behavior in mindfulness practitioners because of two key components of self compassion. The first, is that self-compassion is not founded upon judgment or evaluation of oneself, but rather nonjudgemental and nonevaluative acceptance for oneself and for one's suffering. Mindfulness practice inherently exposes practitioners to a nonjudgemental and nonevaluative acceptance for oneself and one's suffering. It is from this nonjudgmental radical acceptance of self and suffering that self-compassion naturally arises. The second key component of self-compassion is the understanding that suffering is a shared human experience, helping the practitioner to feel connected to others, feel compassion for the suffering of others, ultimately helping the practitioner to connect to compassion for one's own suffering. Baer (2010) proposes that nonjudgmental acceptance of oneself and one's suffering and the understanding that suffering is a shared human experience helps connect mindfulness practitioners with their own motivation for self-caring. Initial research suggests that mindfulness training does enhance self-compassion, as two studies

showed that long-term meditators score higher on self-assessments of compassion than nonmeditators (Lykins & Baer, 2009; Neff, 2003).

*Decentering as a mechanism of change.* Decentering is defined as the ability to assume a stance of objectivity and nonjudgment and simply observe thoughts as transitory events of the mind. Decentering also involves the acknowledgement that these thoughts/events do not necessarily reflect reality or an accurate view of the self. As a result, these events do not require any particular behavior in response. The emphasis of decentering is learning how to change one's relationship with one's thoughts rather than attempting to alter whatever thoughts may be occurring (Feldman, Greeson, & Senville, 2010; Fresco, Moore, et al., 2007; Safran & Segal, 1990). In the early days of cognitive therapy, decentering was the mechanism presumed to be responsible for preventing depressive relapse by changing the content of depressive thinking (Hollon & Beck, 1979). This is the theory that inspired the development of Mindfulness-Based Cognitive Therapy (MBCT) (Teasdale et al., 2002). However, the MBCT conceptualization of decentering is different from the cognitive theory notion of decentering in that the MBCT conceptualization of decentering emphasizes practicing decentered relationship with not just cognitions, but also bodily sensations and emotions. It encourages an attitude of openness, acceptance, and curiosity towards the experience. Considering the efficacy of MBCT in preventing depressive relapse, the process of decentering may be the mechanism of change that results in decreases in depressive rumination (Feldman et al., 2010). This is significant, as depressive rumination appears to have a role a variety of psychological disorders, including depression (Teasdale et al., 2002), anxiety (Hayes-Skelton et al., 2012), binge-eating (Baer et al., 2010), substance use disorders (Witkiewitz

& Bowen, 2010), and self-harm (Grantz & Roemer, 2008) However, it remains unclear as to how or why decentering appears to have a therapeutic effect in the treatment of depressive rumination (Feldman et al., 2010; Sauer, & Baer, 2010). Interestingly, decentering is closely related to mindfulness in that it is believed to play a central role in accounting for benefits observed from mindfulness training. In fact, most definitions of mindfulness and decentering are often very similar (Sauer & Baer, 2010).

*Psychological flexibility as a mechanism of change.* Most studies investigating the role of psychological flexibility have been conducted within the realm of Acceptance and Commitment Therapy. This is largely because helping the client develop increased psychological flexibility is a central therapeutic goal to the approach. Psychological flexibility is defined as "an individual's ability to connect with the present moment fully and consciously and to change or persist in behavior that's in line with their identified values" (Ciarrochi, Bilich, & Godsell, 2010, p. 53; Hayes et al., 1999). Psychological inflexibility occurs when an individual becomes "entangled in experiential avoidance and cognitive fusion" while also experiencing difficulties in connecting with the context of a situation, which ultimately impairs the individual's ability to choose behavior that is aligned with their values and goals (Hayes et al., 1999; Ciarrochi, Bilich, & Godsell, 2010, p. 53). ACT theorists posit that psychological inflexibility results from processes such as experiential avoidance and cognitive fusion that begin to dominate an individual's experience. Both of these processes are associated with the underlying psychopathology for a wide range of psychological disorders because individuals begin to engage in self-destructive behaviors in an attempt to control their private experiences. Instead, the behaviors have quite the opposite effect. (Ciarrochi et al., 2010). Some of the

psychological disorders associated with experiential avoidance and cognitive fusion include depression (Teasdale et al., 2002), anxiety (Hayes-Skelton et al., 2012; Treanor, 2011; Soenke, Hahn, Tull, & Gratz, 2010), substance use disorders (Zgierska et al., 2009), posttraumatic stress disorder (Follete & Vijay, 2009; Thompson & Waltz, 2009), and eating disorders (Baer et al., 2005).

As a result, ACT practitioners and theorists believe that helping clients to increase their psychological flexibility helps individuals to escape the cycle of experiential avoidance and cognitive fusion by learning to relate mindfulness to all aspects of their experience (Ciarrochi, Bilich, & Godsell, 2010; Ciarrochi & Blackledge, 2006). ACT attempts to increase psychological flexibility by building six processes: acceptance, defusion, contact with the present moment, self-as-context, values, and committed action. Acceptance involves developing willingness to accept private experiences. Defusion is concerned with weakening the language processes responsible for cognitive fusion by helping clients to be a neutral observer of their thoughts, which appears similar to the concept of decentering mentioned previously. Contact with the present moment is akin to mindfulness, in which clients are taught to build their awareness of whatever they are experiencing. Self-as-context helps people realize they can let go of unhelpful self-judgments while still retaining a sense of self. Values are similar to goals but different in that values are directions a client wants to work towards rather than something that can be achieved. Committed action is concerned with helping people to strive to work through difficult emotions and experiences by helping the client see that a choice can be made again and again (Ciarrochi et al., 2010).

***Mindfulness: A common therapeutic factor?*** In contrast to the mechanisms of change discussed previously that suggest that mindfulness offers something unique and new to psychotherapy treatment that no other form of psychotherapy has before, some researchers propose that mindfulness is actually a common factor, and that the core of mindfulness already exists within all of the other psychotherapeutic approaches (Anderson, 2005; Martin, 1997). A recent meta-analytic review by Hofmann et al. (2007) concluded that mindfulness-based interventions have general applicability in the treatment of psychological disorders. This study that examined the efficacy of mindfulness-based interventions across a wide range of diagnoses, including generalized anxiety disorder, social anxiety disorder, panic disorder, depression, pain disorders (arthritis, fibromyalgia, and chronic pain), cancer, traumatic brain injury, stroke, diabetes, and organ transplant. Although they were primarily examining the effectiveness of using mindfulness-based interventions in the treatment of anxiety and depression, they concluded that their pattern of results suggests that mindfulness-based training may not be diagnosis-specific. Instead, mindfulness-based training likely addresses processes that occur across a wide range of psychological disorders. They propose that mindfulness-based training accomplishes this via intervening across a range of emotional and evaluative dimensions upon which human well-being is founded. These findings are particularly promising for practitioners looking to incorporate this model into their therapeutic practice with any number of diagnostic issues.

***Mindfulness-based interventions.*** There is a wealth of resources available to clinicians that can guide a clinician to a particular intervention and as one grows in one's own mindfulness practice, one becomes more attuned to which interventions are

addressing which mechanism of change that might be appropriate for one's client. One may need to refer back to the diagnosis section to investigate which underlying mechanisms of change within the mindfulness-based intervention may be appropriate for addressing specific patterns of psychopathology as a reminder. A more formal list of these interventions will be developed as an extension of this dissertation in the future and will act as a supplement to clinicians who will require information about mindfulness resources and literature about mindfulness interventions.

### **Summary: How Mindfulness can be used within this Model**

In conclusion, the mindfulness interventions themselves are layered, wherein practice during session builds mindfulness related skills in both the therapist and the client. It is the hope of this model that incorporation of a mindfulness-based approach or mindfulness-based interventions can enhance a client's skills and resources, as well as empower the client to respond skillfully to their own suffering. Thereby, the mindfulness components within therapy begin to benefit the client in such a way that this vehicle for alleviating suffering can be generalized to all of life and be fully integrated in the client's way of life beyond therapy.

Regardless of how one chooses to integrate mindfulness into one's therapeutic approach with each client, the themes of continual progress, learning, and growth permeates the incorporation of mindfulness into therapy. Essentially, there is a constant growth in skill and resource, which increase and accumulate over time, as the client becomes more skilled at utilizing the benefits of mindfulness independently in their own lives. The goal being that at the conclusion of the therapy process, the client will be empowered with the skills and resources they have learned during therapy to address

their suffering independently of the therapy process. Therein, the mindfulness strategies learned in therapy are generalized to all of life, not just therapy, or the therapy specific issues being addressed. The practice of mindfulness in daily life becomes a way of being.

### **Universality and Instillation of Hope**

Universality is included as a unique component in this model because of the strong emphasis of this concept within both Buddhist psychology and Western psychology. Within the Western psychotherapy literature, universality and instillation of hope were posited as important therapeutic factors necessary for change in group psychotherapy by Yalom & Leszcz (2005). Universality occurs when group members recognize that other members share similar feelings, thoughts, and problems that they do. Instillation of hope occurs when a group member recognizes that other members' success can be helpful for their own outlook and as a result, the member develops optimism that they too will improve (Yalom & Leszcz, 2005). Within Buddhist psychology, the concept of universality, or the idea that one is not alone in suffering and that suffering is in fact common to the experience of all human beings, is a necessary prerequisite to experiencing the instillation of hope. The realization that one's suffering is not unique and that others also suffer interestingly often instills hope for the achievement of being free from that suffering. However, Buddhism also emphasizes a non-attachment to hope because this could lead to future-oriented thinking that may result in suffering. Rather, the Buddhist conception of realization of hope is a realization of one dimension of being human. T. S. Eliot (1943) describes hope this way:

I said to my soul, be still and wait without hope

For hope would be hope for the wrong thing; wait without love,  
For love would be love of the wrong thing; there is yet faith  
But the faith and the love and the hope are all in the waiting.  
Wait without thought, for you are not ready for thought:  
So the darkness shall be the light, and the stillness the dancing. (p. 128)

### **Therapeutic Outcome**

Therapeutic outcome quite simply refers to the goal that the client is working towards, whatever that may be. It could potentially be an increased sense of well-being, healthier psychological adjustment, or reduced symptoms of depression or anxiety. etc. His Holiness the Dalai Lama is often cited as saying that the common goal that all human beings are seeking on this planet is happiness, which could also be a client goal. This future therapeutic outcome should therefore be maintained within conscious awareness of both client and therapist. The therapist should be evaluating what interventions might be utilized to work towards achievement of those goals. The therapist should also regularly check in with the client to determine how the client feels about those goals and whether or not the client believes they are getting any nearer to attaining them. This could open more avenues for exploration within the therapy relationship, reveal therapeutic "stuck" points, and facilitate genuineness, goal consensus, and promote alliance within the relationship.



## **Chapter V**

### **Discussion**

The information in this section may be helpful to both researchers and clinicians. For researchers, this section may be useful in providing directions for future research. This section may be helpful to clinicians in providing a discussion of the applicability of this model and also discussing limitations of the conceptual model.

#### **Critical Review and Applicability of the Model**

The theoretical conceptual model proposed in Chapter IV of this dissertation is informed by a critical review of the research. It was intended to be founded in evidenced-based practice research, yet developed to remain flexible and adaptable to any therapist's preferred integrative treatment approach. As a result, previous research in the field of mindfulness is theoretically quite compatible with this framework, as well as across theoretical orientations of the clinician seeking to integrate mindfulness into their clinical practice.

Overall, this conceptual model offers distinct contributions to the current body of the clinically applied mindfulness literature in several key areas. First, this model attempted to explore the connections between the Buddhist approach to suffering and the path to healing with the Western psychotherapy approaches to the alleviation of suffering. In order to introduce the benefits of mindfulness practice to Western

audiences, mindfulness has been thoroughly analyzed in a Western fashion to explicate the components that might be therapeutically and medically helpful. This Western process of assimilating certain mindfulness principles and techniques, while discarding others, is seemingly fragmented, and it is not altogether impossible that elements from the original Buddhist psychology, philosophy, and ethical principles may have been lost. As a result, this model attempted to reevaluate the essential elements of the Buddhist conception of the path to healing and the cessation of suffering. Exploring the original roots of mindfulness as a part of this conceptual model and dissertation was also conducted in order to try to better theoretically explore and identify if there are any other underlying processes of change that remain empirically untested in the mindfulness literature. It was hoped that in identifying the aspects of the Buddhist understanding of how alleviating from suffering happens and combining this knowledge with a modern Western psychological understanding of what is most effective in psychotherapy, that a more effective mindfulness-informed psychotherapy might be developed.

Secondly, as a result of the investigation into the connections between the Buddhist and Western psychological understandings of suffering and the cessation of suffering, this model was designed to emphasize two key areas, (1) the importance of the therapeutic relationship and (2) the integration of multicultural considerations as a part of mindfulness-informed psychotherapy. Although it is widely acknowledged in the Western clinical psychology literature that the therapeutic relationship can have a significant influence on therapeutic outcome, the mindfulness literature in Western psychology does not often devote much attention to this fact. This seems particularly confusing when considering that within Buddhism, the relationship between mindfulness

student, teacher, and *sangha* is considered an essential, perhaps necessary, part of a Buddhist's journey towards cessation from suffering. As a result, it seemed significant to revisit the importance of the fact that the mindfulness-based interventions themselves, do not occur in a vacuum, but are enacted within a *relationship* between two connected human beings, the psychotherapist and the client.

The importance of integrating multicultural considerations as a part of this conceptual model was found to be of significance as a review of the mindfulness-based literature revealed that there has been little attention given to the inherent compatibility between Buddhist ethics and the multicultural competency standards of clinical psychologists and other mental health practitioners. In addition, a review of the literature found that few to none of the outstanding mindfulness-based therapies discuss how multicultural considerations can be integrated with their approaches. Perhaps this occurs because multiculturally competent practice is implied, however, neglecting to include this important topic can convey a message that issues of multiculturalism, diversity, and social justice are unimportant. As a result, this model is distinct from other mindfulness-based therapies in that it specifically incorporates multicultural considerations and attempts to encourage multicultural competency, continual multicultural conceptualization, and facilitates clinician awareness of one's role as a social justice advocate.

Third, this conceptual model for a mindfulness-informed psychotherapy encourages clinicians to develop a competency in mindfulness through the development of their own formal mindfulness practice. At times the mindfulness literature presents differing opinions and views concerning the importance of the clinician's own

mindfulness practice. However, given the review of the Buddhist literature on mindfulness practice, it seems as though an individual's formal mindfulness practice is essential to being able to model and communicate an understanding of the philosophies and strategies to another individual. Therefore, clinicians wishing to use this model are encouraged to engage with their own mindfulness practice as often as they have the opportunity, whether by attending workshops or retreats, or practicing silently at home several times a week. In many respects, clinicians are invited to view this conceptual model to be a mindfulness practice itself. The interconnected and interdependent nature of the model itself offers a continual reminder and challenge that the clinician attend to each present moment, just as it is, without judgment, and to remain open to the intention to be awake within the therapeutic process.

Finally, this conceptual model offers a unique contribution to the current body of mindfulness literature because it is the first such model that has attempted to conceptualize a mindfulness-informed psychotherapy. In particular, this conceptual model tries to connect the clinician with the hypothesized mechanisms of change within mindfulness-based interventions and how they may be useful in addressing particular processes of psychopathology that cross multiple diagnostic categories, such as emotion regulation, experiential avoidance, increased physiological arousal, and rumination. The theoretical implications of this conceptual model may include helping researchers and clinicians imagine what a mindfulness-informed psychotherapy practice might look like in session with a client, based upon a specific diagnostic issue or presenting problem.

Overall, this model provides a general framework from which the therapist can adapt their integration of Western psychotherapy and Buddhist oriented approaches very

specifically based upon the mechanisms of psychopathology that the clinician and therapist collaboratively determine are particularly salient. This framework was created in this general manner, rather than more specifically, with intentionality, as there remains the possibility that there is no one right way to administer a mindfulness-based intervention in treatment, for ironically, from a Buddhist perspective, this would be a way in which the therapist or client attempts to control or change an aspect of experience. For example, when thinking about what mindfulness-based intervention or approach to use when applying this model, the clinician will need to understand how to implement the mindfulness practice and exercises, maintain an awareness and consideration of what mechanism of psychopathology each particular mindfulness practice might be addressing, and balance all of this with a conceptualization of what unique tendencies the client may have for self-judgments, attempts to control their experience, or avoidance and thought suppression. Based on these variables, a clinician and client may work together to collaboratively choose a particular intervention that may be more specific to that client. For example, a client who struggles with intense self-judgment may benefit from loving-kindness practices, while someone who struggles with depressive rumination may benefit from practicing mindful awareness in order to work towards decentered awareness. It is the hope of this model that by the end of the clinician's work with the client, the client will have learned the mental and emotional mindfulness tools that they can utilize at any time, essentially alleviating their own suffering with the skills that they have learned.

### **Limitations**

Despite the flexibility this conceptual model offers, a limitation of this conceptual model is that it does not expand upon what this conceptual model looks like in session

when a therapist uses mindfulness and Buddhist oriented approaches to treat specific clinical issues. At the same time, this model does not contain specific illustrations of how a therapist and client could collaboratively modify this model in accordance with unique therapist factors, such as therapist competency with mindfulness, overall experience level as a clinician etc., or client specific factors, such as personality style, diagnosis, motivation for change, and treatment goals, among others. An example of how a therapist specific factor may influence this model is that a therapist who has more experience with mindfulness will be more familiar and comfortable with communicating and modeling the mindfulness strategies utilized as a part of the therapeutic process and interventions. An example of how a client specific factor might influence this model might be evidenced in how therapy may have to be modified for an individual based on a diagnostic factor, such as a traumatic brain injury. In this instance, rather than emphasizing an insight-oriented approach to learning mindfulness, the client and therapist may collaboratively determine that the client may benefit from learning via a more behavioral approach to the mindfulness practices.

Therefore, this conceptual model requires further development in order to be an actualized product. More specifically, prior to publication of this model, it may be helpful to expand upon what specific mindfulness interventions would be useful for a particular process of psychopathology, such as identifying a number of mindfulness-based interventions or therapy approaches that might be helpful for a client presenting with patterns of emotional avoidance, in comparison to a client who presents with stronger patterns of rumination. The final product would also include additional information relating to how unique therapist and client specific factors and an interaction

of other factors may impact or alter how this conceptual model may appear in session. The final product would also include examples of mindfulness-based practices and offer references to appropriate resources that may prove informative. Another limitation of this model is that it does not any specific case conceptualizations that would be beneficial in illuminating how this model could operate as a mindfulness-informed psychotherapy. As such the final product would include an example case conceptualization.

A further limitation of this conceptual model remains in the reality that this model remains empirically untested. As this is an original model that may offer a framework for clinicians seeking to practice a mindfulness-informed psychotherapy, it offers immense potential for future research. Future research may explore the applicability and utility of this model in the treatment of specific clinical issues, whether by diagnostic category or by a specific psychopathological process. It may also be helpful to empirically investigate the connection or disconnection between the original Buddhist psychology concepts with Westernized mindfulness-based interventions. Next, future mindfulness research should attempt to evaluate the impact of the therapeutic relationship and the clinician's own mindfulness practice on treatment outcomes as a part of a mindfulness-informed psychotherapy model. This research is significant because it remains unclear within the Western mindfulness literature as to whether or not factors related to the therapy relationship, therapeutic alliance, working alliance, or therapist specific factors, such as therapist mindfulness practice, have a positive impact on therapeutic outcome.

### **Resource Guide Development**

One purpose of the development of this conceptual model was to inform the development of a resource guide for clinicians containing appropriate sources relevant to

mindfulness-based approaches, practices, and interventions in psychotherapy. A resource guide may be a beneficial supplement to this conceptual model for clinicians who do not have much experience with mindfulness or mindfulness-based interventions and are seeking to increase their competency in this area. This project may be easily undertaken by the author or by another student seeking to complete their dissertation project. It is suggested that a web-based format be considered for development of this guide. A web-based resource guide would increase the accessibility of this information to a broader audience of mental health practitioners who could benefit from an improved understanding of what aspects of mindfulness-based interventions are most important to attend to in clinical settings.



## Appendix

### A Conceptual Model of Mindfulness in Psychotherapy for Clinicians

The conceptual model presented represents a framework from which all clinicians at all levels of training with mindfulness and mindfulness-based interventions may conceptualize how to use mindfulness and mindfulness-based interventions in psychotherapy, providing the foundation for a mindfulness-informed psychotherapy. This model attempts to integrate the Buddhist psychological perspectives that strive for and support the development of happiness, healing, and the cessation of suffering with a Western psychological understanding of how and why healing relationships, such as psychotherapy are helpful.

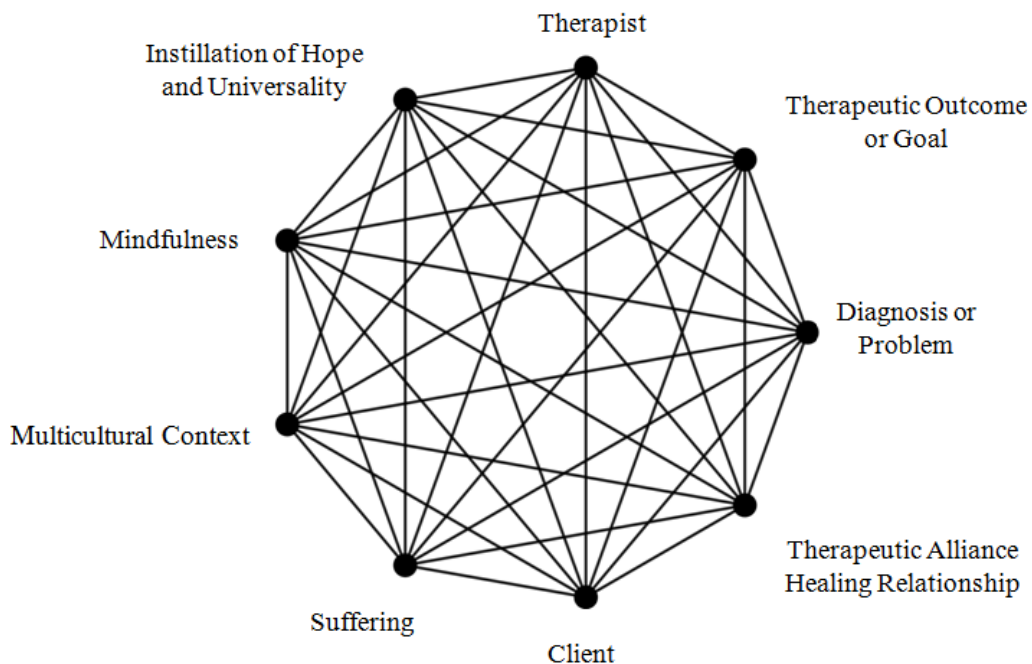
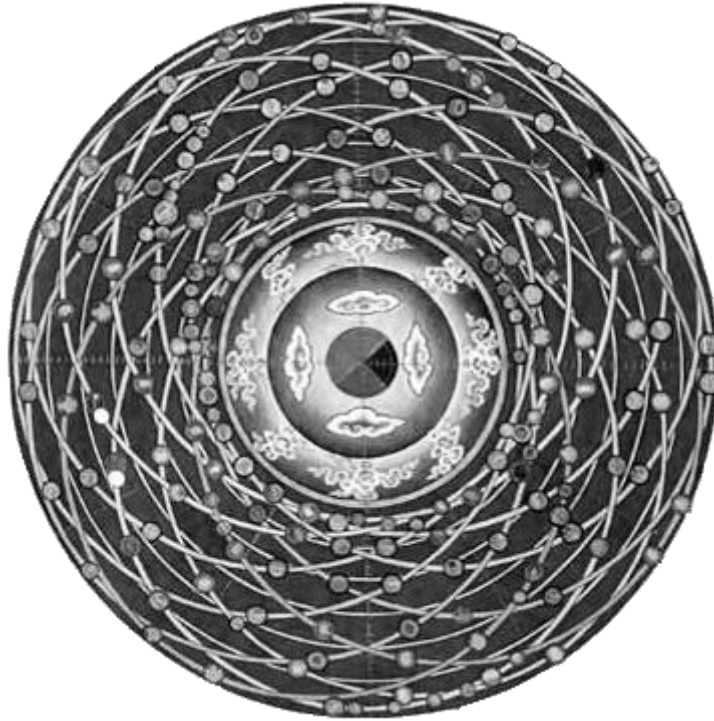


Figure 1. A conceptual model of mindfulness in psychotherapy.

The three dimensional representation of this model, as shown above in *Figure 1.*, was inspired largely from a metaphor taken from Buddhist philosophy known as Indra's net (See *Figure 2.*).



*Figure 2.* Tibetan mandala incorporating Indra's Net motif.

The metaphor of Indra's net is used to illustrate several important Buddhist concepts, including emptiness, dependent origination, and most importantly for our purposes, interpenetration. A particularly succinct explanation of Indra's net can be taken from Brook (2009), who writes about how Buddhism uses the image of Indra's net to describe the interconnectedness of all things. He writes the following:

"When Indra (king of the gods in Hindu mythology) fashioned the world, he made it as a web, and at every knot in the web is tied a pearl. Everything that exists, or has

ever existed, every idea that can be thought about, every datum that is true--every dharma, in the language of Indian philosophy--is a pearl in Indra's net. Not only is every pearl tied to every other pearl by virtue of the web on which they hang, but on the surface of every pearl is reflected every other jewel on the net. Everything that exists in Indra's web implies all else exists.(p. 22)

As illustrated by the metaphor, the concepts of interpenetration and interconnectedness express the idea that everything in this universe contains everything else, as observed in the reflections of all the other pearls within just one pearl on the net. And yet at the same time, each individual pearl on the net is a universe to itself, unique, and not to be confused by the other pearls in the net. Just as with Indra's net, this conceptual model acknowledges the interconnectedness and interdependence of various equally important ongoing processes and constructs within the psychotherapy relationship. As such, it is important to view this model as fluid and dynamic and to recognize that the very nature of this model challenges the clinician to be mindful and pay attention to and awaken to what is unfolding in the present moment.

The spokes that appear on the star polygon representing the "Indra's net of psychotherapy" in *Figure 1* were selected in an attempt to coherently conceptualize the aspects of healing and healing relationships that permeate both Buddhist psychology, as outlined by the Four Noble Truths and the Eightfold Path, and the Western psychological literature. These spokes include: the therapist, the client, the therapeutic alliance, the multicultural context, the common human experience of suffering, a diagnosis or presenting problem, mindfulness and mindfulness-based interventions, universality and the instillation of hope, and the therapeutic outcome, whether that may be improved

client well-being or a healthy psychological adjustment, among other potential outcomes. However, just because they are denoted by this model as "spokes" on a wheel, they are in fact much more flexible than having a fixed place within this "net," and at times, they will shift into or out of greater focus dependent upon timing, need, and the therapist's clinical judgment. However, they are all given equal status in terms of their importance and significance because they should and can be occurring and attended to at all times; they are viewed as necessary ingredients for effective utilization of mindfulness and clinician mindful presence in psychotherapy. The flexibility and flow within this model is meant to allow the clinician to quickly adapt to client needs, modality (group or individual), diagnostic issue, the dynamics of the therapeutic relationship and strength of the therapeutic alliance, all within the context of the conceptualization of the client's problem.

First, it is helpful to note that this conceptual model is intended to facilitate evidenced-based practice in psychology. Evidenced-based practice in psychology is defined by the American Psychological Association Task Force on Evidence-Based Practice (2006) as an integration of the best available research as to what works in psychotherapy with an application of the clinician's expertise within the context of each client's unique characteristics, culture, and preferences. Since the emphasis on the importance of evidenced-based practice began, there has been a gradual trend in the research that emphasizes the examination of treatment methods separately from the therapy relationship itself. Unfortunately, this trend has begun to impede collaboration between clinicians and researchers in designing the most efficacious approach to psychotherapy because it has pitted the treatment method and therapy relationship against

one another. This tendency to place greater emphasis on the significance of the treatment method is an emphasis which is also reflected within the mindfulness research (Norcross & Lambert, 2011).

As the mindfulness literature base has grown, recent research has begun to be heavily focused on breaking down the interventions into the processes of change. The purpose of this research is to determine what and why the techniques utilized in mindfulness-based approaches work the way they do, with the hope that clinicians can begin to use this knowledge to improve the efficacy of interventions. While this research is needed and is informative for clinical practice, it is unbalanced because it is examining the processes of change independently of the relationship aspects of the therapeutic environment. This is troubling, as both clinical and research findings highlight that the therapy relationship accounts for as much of the outcome variance as particular treatment methods (Lambert & Barley, 2002). Indeed, the success of therapy is not dependent on the treatment method alone but also factors that include the client, the therapist, the therapy relationship, and the context within which all are occurring (APA, 2006; Norcross & Wampold, 2010;). There is an inseparable context and practical interdependence of the relationship and the treatment methods. Given this intervention-oriented emphasis observed in the mindfulness research and literature, this model aims to provide balance and equal consideration of evidenced-based relationship and evidenced-based intervention. It is with this intention that clinical practitioners may find this conceptual model of mindfulness in therapy helpful. In sum, evidenced-based practice in psychology provides much of the rationale for acknowledging the therapist, the client, the

therapy relationship, the context, and the treatment methods, as equally important factors within this conceptual model.

## **Therapist**

The first spoke on the conceptual model begins with the *therapist*. The therapist is acknowledged first because this is the component of the model over which you, as the clinician, have the most control and ability to adjust. It is also emphasized initially based on the research indicating that therapist personal factors account for the second largest proportion of change in psychotherapy and the finding that 7% of the unexplained variance in psychotherapy outcome is attributable to the therapist alone (Lambert & Barley, 2002; Norcross & Lambert, 2011; Wampold et al., 1997; Wampold, Minami, Baskin, & Tierney, 2002). Therefore, some basic responsibilities and qualities of the successful psychotherapist are emphasized and necessary for this model to work, which include: (1) the ability to establish a relationship or alliance with the client. (2) The therapist must be able to make an accurate diagnosis and develop a conceptualization of the problem that explains the client's distress in order to alleviate the client's suffering. (3) The therapist must have an understanding or conceptualization of *how* a client will change in order to best select a treatment approach, including how to incorporate mindfulness in therapy. (4) The therapist must be actively developing competency with mindfulness-based interventions and preferably, be engaged in their own formal mindfulness practice.

**Relationship.** First and foremost, the therapist must be capable of establishing a relationship or alliance with the client, which is closely associated with the section related

to the therapeutic alliance and will be discussed in greater detail as a part of that spoke within this conceptual model. However, within the therapist's capacity to establish a relationship, there are certain interpersonal skills that therapists can cultivate within themselves which improve their ability to develop a strong therapeutic alliance with clients. Some of these interpersonal skills include: empathy, positive regard or affirmation, and congruence and genuineness. All of these skills should be viewed as ingredients and best employed interactively. Before we move on to the other responsibilities and qualities that a therapist must possess to effectively use this model, it may be helpful to discuss some of the interpersonal skills mentioned previously that are important for developing strong therapeutic relationships in psychotherapy.

*Empathy.* Empathy has been identified as an important component of healing relationships within both Buddhist psychology and Western psychology. In Buddhist psychology, the construct of empathy is encompassed by the term, compassion, which literally means "to suffer with." Interestingly, recent neuroimaging studies have found that regions of the brain activated in association with empathy, particularly within the limbic regions, are also correlated with positive emotions, such as self-compassion (Lutz, Brefczynski-Lewis, Johnstone, & Davidson, 2008). This is how His Holiness the Dalai Lama describes the Buddhist conception of compassion,

Compassion is an aspiration, a state of mind, wanting others to be free from suffering. It's not passive--it's not empathy alone--but rather an empathetic altruism that actively strives to free others from suffering. Genuine compassion must have both wisdom and loving-kindness. That is to say, one must understand that the nature of the suffering from which we wish to free others (this is

wisdom), and one must experience deep intimacy and empathy with other sentient beings (loving-kindness). (p. 52)

Within Buddhism, compassion towards self and others is viewed as an important requirement on one's path towards liberation from suffering and necessary for the cultivation of a happier, healthier life. This is largely because compassion is necessary in order to notice and acknowledge pain and suffering. This noticing and acknowledgement of suffering is what makes the healing process possible and opens the door for the ability to respond with warmth and sympathy (Neff, 2011).

Historically within Western psychotherapy, the notion that empathy was an important part of the therapeutic change process was first popularized by Carl Roger's client-centered psychotherapy (Elliot, Bohart, Watson, & Greenberg, 2011). Modern research continues to provide evidence supporting the importance of empathy in psychotherapy, even suggesting that therapist-to-client empathy is critical for effective mental health practice (Gerdes, Jackson, Segal, & Mullins, 2011). Further, empathy has been shown to account for about 9% of the variance in therapy outcome and typically even accounts for more outcome variance than the treatment methods themselves, which range between 1% and 8% (Elliot et al., 2011). In addition, emerging cognitive neuroscience research in the last decade suggests that there is even a biological basis for the human experience of empathy. According to the cognitive neuroscience research, empathy consists of three major neuroaffective subprocesses: (1) emotional simulation, which is the neurological process that mirrors the emotional elements of the other person's bodily experience, (2) perspective taking, one of the most commonly emphasized therapeutic approaches in the clinical psychology literature, involves the



therapist's attempt to understand the client's point of view and way of experiencing the world, and (3) emotion-regulation, the way in which people reappraise or soothe their own experience of distress at the other person's suffering, thus mobilizing compassion and helping behaviors for the person who is suffering (Elliot et al., 2011; Gerdes et al., 2011). This cognitive neuroscience research would seem to affirm the importance of utilizing the basic human biological capacity for empathy in healing relationships.

Therefore, based on both the Buddhist emphasis on the importance of compassion as necessary for healing and the evidence observed as to the significance of empathy in psychotherapy treatment outcomes, empathy is an important skill that therapists must develop in order to improve their effectiveness (Elliot, Bohart, Watson, & Greenberg, 2011). So how might a student therapist begin to develop empathy as a part of their clinical practice and what might an experienced clinician do to continue deepening their empathetic practice? First, it may be helpful to summarize important factors associated with empathy that have been identified in the literature. Empathic therapists are perceived as nonjudgemental and attentive. They also evidence skills in employing nonlinguistic and paralinguistic communication (i.e. posture and vocal quality, etc.) to convey empathy. Empathic therapists also frequently use appropriate emotion words to encourage the client's exploration in therapy. Further, the level of empathy experienced in the therapeutic relationship is influenced by the degree of similarity experienced between the therapist and client, client perception of the therapist as being open to conflictual feelings, and openness to discussing any topic (Elliot et al., 2011). Skilled utilization of empathy in therapy acknowledges that the clinician often has to tailor their empathic responses and level of empathy communicated to the client as appropriate for

the client's personality and context. It also implies that the therapist has a knowledge for knowing when and when not to respond to clients with empathy and to what degree (Elliot et al., 2011). As such, there are many different ways of expressing empathy in therapy, including empathic questions, conjectures, reflections, experience-near interpretations, and others. Further, there are three main modes of therapeutic empathy that involve developing empathic rapport, communicative attunement, and person empathy. Empathic rapport is promoted by the therapist conveying a compassionate attitude that expresses they are attempting to understand the client's experience. Communicative attunement is an on-going process the therapist engages in, in which one attempts to "attune" to the client's moment-to-moment communications and experience. Person empathy consists of the therapist attempting to understand what in the client's previous experiences has shaped their current understanding of the world that is shaping their present experience.

Second, it may be beneficial to integrate the aforementioned factors associated with empathy with a framework developed by Gerdes et al. (2011). Using this framework, practitioners and students can develop an empathetic practice with their clients that is largely based on the cognitive neuroscience research related to empathy. The three main components of this framework include: (1) the therapist's affective response to the client's emotions and actions, (2) the therapist's cognitive processing of the client's affective response and the client's perspective, and (3) the therapist's conscious decision making surrounding the choice of what, when, how, and why to take empathetic action (Gerdes & Segal, 2010). This framework appears remarkably compatible with the Buddhist conceptualization of compassion and shares parallels with

core tenets of cognitive-behavioral therapy because it asks the therapist to notice, investigate, and respond to the *emotions, thoughts, and behavior* of both oneself and the client. As such, this framework may be viewed as a mindfulness-practice in and of itself, aligning with the clinician's intention to open to the therapeutic process and offering a reminder to pay attention and simply notice what is happening in the here-and-now. For example, as the therapist practices communicative attunement with the client in session, the therapist may first notice that the client is exhibiting sad and tearful affect. Next, the therapist may quickly shift the focus of their attention inward, and identify what emotional response is being elicited by this sad and tearful affect. Then, the therapist can investigate their own internal thought process related to both the affect of the client and the therapist in the moment and connect this with the therapist's practice of person empathy, or their comprehension of the client's past and present experiences and context and how those factors are playing out for the client in the present. Finally, the therapist would integrate all of this information to inform their empathic response, further developing empathic rapport within the therapeutic relationship.

Third, the clinician seeking to deepen their empathetic practice with clients may find it quite helpful to develop a formal mindfulness practice that regularly incorporates compassion-based mindfulness exercises as a means to cultivate compassion and empathy for self and others. A growing body of Western psychological studies examining the construct of self-compassion or compassion based mindfulness interventions are beginning to demonstrate support for the efficacy of compassion in healing in psychotherapy in several areas, including improvements in psychological resilience (Neff & McGhee, 2010), self-esteem (Michalak et al., 2011; Neff, 2009; Neff

& Vonk, 2010), and self-reported well-being (Feldman, Greeson, & Senville, 2010; Joseph & Wood, 2010; Wood, Froh, & Geraghty, 2010). Given this evidence, it is possible that these practices may also be helpful in developing clinician therapeutic empathy and may even develop a type of clinician psychological resiliency which could prevent burnout. There are many traditional Buddhist practices that are centered around developing compassion towards self and others, including loving-kindness (*metta*) meditation and *tonglen*. Practitioners of these types of meditation often report feeling that they feel more open, accepting and understanding towards oneself, as well as towards others, and are often more forgiving of others' mistakes. At the same time, these positive emotions also offer comfort and safety during times of insecurity. There are many resources available on the internet and through a variety of Western mindfulness books on the topic to provide clinicians interested in these practices with further information.

***Positive regard and affirmation.*** The next therapist interpersonal skill identified as being particularly beneficial to therapeutic outcomes is known within Western psychology as positive regard and affirmation. In Buddhist psychology, these two constructs may be best encompassed by the concepts of warmth and acceptance. His Holiness the Dalai Lama (2011) describes the warmth and acceptance felt from positive regard, as the attitude behind compassion and also offers some insight as to how to demonstrate warmth and acceptance to others. He writes,

If you approach others with the thought of compassion, that will automatically reduce fear and allow an openness with other people. It creates a positive, friendly atmosphere. With that attitude, you can approach a relationship in which

you, yourself, initially create the possibility of receiving affection or a positive response from the other person. And with that attitude, even if the other person is unfriendly or doesn't respond to you in a positive way, then at least you've approached the person with a feeling of openness that gives you a certain flexibility and the freedom to change your approach as needed. The kind of openness at least allows the possibility of having a meaningful conversation with them. (p. 69)

As Jon Kabat-Zinn was adapting mindfulness as a part of Mindfulness-Based Stress Reduction, he noted that one of the attitudinal foundations of mindfulness, is the attitude of acceptance (Kabat-Zinn,2009). In Buddhism, acceptance is not discussed separately from mindfulness because it is a major component of how mindfulness is put into practice and is also cultivated by the mindfulness practice. In the mindfulness practice, acceptance is cultivated by allowing each moment to be just as it is, embracing it. It is in this embrace and acceptance of what is that actually alleviates suffering, rather than attempts aimed at resisting or avoiding reality. The mindfulness practice itself offers a reminder to be open and receptive to whatever it is that we may thinking, feeling, and experiencing, and rather than trying to impose our own ideas about what we should be thinking, feeling, or experiencing, instead we are to simply accept all of our experience, just as it is, right now. Simply, acceptance within the mindfulness practice is an openness and willingness to see things as they actually are in the present moment (Kabat-Zinn, 2003). Western psychological researchers have proposed that acceptance may be a useful alternative to the psychopathological mechanism of emotional avoidance, (which will be discussed in greater detail below). As a result, acceptance has become a

core therapeutic process in Acceptance and Commitment Therapy (Luoma, Hayes, & Walser, 2007) and Dialectical Behavior Therapy (Linehan, et al., 2002), where it is referred to as radical acceptance.

Interestingly, positive regard and affirmation in Western psychotherapy, which evolved from Carl Rogers' thoughts on the conditions necessary and sufficient for therapeutic change, capture the ideas of both warmth and acceptance as being key components of positive regard. For Rogers, positive regard is a "warm acceptance of each aspect of the client's experience" including both the negative and positive aspects of the client and their experiences (p. 225). Within Western psychotherapy, the mental health provider's ability to provide positive regard within the therapy relationship is significantly associated with therapeutic success. It is theorized that positive regard and affirmation creates a foundation within the relationship to introduce changes in the relationship or implement new interventions. Positive regard may also serve an important alliance building function to bridge diversity variable differences between the therapist and the client. It also serves important functions related to positive reinforcement for the client's engagement in the therapy process and the client's belief in his/her capacity to be engaged in an effective relationship, ultimately cultivating the client's tendency to want to achieve his/her potential. The primary way a clinician can communicate positive regard is in communicating a "caring, respectful, positive attitude that serves to affirm the client's basic sense of self worth" (Farber & Doolin, 2011). At the same time, just as with empathy, the therapist should be responsible for monitoring and adjusting the amount of positive regard conveyed, dependent upon the client and context. (Farber & Doolin, 2011).

***Congruence and genuineness.*** The last therapist interpersonal skills identified as beneficial to overall therapeutic outcomes involves congruence and genuineness, which are interestingly closely associated with mindfulness and often discussed within Buddhist psychology as genuineness and openness. In fact, from a Buddhist perspective, openness, honesty, and a genuine acknowledgement of reality is necessary for freedom from suffering. This is reflected in this quote attributed to Siddhartha Gautama, "When words are both true and kind, they can change the world" (p.92). Within Western psychotherapy, therapist genuineness with clients relates to the therapist's acceptance of and receptivity to experiencing whatever arises with the patient and a willingness to utilize that information during therapy. Congruence in therapy serves as a way to allow attachment or bonding to occur in therapy and guides behavior by modeling ownership of feelings within the therapy relationship. Forms of congruent responding in therapy might include self-disclosure, articulation of thoughts and feelings, opinions, questions, and feedback relating to client behavior. Congruent responses offer honesty and authenticity and are founded in the therapist as a real human being. Therefore, congruent responses are not disrespectful or insincere. A therapist can work to develop their skills with congruence by soliciting feedback from colleagues, supervisors, and clients (Kolden, Klein, Wang, & Austin, 2011).

**Conceptualization of the problem or diagnosis.** Secondly, just as with any form of psychotherapy, a therapist must be able to develop a conceptualization of the problem or diagnosis that explains the client's distress in order to alleviate the client's suffering. Many studies have shown that clinician adherence to a carefully constructed case conceptualization is predictive of treatment processes and outcomes (Eels &

Lombart, 2003; Crits-Christoph, Cooper, & Luborsky, 1988; Silberschatz & Curtis, 1993). The topic of case conceptualization and diagnosis will be discussed in further detail in the relevant section below.

**Conceptualization of how change will occur in therapy.** Third, the therapist must have an understanding or conceptualization of *how* a client will change in order to best select a treatment approach, including how to incorporate mindfulness in therapy. There are many factors that affect how a client changes, and this model as a whole will attempt to address all of these areas throughout the explanation of this model. As such, clinicians are encouraged to evaluate their understanding of the client and the client's context continually throughout the process of applying this model, so as to better conceptualize how change will occur in therapy. At the same time, clinicians are reminded to remain aware of the dynamic, ever fluctuating nature of how change may best be evoked in the therapeutic process maintaining the ability to be flexible and adapt to the client's context and needs. Although much of the *how* may be based on theoretical orientation, this model will hopefully provide clinicians with an understanding of how mindfulness promotes change in psychotherapy and will be discussed in greater depth in the mindfulness section.

**Therapist competency with mindfulness.** Finally, the therapist must be actively developing competency with mindfulness-based interventions and preferably be engaged in their own formal mindfulness practice. Within Buddhism, the model of teaching mindfulness has always been centered around students working with a more experienced practitioner with many more years of experience with mindfulness practice. It is argued that in order to guide another individual through their own journey with mindfulness that



one must be walking their own journey as well. This sentiment is echoed by the Dalai Lama, quoted as saying, "If you don't love yourself, you cannot love others. You will not be able to love others. If you have no compassion for yourself, then you are not able to develop compassion for others." In walking on one's own journey of mindfulness, or in the case of this quote, the path of self-compassion, the "teacher" will hopefully be able to understand or recognize issues that may arise as a part of the "student's" practice and be able to guide the student with progressing forward on their path because they have already been down the path. This model within Buddhism is not altogether dissimilar from the training model employed by Western psychotherapy.

When considering psychotherapy independently of mindfulness for just a moment, the research on evidenced-based relationships suggests that therapist competence accounts for around 6-9% of the variance in treatment outcomes. Further, the research also suggests that therapist allegiance to their own belief in the efficacy of treatment may account for almost 70% of the variance in treatment outcomes (Wampold, 2001). Mental health professionals spend years in classes and under supervision learning the art of therapy, so it would follow that it is also important for therapists interested in utilizing mindfulness as a part of their therapeutic practice to be developing a competency with mindfulness by progressing on their own independent journey with mindfulness. That same journey may also reinforce the therapist's allegiance to the efficacy of the use of a mindfulness-perspective or mindfulness-based interventions, hopefully increasing the efficacy of the therapy as a result.

Consequently, developing a competency with mindfulness may mean seeking out a more experienced peer or colleague from which to learn, attending mindfulness

workshops or retreats, reading the literature, as well as learning how to incorporate and benefit from what mindfulness has to offer the therapist. There are many resources available to clinicians at this time that can facilitate one's own mindfulness practice, some of which will be listed at the end of this model. Also, a more detailed understanding of what mindfulness is and how it works will be described in the appropriate section below. From a Buddhist perspective, having one's own formal mindfulness practice makes one a better therapist because they have had formal practice paying attention. Improved attentional capacity could theoretically help the therapist to be open and attuned to the timing of the processes within the therapy relationship and better able to intuitively estimate when it is appropriate to utilize the interpersonal skills known to be associated with good therapists, including genuineness, openness, empathy, and warmth. Not only would Buddhism propose that it will improve your therapy skills but that it will have a positive effect on one's personal life. As mindfulness interventions in clinical populations have exhibited positive mental health improvements and reduction in stress, clinicians would also experience similar benefits. Mindfulness practiced in the clinician's personal life can offer a source of positive-self-care, an increased and renewed sense of well-being, and potentially offer a buffer from the negative effects of compassion fatigue.

### **Therapeutic Alliance and a Healing Relationship**

The experience of a healing relationship is emphasized as of utmost importance within Buddhism and a necessary part of the journey to alleviate suffering. This is evidenced by its prominent inclusion in the three phrases typically repeated by those proclaiming that they desire to officially become Buddhist. Known as "taking refuge in the Three Jewels," the three phrases are "*May I take refuge in the Buddha. May I take*

*refuge in the Dharma. May I take refuge in the Sangha.*" These refuges are what a Buddhist references when needing guidance along their journey to alleviate suffering. The third refuge, *sangha*, is translated into English as the word "community." The *sangha* is the community of individuals who have perhaps attained enlightenment, or freedom from suffering, and may assist other human beings in also doing the same. The emphasis on requiring a *sangha* as necessary along the path to freedom from suffering stresses the importance of developing loving, compassionate, emotionally intimate relationships with others as a part of this journey. Many Buddhists argue that for most people, it is impossible to attain freedom from suffering independent of other people because we do not have independent existences, but rather interdependent ones. Just as relationships can be the key to alleviating suffering, from a Buddhist perspective, conflicts with other human beings can also be the source of one's suffering. Buddhism encourages practitioners to attempt to connect with others in meaningful ways because they believe that it is through this human connection that conflict with others is reduced, resulting in decreased suffering that arises from poor communication in relationships (Gyatso & Cutler, 2009).

Dzogchen Ponlop Rinpoche (2008) writes:

From a Buddhist point of view, relationship is a great mirror....When we sit by ourselves, it's easy to enjoy our mental games, fantasies, ego trips, and so forth. We can go on and on without any problem. But try that with a friend, who acts as your mirror. The mirror will reflect who you are and your ugly ego trips. At the same time, a mirror is very neutral--it just reflects. It doesn't take any sides....In this mirror, we discover ourselves--our tendencies, our weaknesses, and our

strengths. We discover our good qualities as well as our negative qualities...The mirror of relationship becomes a very precious teaching for us to discover who we really are and where we are on the path and in the world altogether....If we can practice while being in this present moment, relationship can become a path and the mirror a great teacher.

Further, Sharon Salzberg illuminates the unique place that a psychotherapy relationship can offer those on a spiritual path when describing this "mirroring relationship" in a 2012 interview with the Omega Institute:

It can certainly have a place. Even on the spiritual path, we have things we'll tend to cover up or be in denial about. In the past, training in meditation would be done with a teacher, often in a very close relationship. They would sometimes help and support you by challenging you or provoking you to see something that you weren't seeing. Since most of us don't practice in that way today, a psychologist can help play that role.

Just as in Buddhism, since the inception of psychotherapy, it has also adhered to the idea that a healing relationship is necessary for the alleviation of suffering or successful treatment outcomes. In modern Western psychotherapy, the importance of a healing relationship is reflected in the research suggesting that the therapeutic relationship accounts for 12% of variance in psychotherapy outcomes (Norcross & Lambert, 2011). The therapeutic relationship is not to be confused with the therapeutic alliance, however, so it may be helpful to briefly demarcate the difference between the two, as the constructs are often confused. The therapy relationship is composed of

several elements that the therapist enacts, such as empathy, responsiveness to the client, and creating a safe therapeutic space. The alliance, on the other hand, is a way of conceptualizing what has been achieved as a result of the appropriate use of these elements. According to Horvath, Del Re, Fluckinger, & Symonds (2011), fostering the therapeutic alliance is not at all separate from the interventions that therapists utilize in therapy. Instead, the alliance is an inseparable part of everything that happens in therapy.

Many definitions of the therapeutic alliance have been posited in the past. The frequently cited definition of Bordin's (1994) working alliance seems particularly apt for the purposes of this conceptual model because there is some evidence to support it in the evidenced-based relationship literature (Norcross & Lambert, 2011). Bordin (1994) describes the working alliance in therapy as the achievement of a collaborative stance in therapy. This stance is built upon an agreement between therapist and client as to the therapeutic goal and consensus on tasks that compose the work conducted in therapy. It concludes that all of these components of the working alliance are dependent upon and cultivate a bond between the therapist and client.

Goal consensus and collaboration on the tasks within therapy are also shown to have a moderate effect on psychotherapy treatment outcomes. Therefore, therapist's utilizing this model should take care to follow Shick Tryon and Winograd's (2011) recommendations for establishing goal consensus, which include (1) establishing agreement on the goals between therapist and client; (2) the therapist taking care to explain the nature and expectations of therapy and the client's resultant understanding of this information; (3) goals are discussed and the client believes that the goals are clearly specified; (4) the client is committed to the goals of therapy; (5) the therapist and patient

experience congruence on the origin of the client's problem and on who or what is responsible for the solution to the problem. Collaboration should be encouraged as a part of this model of therapy by educating the client about the importance of their contribution to the success of therapy and by encouraging feedback, insight, and reflections from the client throughout the therapy process. At the same time, the therapist can work to engage the client in updates about their motivation to change, current functioning and social support, as well as providing them with feedback about their progress (Shick Tyron & Winograd, 2011).

Additionally, it may also be important to distinguish that when the modality of therapy is group therapy, the therapeutic alliance, while still important, is deemphasized and more attention is given to group cohesion. Cohesion is a common factor identified in the literature as reliably associated with group outcomes when that outcome is related to a reduction in symptom distress or an improvement interpersonal functioning (Burlingame, McClendon, & Alonso, 2011). As a result, if you are utilizing a mindfulness-based approach as a part of group therapy, it is important that you, as the group facilitator are working to actively foster group cohesion and perhaps utilizing assessment measures throughout the group process to assess group cohesion.

## **Client**

Buddhism places a very strong emphasis on the unique journey of each individual in their path to be free from suffering, instilling a hope that human beings are capable of opening the pathway to freedom from suffering entirely on their own through their

mindfulness practice. The Vietnamese Zen monk, Thich Nhat Hahn (1975) describes this hope in his book *The Miracle of Mindfulness*:

Mindfulness is the miracle by which we master and restore ourselves...mindfulness is at the same time a means and an end, the seed and the fruit. When we practice mindfulness in order to build up concentration, mindfulness is a seed. But mindfulness itself is the life of awareness: the presence of mindfulness means the presence of life, and therefore mindfulness is also the fruit. Mindfulness frees us of forgetfulness and dispersion and makes it possible to live fully each minute of life. Mindfulness enables us to live (p.14-15).

His Holiness the Dalai Lama also offers similar wisdom surrounding the "certain inner discipline" that arises through regular mindfulness practice:

...We can undergo a transformation of our attitude, our entire outlook and approach to living...one begins by identifying factors which lead to happiness and those factors that lead to suffering. Having done this, one sets about gradually eliminating those factors which lead to suffering and cultivating those which lead to happiness. (p. 15)

This capacity for self-healing is reinforced by the Western psychotherapy finding that, overall, the client's contribution to psychotherapy, including the severity of their disorder, explains around 30% of the variance observed in psychotherapy outcomes (Norcross & Lambert, 2011). Therefore, it is very important for the therapist to attend to the client-specific factors that may impact the type of interventions and therapeutic stance

that you assume throughout the psychotherapy process. Some things that may be useful to pay attention to in particular over the course of treatment include the client's personality, multicultural/diversity variables, interaction between therapist and client multicultural/diversity variables, situation and client context, diagnosis, identified problem, coping style, level of distress and impairment in functioning, motivation and readiness for change, risk factors for relapse, protective factors, learning style, and attachment style. The more experienced a clinician becomes with utilizing mindfulness-based interventions and a mindfulness perspective with clients, it may become easier to identify particular aspects of mindfulness that might be helpful and concepts that may be particularly impactful for that person.

### **Suffering**

Suffering, which is closely linked to the client's diagnosis, distress, or presenting problem, is identified separately in acknowledgment that suffering is common to all human experience. This acknowledgment works to foster compassion and empathy within the therapist for the client's suffering. It also encourages the therapist to strive towards decreasing power differentials in the therapy relationship through exploration of the commonalities in shared experiences of human suffering.

Next, in order to make more informed choices about which mindfulness-based interventions to utilize in therapy, it may be useful to understand more about the Buddhist conceptualization of suffering. In Buddhism, suffering, or *dukkha*, is the first of the Four Noble Truths, and could be translated also as stress, anxiety, or dissatisfaction. There are several different categories of *dukkha*. The first is physical suffering or pain, associated



with illness, aging, and dying. The second is the anxiety or stress evoked when humans try to attach or hang on to things that are constantly changing. The third category of *dukkha* is a basic dissatisfaction that pervades all of life simply due to the reality that life is impermanent and always changing. It could also be described as a resentment that builds because situations in life never seem to add up to the expectations we have for them. It may be useful for the therapist to have an understanding of these various types of suffering because various mindfulness-based interventions may be better suited than others in addressing particular forms of suffering.

### **Diagnosis or Problem**

Diagnosis and case conceptualization should be a collaborative process undertaken with the client diagnostic classification system that is appropriate for the professional's setting. The diagnosis, distress or presenting problem is elucidated and agreed upon in a collaborative manner through therapist exploration of the issue with the client and can be based upon the clinician's preferred theoretical orientation. Diagnosis, distress, or presenting problem can be a significant piece of the therapist's conceptualization and is essential for being able to inform mindfulness relational approaches to treatment, as well as mindfulness-based interventions that may be helpful. It is also significant because there are several mechanisms commonly observed in psychopathology that can be addressed by different aspects of mindfulness-based interventions. Several commonly observed processes of psychopathology observed in the literature that may benefit from being addressed by a mindfulness-based intervention include: experiential avoidance, rumination, emotional dysregulation, increased physiological arousal, deficits of executive functioning, and cognitive dysregulation.

These processes of psychopathology will be discussed in further detail in the subsections following this one.

The idea of developing a conceptualization of the client's presenting problem is quite consistent with core tenets of Buddhism. This is largely because Buddhism offers a way in which to conceptualize human suffering and how to alleviate it using four interconnected propositions known as the Four Noble Truths. They contain the assertion that: (1) life is suffering, whether this may mean physical or biological suffering or pain, such as sickness, aging, or death. This may also mean emotional and psychological forms of suffering and pain, such as despair, sorrow, or grief. It may also be referring to existential pain, which is related to a generalized disillusionment with life when it does not go the way one may have wanted. (2) Suffering is caused by craving and is in reference to three things: 1) craving for sensual pleasure or gratification, 2) craving for existence, which drives us to new experiences and life, and 3) craving for non-existence, which drives us to destroy, deny, reject, or avoid anything in life that is unpleasant or unwelcome. (3) Suffering can have an end and be alleviated because craving can be extinguished. (4) There is a path, called the Noble Eightfold Path, which leads to the cessation of suffering. This path is composed of (1) right understanding/view, (2) right resolve, (3) right speech, (4) right action, (5) right livelihood, (6) right effort, (7) right mindfulness, and (8) right meditation. (Keown, 2000).

**Experiential avoidance.** Experiential avoidance is a process of psychopathology that occurs when an individual is unwilling to remain in contact with particular personal experiences. These experiences may range from bodily sensations to thoughts, feelings, and memories. However, this unwillingness to connect with these personal experiences

is extended into the individual actively trying to alter the form or frequency of those experiences, as well as the contextual situations that are associated with them. The term experiential avoidance also encompasses terms acknowledged as psychopathological process by a variety of theoretical orientations, such as emotional avoidance or cognitive avoidance and thought suppression, as these may be more specific in particular instances, rather than the more general expression of experiential avoidance. However, across all of these terms, it is evident that the individual is engaged in trying to escape, avoid, or modify, whatever is happening to, within, or around them. Experiential avoidance is observed in many different forms of psychopathology and it may be that experiential avoidance results in psychopathology itself, as many of the behaviors associated with psychopathology are forms of unhealthy forms of experiential avoidance (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). In other words, experiential avoidance may actually increase the intensity, frequency, severity, and accessibility of those experiences or negative emotions (Gratz & Tull, 2010; Hayes et al., 2006). This phenomena is important to note as emotional avoidance, in particular, may actually place one at risk for emotional dysregulation as well, and has been implicated in maintaining and sustaining clinical symptomology for a wide range of psychological disorders (Gratz & Roemer, 2004). These include depression (Teasdale et al., 2002), anxiety (Hayes-Skelton et al., 2012; Treanor, 2011; Soenke, Hahn, Tull, & Gratz, 2010), substance use disorders (Zgierska et al., 2009), posttraumatic stress disorder (Follete & Vijay, 2009; Thompson & Waltz, 2009), and eating disorders (Baer et al., 2005).

**Rumination.** Rumination, or a rumination response style, is the tendency to focus repetitively on symptoms of distress, as well as possible causes and consequences

of these symptoms without engaging in active, productive problem solving that results in changing the circumstances surrounding these symptoms (Nolen-Hoeksema, Stice, Wade, & Bohon, 2007; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). It has also been referred to as a process of thinking perseveratively about one's feelings and problems, rather than thinking of the specific content of one's thoughts and is often associated with a variety of maladaptive cognitive styles, including hopelessness, pessimism, self-criticism, dependency, neediness, and neuroticisms, among others (Nolen-Hoeksema, et al., 2008). Often, individuals engage in this maladaptive response style because they believe it will solve their problems, but instead, an individual who is ruminating undergoes a deteriorated ability to solve problems.

Unsurprisingly, rumination has been implicated in the psychopathology associated with anxiety, eating disorders, and substance abuse disorders (Aldao, Nolen-Hoeksema, & Schweizer, 2010) and is the form of self-focused attention that is most strongly and consistently related to depressive symptoms (Nolen-Hoeksema et. al., 2008). According to the research, the process of rumination actually exacerbates and prolongs the distress associated with depression in particular because it enhances the effects of depressed mood on thinking, as a result, it becomes more likely that the individual will continue to use the negative thoughts and memories activated by their depressed mood to understand their present circumstances. Further, because one of the effects of rumination is increased pessimism and fatalistic thoughts, it can interfere in effective problem solving. Finally, rumination can actually lead to an increase in stressful circumstances because it can interfere in the person's ability to engage in behaviors that will be helpful to them. For example, an individual who chronically ruminates may eventually lose

social supports around them, which can in turn result in increased depression. Due to this combination of the effects of rumination, depression often becomes more severe over time and evolves into multiple episodes of depression (Nolen, Hoeksema et al., 2008; Williams, Teasdale, Segal, & Kabat-Zinn, 2007).

**Emotional dysregulation.** Problems with emotional regulation characterize more than 75% of the diagnostic categories included in the DSM-IV-TR (Werner & Gross, 2009). Generally human emotions offer an adaptive response to problems and opportunities that humans encounter in our environment and promote survival. However, emotions become problematic, or dysregulated, when they are the wrong type of emotion, they occur in an inappropriate context, are too intense, or last too long. When emotions are problematic, the individual often tries to influence or change their emotional reaction (Werner & Gross, 2009). Generally, emotion dysregulation can be divided into two categories, (1) difficulties modulating emotional experiences and expressions and (2) frequent or automatic attempts made by the individual to control or suppress emotional experience or expression, essentially trying to prevent the emotion from being experienced at all (Cicchetti, Ackerman, & Izard, 1995). The characteristics of emotion dysregulation are implicated in several types of psychopathology that are characterized by deficits in emotion regulation. Some of these disorders include generalized anxiety disorder, panic disorder, social anxiety disorder (Mennin, Heimberg, Turk & Fresco, 2005; Cox, Swinson, Shulman, & Bourdeau, 1995), as well as posttraumatic disorder (Roemer, Litz, Orsillo, & Wagner, 2001). Other disorders also characterized by emotion dysregulation include depression (Flett, Blankstein, & Obertynski, 1995), borderline personality disorder (Wagner & Linehan, 1999), and eating disorders (Westen &

Harnden-Fischer, 2001). In the treatment of psychiatric disorders in which emotional dysregulation may be prevalent, such as generalized anxiety disorder, attention to emotions themselves has been hypothesized as an important variable in the emotion regulation process. As a result, mindfulness-based approaches to psychotherapy and intervention may be poised to address emotion dysregulation in this regard by utilizing interventions that facilitate the client's ability to pay attention to their emotions (Mennin et al., 2005).

**Increased physiological arousal.** Increased physiological arousal is equated with the biological alarm systems that are wired into the human body and help prepare the body to react physically and mentally to potentially harmful circumstances. Particularly with an anxiety response, a healthy individual experiences increased muscle tension, activation of the sympathetic and parasympathetic nervous systems, followed by an increase in blood pressure, heart rate, respiration, sweat gland activity, and gastrointestinal and bladder activity. Most humans experiences these things as feeling tense and flushed, heart palpitations, increased perspiration, shortness of breath, and in severe instances, a need to defecate or urinate. Moderate levels of anxiety have an important survival function in human beings because they direct the person's attention to the perceived danger and motivate a responding coping behavior. However, when anxiety reaches severe levels, it overwhelms the person physiologically and results in mental and emotional disorganization, which is counterproductive to the person's ability to enact an appropriate coping behavior (Hoehn-Saric & McLeod, 2000). This can become particularly problematic for the individual when they begin to misperceive the reason why they experiencing the anxiety. For example, an individual who is

experiencing a panic attack prior to public speaking may indicate that they feel like they are about to have a heart attack and request to be taken to the emergency room.

Therefore, it is hypothesized that mindfulness may instruct individuals how to pay attention to their physiological reactions in their body and connect the reaction to the appropriate congruent thought or feeling associated with that experience.

**Deficits of executive functioning and cognitive dysregulation.** It is largely held that deficits in organization and efficient management may be attributed to deficits in executive functioning. This would encompass such cognitive abilities as working memory, one's ability to shift attention, inhibition of impulses, susceptibility to distraction, as well as organizing, planning, and the ability to self-monitor and regulate one's emotions and behaviors. Deficits of executive functioning are implicated across a variety of mental health diagnoses, including cognitive developmental disorders, psychotic disorders, affective disorders, conduct disorders, neurodegenerative diseases (such as Parkinson's), and acquired brain injury. At present, there is very limited research in exploring the effectiveness of mindfulness-based approaches and interventions as supplementary interventions to address deficits of executive functioning. However, it is hypothesized that as mindfulness is wholly concerned with the basic human capacity to pay attention and developing this ability further, it may be uniquely capable to address deficits observed in individuals with attention deficit/hyperactivity disorder and other forms of executive dysfunction. Further, mindfulness activates regions of the brain that are implicated as areas of dysfunction, particularly for individuals with attention deficit/hyperactivity disorder, including the prefrontal cortex, amygdala, cerebellum, and the basal ganglia (Zylowska, Smalley, & Schwartz, 2009). Mindfulness-based

interventions as applied to the treatment of ADHD has only more recently been proposed in the mindfulness literature as a potential complementary treatment for ADHD.

Preliminary studies suggest that mindfulness interventions may be a beneficial supplemental treatment intended to address deficits of executive functioning with attention deficit/hyperactivity disorder (Tang, et al., 2007; Zylowska, Smalley, & Schwartz, 2009), co-morbid attention deficit/hyperactivity disorder and mood disorders (Hesslinger et al., 2002; Zylowska et al., 2008), psychotic disorders (Gaudiano & Herbert, 2006), developmental disabilities (Hwang & Kearney, 2013, Singh, et al., 2011), and Parkinson's disease (Fitzpatrick, Simpson, & Smith, 2010).

### **Multicultural Context**

Further, it is important to be reminded of the ethical obligation to engage in multiculturally competent diagnosis, conceptualization, and interventions with our clients (APA, 2010). Every individual exists with certain sociopolitical, historical, and economic contexts that influence the behavior of ourselves and our clients. Clinicians must remain cognizant of how the intersection of variables such as age, gender, sexual orientation, race, ethnicity, national origin, socioeconomic status, educational attainment, religious/spiritual orientation, and ability status can enhance the understanding and treatment of our clients. Given the role and impact of psychologists in society, psychologists are in a unique position, capable of promoting issues of social justice (APA, 2002). Therefore, it is important to identify the intersection of these variables as a part of case conceptualization and diagnosis, as well as have the ability to identify and acknowledge issues related to bias and prejudice, within the medical model of diagnostic classification used in Western psychotherapy, within the practitioner themselves, and the



systems and institutions in which both the client and therapist. Even further still, it is important to acknowledge that the process of "diagnosis" itself involves mental health professionals having the power to label a behavior pathological as opposed to normative behavior and that the resultant label can carry extraordinary weight within dominant culture (Ballou, Hill, & West, 2008; Brown, 2010; Evans, Kincade, & Seem, 2011). Diagnosis is a grave responsibility wherein the social context surrounding the client's distress should be carefully examined by the therapist prior to making a specific diagnosis because sexism, racism, heterosexism, ableism, classism, and ageism can all be found embedded in current diagnoses (Caplan, 1999; Kaplan et al., 1983). Further, diagnosis goes beyond a simple label and places the person within a broader societal hierarchy in a manner that is often immovable and may subject the person to exclusionary dominant attitudes toward the normative behaviors of a marginalized and oppressed social group. Diagnosis also frequently neglects attending to the sources of strength, resilience, and resistance present in a client's life, culture, and immediate environment. Therefore, the culturally competent therapist should be encouraged to think diagnostically through a contextual lens that acknowledges issues of power, oppression, and social control, while also examining client distress within the context of strength, resilience, and resistance. This simply means that the therapist and client work together to develop hypotheses about the nature, origins, and meanings of the client's distress (Ballou, Hill, & West, 2008; Brown, 2010; Evans, Kincade, & Seem, 2011). The hypotheses allow a goal to be developed surrounding the focus of treatment, contextualizes and names the distress for the client, and reinforces the collaborative and more egalitarian nature of a productive therapeutic relationship. It is important to point

out that at times, this model does utilize language such as "diagnosis" and "psychopathology," which are terms common to the medical model of diagnostic classification. These are the terms predominant in the mindfulness-based research and are used to reflect the research appropriately and also communicate common terms with which most mental health professionals are familiar. However, they should be viewed within the context of the power inherent in these labels and with the understanding that they are not to be viewed independently of the sociocultural context of the client.

Buddhism also promotes the basic human responsibility to act as an agent for social justice. Although Buddhism has a reputation as being a rather introspective religion, contemporary Asian Buddhism is quite active with both Asian and global sociopolitical issues and crises. In fact, Buddhist contributions to the international community in regards to actualizing nonviolent action for social justice have resulted in two Buddhist leaders, the Dalai Lama of Tibet and Aung San Suu Kyi of Myanmar, receiving Nobel Peace prizes (Queen & King, 1996). Further, there is ample Buddhist literary and philosophical justification for the importance of engaging in social justice issues. In particular, Buddhists often apply the principle of interdependence to justify social activism. The principle of interdependence posits that all living beings share the world and therefore the acts of each of us affects all the others (King, 1996). The Dalai Lama (2008) communicates the principle of interdependence quite effectively in his challenge to the world to become engaged in social justice issues on the Anniversary of the Universal Declaration of Human Rights:

At birth, all human beings are naturally endowed with the qualities we need for our survival, such as caring, nurturing, and loving kindness. However, despite

already possessing such positive qualities, we tend to neglect them. As a result, humanity faces unnecessary problems. What we need to do is make more effort to sustain and develop these qualities. Therefore, the promotion of human values is of primary importance. We also need to focus on cultivating good human relations, for, regardless of differences in nationality, religious faith, race, or whether people are rich or poor, educated or not, we are all human beings. When we are facing difficulties, we invariably meet someone, who may be a stranger, who immediately offers us help. We all depend on each other in different circumstances, and we do so unconditionally. We do not ask who people are before we offer to help them. We help because they are human beings like us.

### **Mindfulness-based Treatment Approaches and Mindfulness-based Intervention**

The concepts of mindfulness and mindfulness practice referred to in the psychological literature originate from ancient contemplative spiritual traditions, particularly as adapted from Buddhism, as well as aspects of Hinduism, which Buddhism appropriated (Seigel, Germer, Olendzki, 2008; Bishop et al., 2004; Baer, 2003; Kabat-Zinn, 1985). Mindfulness is a 2,500 year old practice that has been referred to as the 'heart of Buddhist meditation.' It is considered the foundational stance of attention aimed at striving towards the cessation of and freedom from suffering (Thera, 1992). Buddhist's believe that continued engagement in the practice of mindfulness meditation teaches one how to eliminate needless suffering, while simultaneously cultivating the components of awareness, attention, and remembering. It is through mindfulness practice, that insight into the nature of the mind and the environment may be found. As insight is attained,

mindfulness exposes habits of the mind that perpetuate suffering and unhappiness, such as greed, anger, or various harmful behaviors (Seigel, Germer, Olendzki, 2008).

**What is mindfulness?** A very simple definition of mindfulness by Brown and Ryan (2003) describes mindfulness as the basic human capacity to maintain a quality of conscious attention and awareness to the present, moment-to-moment unfolding of experience. When illuminating the linguistic roots of the original Pali word for mindfulness, 'sati', the word mindfulness evokes meaning relating to a combination of awareness, attention, and remembering (Seigel, Germer, Olendzki, 2008). Brown and Ryan (2003) describe this *awareness* by likening it to “the background ‘radar’ of consciousness” which is continually monitoring the inner and outer environment. *Attention* is a process of focusing conscious awareness so as to provide increased or heightened sensitivity to a much smaller range of experience (Westen, 1999). *Remembering*, on the other hand, is the intention to engage in mindfulness practice, and remembering to open oneself to awareness and pay attention (Seigel, Germer, Olendzki, 2008).

However, the aforementioned definition of mindfulness only encompasses its linguistic components, but mindfulness is in fact much more nuanced. As a result, there are many definitions of mindfulness observed in the psychological literature on the topic. This is largely because there is a great deal of diversity amongst the various Buddhist traditions relating to what factors should be included in descriptions of mindfulness. This diversity is also reflected in the ongoing debate within the psychological literature as to what exactly constitutes the construct of mindfulness (Carmody, 2009). As a result of this debate, there has been a historical difficulty with prevailing research studies

investigating the effects of mindfulness practice because studies potentially employed and measured different constructs of mindfulness. Much of this debate is centered around whether or not mindfulness refers to mental skill utilized as a part of practicing mindfulness, or rather a state or trait that emerges as a result of mindfulness practice (Brown, Ryan, & Creswell, 2007). Therefore, it continues to be difficult to generalize and compare research findings when differing definitions of mindfulness have been used and this should be considered while comparing and contrasting the research findings contained within this dissertation (Chiesa & Malinowski, 2011; Bishop et al., 2004).

One of the most commonly observed definitions used in the literature was coined by Jon Kabat-Zinn (1993), and supported by Baer (2003), as an appropriate operationalized working definition of mindfulness. According to this definition, mindfulness is "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgementally to the unfolding of experience moment by moment." This is also the most commonly used working definition of mindfulness utilized in research studies. It is important to note that use of this definition implies that mindfulness is a *state* rather than a trait and that while mindfulness may be promoted by certain practices or activities, such as meditation, mindfulness is not equivalent to those practices (Davis & Hayes, 2011). Carmody's definition of mindfulness is slightly different in that it attempts to describe what mindfulness cultivates. Her definition of mindfulness is "intentionally paying attention to present-moment experience (physical sensations, perceptions, affective states, thoughts and images) in a nonjudgemental way and thereby cultivating a stable and nonreactive awareness." Another commonly referenced definition of mindfulness was the basic Brown and Ryan (2003) definition

noted earlier, which Germer et al. (2005) somehow simplifies further by defining mindfulness as "moment-by-moment awareness." Martin's (1997) definition expresses the relationship that mindfulness has to the Buddhist concept of *attachment*, which says: mindfulness is "a state of psychological freedom that occurs when attention remains quiet and limber, without attachment to any particular point of view.

**Why should mindfulness be integrated into Western psychotherapy approaches?** Buddhist psychology and Western psychotherapy actually share a great deal in common, the first of which is that both share a common goal of alleviating human suffering. Within Buddhism, it is believed that the practice of mindfulness is the path that leads to an unfolding of events that alleviate human suffering. This path begins with mindfulness and is sustained by the practice of mindfulness. Mindfulness is used as a vehicle to bring the body and mind into a calm and relaxed state. According to Buddhism, this calm and relaxed mind is necessary on the path to the alleviation of suffering because it has the effect of an increased awareness and attention, which results in a deepened mental concentration. Deepened concentration occurs because the calm mind state that arises from mindfulness practice closes off sensory experiences that diminish the quality of awareness. So rather than becoming quickly distracted by physical, visual, or audible etc. sensations in our environment, the mind is more free to fully attend to whatever the practitioner would like to attend to in that moment. As a result of this deepened concentration, one is able to attend better to our behavior and actions. Practicing this kind of devoted attention and deepened concentration to whatever arises in the present moment, creates a space for developing a deeper understanding of the patterns of thoughts, feelings, and behaviors that precede what unfolds in the next

moment of our experience. Within Buddhist psychology, this combination of mindfulness, increased ability to attend to our behavior and actions, and an intention to calm the mind and develop concentration are all ingredients for the gradual attainment of wisdom. What exactly that wisdom may be may be unique and different for each person. For example, it may mean an improved understanding of self, experience, and the world. Regardless of the personal meaning of the wisdom attained, it is this wisdom that is said to be responsible for the cessation of suffering (Olendzki, 2003).

In addition, Buddhist psychology and Western psychology share several important beliefs about how behavioral, social, and emotional conditioning shape the beliefs that we have about ourselves and the world. In fact, when discussing achieving freedom from suffering, Buddhists often refer to this as sustaining mental effort so as to decondition old patterns and habits of the mind. In breaking free of those old patterns and habits, it is possible to condition the mind with new ways of being in the world. This is not altogether dissimilar from the cognitive-behavioral model of psychotherapy that addresses faulty cognitions and tries to replace them with new ones. Therefore, both mindfulness-based treatment approaches and mindfulness-based interventions, should address the three domains of human experiencing: (1) behavior, or the actions that we "do" and associated physical sensations, (2) emotions, or what we "feel," and (3) the mind, or what we "think."

**Evidence to support the use of mindfulness-based approaches and interventions.** There is a growing body of research suggesting that mindfulness-based interventions such as mindfulness-based cognitive therapy (MBCT; Segal, Wililams, & Teasdale, 2002), acceptance and commitment therapy (ACT, Hayes, Strosahl, & Wilson,

1999); and dialectical behavior therapy (DBT; Linehan, 1993) lead to clinically significant improvements in psychological and physical functioning, as well as promote stress reduction in healthy individuals (Carmody & Baer, 2008; Grossman, Neimann, Schmidt, & Walach, 2004; Salmon et. al, 2004; Hayes, et al., 2006; Chiesa & Serretti, 2010; Lynch, Trost, Salsman, & Linehan 2007; & Pull, 2009). Recent reviews of the literature suggest that mindfulness is positively associated with psychological health and that training in mindfulness may improve subjective well-being, reduce psychological symptoms and emotional reactivity, and improve self-regulation of behavior (Keng, Smoski, & Robins, 2011; Chiesa & Serretti, 2010; Davis & Hayes, 2011; Grossman et al., 2004). It has also been shown to be helpful in promoting healthy coping strategies, stress reduction, and teaching relapse prevention skills. Mindfulness and mindfulness-based interventions have been found to have a positive impact on a treatment of a wide range of clinical issues, including: anxiety, depression, trauma, eating disorders, attention deficit-hyperactivity disorder, self-harm and suicidal behavior, anger management and impulsivity, psychosis, bipolar disorder, substance abuse, psychological effects of pain, and stress reduction and increased psychological resilience in healthy individuals. In addition, neurobiological findings demonstrate that mindfulness meditation practices are associated with changes in the activation of specific regions of the brain and preliminary evidence indicates that mindfulness meditation practices could enhance cognitive functions (Chiesa, Calati, & Serretti, 2010; Chiesa & Serretti, 2010; Ivanovski, & Malhi, 2007; Jha, Stanelly, Wong, Gelfand, & Kiyaoonaga, 2010; Cahn & Polich, 2006).

**Mindfulness-based interventions and processes of change.** As mentioned before, there is a wide research base supporting the use of mindfulness-based



interventions in psychotherapeutic treatment for a wide range of presenting clinical issues. As a result, more and more practitioners are seeking training in the administration of these interventions and trying to adapt them to their clinical practice. However, although there is plenty of research demonstrating the effectiveness of mindfulness-based interventions, little research exists examining exactly *how* and *why* they work. Baer (2010) offers an excellent example in her book when she posits the legitimate question as to whether or not what is assumed about how mindfulness training works is in effect true. She notes that mindfulness training is theorized to lead to individuals experiencing more mindfulness in their daily lives, which should lead to reductions in suffering while increasing overall well-being. The problem is that at this time, our understanding of how mindfulness actually improves well-being and reduces suffering remains an assumption. As a result, it is important to develop a better understanding of how and why mindfulness-based interventions and concepts specifically work. An understanding of what components are responsible for the changes observed in therapy could potentially increase their effectiveness by improving upon the components known to be helpful, while disposing of components of the intervention that are not beneficial. Aided by this understanding, clinicians will be better equipped to enact mindfulness-based interventions more appropriately for particular clients and hopefully with greater therapeutic effect (Baer, 2010; Chambers et al., 2009).

At present, there are many psychological processes that are being examined as potential processes responsible for the changes observed as a result of mindfulness-based interventions and mindfulness training that lead to reduced psychological distress and improved well-being. Some suggest that the process of change is mindfulness itself and

that perhaps mindfulness is actually a common factor present in other forms of psychotherapeutic interventions (Anderson, 2005; Baer, Smith, Krietemeyer, Hopkins, & Toney, 2006; Martin, 1997). However, it has been suggested that several constructs often associated with mindfulness-based interventions could be potential mechanisms of change. These constructs include: emotion regulation, self-compassion, decentering, psychological flexibility, as well as changes in the brain/neuroplasticity and changes in higher cognitive processes like attention, executive functions, and working memory (Baer, 2010; Chambers, Gullone, & Allen, 2009). Others have suggested that psychological processes relating to self-control, objectivity, flexibility, improved concentration and mental clarity, emotional intelligence, and the ability to relate to one's self with kindness, acceptance, and compassion may be responsible for change (Davis & Hayes, 2011).

*Emotion regulation as a mechanism of change.* Emotion regulation has been identified as a potentially unifying function of diverse symptom presentations and that emotional dysregulation may be at the root of behaviors and psychological difficulties experienced by individuals with a wide range of presenting clinical issues. Research largely suggests that emotion regulation is essential to mental health and plays an important role in various forms of psychopathology that are often associated with problems of emotion regulation (Chambers, 2009; Davidson, 2000; Hayes & Feldman, 2004; Hofmann & Asmundson, 2008). Some of the psychological issues which have been attributed to difficulties with emotion regulation include depression and anxiety (Roemer et al., 2009; Vujanovic, Zvolensky, & Berstein, 2008), binge eating (Baer, Fischer, & Huss, 2005; Kristeller & Wollevar, 2011), substance use (Bowen et al., 2009),

generalized anxiety disorder (Roemer et al., 2009), attention-deficit/hyperactivity disorder (Zylowska, Smalley, & Schwartz, 2009), post-traumatic stress disorder (Gratz & Tull, 2010), borderline personality disorder, and deliberate self harm (Gratz & Roemer, 2008; Gratz & Tull, 2010). Due to the large role that emotion regulation difficulties appear to play in all of these psychological issues, treatments for a wide variety of psychological issues attempt to incorporate ways in which to improve emotion regulation and teach healthier, more adaptive emotion regulation skills (Gratz & Tull, 2010).

However, when attempting to define what emotion regulation exactly consists of, the existing literature of the topic is wrought with disagreement as to an appropriate definition. Largely, this disagreement centers around two very important questions: (1) does emotion regulation refer to the control and reduction of negative emotions or does it refer to the control of behavior when experiencing negative emotions and rather that emotions are functional in nature? and (2) is emotion regulation dependent upon the temperament of the individual or is emotion regulation separate from one's emotional temperament? At present, research tends to be in support of the latter half of each question, such that emotion regulation is separate from the individual's emotional temperament and is more concerned with behavioral control while experiencing emotions (Gratz & Tull, 2010). Gratz & Roemer (2004) have tried to conceptualize emotion regulation within the context of these arguments in order to provide a clinically relevant understanding of adaptive emotion regulation. They argue that emotions serve a functional purpose and as such, emotion regulation is viewed as a multidimensional construct involving the awareness, understanding, and acceptance of emotions. It involves the ability to engage in goal directed behaviors and inhibit impulsive behaviors

when experiencing negative emotions. Emotion regulation also involves flexible use of situationally appropriate strategies in order to modulate the intensity or duration of emotional responses rather than to eliminate emotions entirely. Finally, emotion regulation is associated with a willingness to experience negative emotions as part of pursuing meaningful activities in life (Gratz & Roemer, 2004; Gratz & Tull, 2010).

There are many ways in which mindfulness-based interventions may potentially be helpful in improving emotion regulation and facilitating adaptive responding to unwanted emotional experiences. First, it is hypothesized that simply labeling emotions as a part of mindfulness-based interventions help individuals decenter from their experiences so they might observe them more objectively. This observational stance, which is also taken with an attitude of nonjudgment, is intended to increase the client's tolerance for and acceptance of interacting with difficult emotions and experiences (Gratz & Tull, 2010). Deepened willingness or openness in engaging with affect may also be viewed as a form of exposure, which ultimately reduces avoidance of unpleasant experiences and dysfunctional behaviors aimed at control (Linehan, 1993; Treanor et al., 2011). Mindfulness may also be useful in teaching clients that emotions do not have to control behavior and that they can be experienced and tolerated without acting on them. Further, some of the acceptance-based interventions use psychoeducation to teach clients about how emotions evolved in order to offer humans an evolutionary advantage to promote survival (Gratz & Tull, 2010; Linehan, 1993; Roemer & Orsillo, 2007). In understanding the functional nature of emotions, clients may be more effective in the responses that they choose to make dependent on their environment. Farb, Anderson, & Segal (2012) offer an interesting neuropsychological model as to how mindfulness

impacts emotion regulation. They argue, based on research demonstrating that mindfulness training is associated with developing a prefrontal cortex network, that mindful emotion regulation increases emotional awareness by reducing midline prefrontal cortex activity, while maintaining sustained activation of the limbic system. In doing so, mindful awareness may result in disruption of automatic reactions and create room for more adaptive reactions, such as acceptance or self-compassion.

*Self-compassion/compassion as a mechanism of change.* Compassion is considered to be associated with a variety of aspects of healthy psychological functioning, and client participation in mindfulness-based interventions demonstrated increases in levels of self-compassion (Neff, 2009). In particular, self-compassion is correlated with psychological well-being and associated constructs such as happiness, optimism, personal initiative, and connectedness (Baer, 2010). At the same time, self-compassion is also associated with decreases in anxiety, depression, neurotic perfectionism, and rumination (Neff, 2009; Neff & McGhee, 2010) and negatively correlated with self-judgment and isolation (Iskender & Akin, 2011). Self-compassion may also be important in bolstering self-esteem without also increasing narcissism (Leary, Tate, Adams, Allen, & Hancock, 2007; Neff & McGhee, 2010; Neff & Vonk, 2009; Michalak, Teismann, Heidenreich, Strohle, & Vocks, 2011). Further, high levels of self-compassion are related to feelings of autonomy, competence, optimism, wisdom, and positive emotions (Jimenez et al., 2010). Due to the findings that self-compassion is overwhelmingly associated with improved psychological well-being, there is growing interest as to why and how self-compassion appears to enact change as a part of mindfulness-based interventions. However, it is important to note that there is

disagreement in the literature as to whether or not mindfulness and self-compassion are separate constructs. What does seem clear is that they do interact to some degree and that it may be that they must both co-exist in order to co-facilitate the process of the other. In fact, one study found that self-compassion may have been the mechanism through which participants of an MBSR group experienced reductions in perceived stress (Shapiro, Astin, Bishop, & Cordova, 2005), although other similar studies had mixed findings (Moore, 2009, Shapiro, Brown, Biegel, 2007).

At present, it is altogether still unclear as to exactly how self-compassion may facilitate improved well being in individuals who have received mindfulness training. However, Baer (2010) postulates that mindfulness may evoke adaptive, healthy and wise behavior in mindfulness practitioners because of two key components of self compassion. The first, is that self-compassion is not founded upon judgment or evaluation of oneself, but rather nonjudgemental and nonevaluative acceptance for oneself and for one's suffering. Mindfulness practice inherently exposes practitioners to a nonjudgemental and nonevaluative acceptance for oneself and one's suffering. It is from this nonjudgmental radical acceptance of self and suffering that self-compassion naturally arises. The second key component of self-compassion is the understanding that suffering is a shared human experience, helping the practitioner to feel connected to others, feel compassion for the suffering of others, ultimately helping the practitioner to connect to compassion for one's own suffering. Baer (2010) proposes that nonjudgmental acceptance of oneself and one's suffering and the understanding that suffering is a shared human experience helps connect mindfulness practitioners with their own motivation for self-caring. Initial research suggests that mindfulness training does enhance self-compassion, as two studies

showed that long-term meditators score higher on self-assessments of compassion than nonmeditators (Lykins & Baer, 2009; Neff, 2003).

*Decentering as a mechanism of change.* Decentering is defined as the ability to assume a stance of objectivity and nonjudgment and simply observe thoughts as transitory events of the mind. Decentering also involves the acknowledgement that these thoughts/events do not necessarily reflect reality or an accurate view of the self. As a result, these events do not require any particular behavior in response. The emphasis of decentering is learning how to change one's relationship with one's thoughts rather than attempting to alter whatever thoughts may be occurring (Feldman, Greeson, & Senville, 2010; Fresco, Moore, et al., 2007; Safran & Segal, 1990). In the early days of cognitive therapy, decentering was the mechanism presumed to be responsible for preventing depressive relapse by changing the content of depressive thinking (Hollon & Beck, 1979). This is the theory that inspired the development of Mindfulness-Based Cognitive Therapy (MBCT) (Teasdale et al., 2002). However, the MBCT conceptualization of decentering is different from the cognitive theory notion of decentering in that the MBCT conceptualization of decentering emphasizes practicing decentered relationship with not just cognitions, but bodily sensations and emotions. It encourages an attitude of openness, acceptance, and curiosity towards the experiences. Considering the efficacy of MBCT in preventing depressive relapse, the process of decentering may be the mechanism of change that results in decreases in depressive rumination (Feldman et al., 2010). This is significant, as depressive rumination appears to have a role a variety of psychological disorders, including depression (Teasdale et al., 2002), anxiety (Hayes-Skelton et al., 2012), binge-eating (Baer et al., 2010), substance use disorders (Witkiewitz

& Bowen, 2010), and self-harm (Grantz & Roemer, 2008) However, it remains unclear as to how or why decentering appears to have a therapeutic effect in the treatment of depressive rumination (Feldman et al., 2010; Sauer, & Baer, 2010). Interestingly, decentering is closely related to mindfulness in that it is believed to play a central role in accounting for benefits observed from mindfulness training. In fact, most definitions of mindfulness and decentering are often very similar (Sauer & Baer, 2010).

*Psychological flexibility as a mechanism of change.* Most studies investigating the role of psychological flexibility have been conducted within the realm of Acceptance and Commitment Therapy. This is largely because helping the client develop increased psychological flexibility is a central therapeutic goal to the approach. Psychological flexibility is defined as "an individual's ability to connect with the present moment fully and consciously and to change or persist in behavior that is in line with their identified values" (Ciarrochi, et al., 2010; Hayes et al., 1999). Psychological inflexibility occurs when an individual becomes "entangled in experiential avoidance and cognitive fusion" while also experiencing difficulties in connecting with the context of a situation, which ultimately impairs the individual's ability to choose behavior that is aligned with their values and goals (Hayes et al., 1999; Ciarrochi, Bilich, & Godsell, 2010). ACT theorists posit that psychological inflexibility results from processes such as experiential avoidance and cognitive fusion that begin to dominate an individual's experience. Both of these processes are associated with the underlying psychopathology for a wide range of psychological disorders because individuals begin to engage in self-destructive behaviors in an attempt to control their private experiences. Instead, the behaviors have quite the opposite effect. (Ciarrochi et al., 2010). Some of the psychological disorders



associated with experiential avoidance and cognitive fusion include depression (Teasdale et al., 2002), anxiety (Hayes-Skelton et al., 2012; Treanor, 2011; Soenke, Hahn, Tull, & Gratz, 2010), substance use disorders (Zgierska et al., 2009), posttraumatic stress disorder (Follete & Vijay, 2009; Thompson & Waltz, 2009), and eating disorders (Baer et al., 2005).

As a result, ACT practitioners and theorists believe that helping clients to increase their psychological flexibility helps individuals to escape the cycle of experiential avoidance and cognitive fusion by learning to relate mindfulness to all aspects of their experience (Ciarrochi, Bilich, & Godsell, 2010; Ciarrochi & Blackledge, 2006). ACT attempts to increase psychological flexibility by building six processes: acceptance, defusion, contact with the present moment, self-as-context, values, and committed action. Acceptance involves developing willingness to accept private experiences. Defusion is concerned with weakening the language processes responsible for cognitive fusion by helping clients to be a neutral observer of their thoughts, which appears similar to the concept of decentering mentioned previously. Contact with the present moment is akin to mindfulness, in which clients are taught to build their awareness of whatever they are experiencing. Self-as-context helps people realize they can let go of unhelpful self-judgments while still retaining a sense of self. Values are similar to goals but different in that values are directions a client wants to work towards rather than something that can be achieved. Committed action is concerned with helping people to strive to work through difficult emotions and experiences by helping the client see that a choice can be made again and again (Ciarrochi et al., 2010).

***Mindfulness: A common therapeutic factor?*** In contrast to the mechanisms of change discussed previously that suggest that mindfulness offers something unique and new to psychotherapy treatment that no other form of psychotherapy has before, some researchers propose that mindfulness is actually a common factor, and that the core of mindfulness already exists within all of the other psychotherapeutic approaches (Anderson, 2005; Martin, 1997). A recent meta-analytic review by Hofmann et al. (2007) concluded that mindfulness-based interventions have general applicability in the treatment of psychological disorders. This study examined the efficacy of mindfulness-based interventions across a wide range of diagnoses, including generalized anxiety disorder, social anxiety disorder, panic disorder, depression, pain disorders (arthritis, fibromyalgia, and chronic pain), cancer, traumatic brain injury, stroke, diabetes, and organ transplant. Although they were primarily examining the effectiveness of using mindfulness-based interventions in the treatment of anxiety and depression, they concluded that their pattern of results suggests that mindfulness-based training may not be diagnosis-specific. Instead, mindfulness-based training likely addresses processes that occur across a wide range of psychological disorders. They propose that mindfulness-based training accomplishes this via intervening across a range of emotional and evaluative dimensions upon which human well-being is founded. These findings are particularly promising for practitioners looking to incorporate this model into their therapeutic practice with any number of diagnostic issues.

***Mindfulness-based interventions.*** There is a wealth of resources available to clinicians that can guide a clinician to a particular intervention and as one grows in one's own mindfulness practice, one will become more attuned to which interventions are

addressing which mechanism of change that might be appropriate for one's client. One may need to refer back to the diagnosis section to investigate which underlying mechanisms of change within the mindfulness-based intervention may be appropriate for addressing specific patterns of psychopathology as a reminder. A more formal list of these interventions will be developed as an extension of this dissertation in the future and will act as a supplement to clinicians who will require information about mindfulness resources and literature about mindfulness interventions.

### **Summary: How Mindfulness can be used within this Model**

In conclusion, the mindfulness interventions themselves are layered, wherein practice during session builds mindfulness related skills in both the therapist and the client. It is the hope of this model that incorporation of a mindfulness-based approach or mindfulness-based interventions can enhance a client's skills and resources, as well as empower the client to respond skillfully to their own suffering. Thereby, the mindfulness components within therapy begin to benefit the client in such a way that this vehicle for alleviating suffering can be generalized to all of life and be fully integrated in the client's way of life beyond therapy.

Regardless of how one chooses to integrate mindfulness into one's therapeutic approach with each client, the themes of continual progress, learning, and growth permeates the incorporation of mindfulness into therapy. Essentially, there is a constant growth in skill and resource, which increase and accumulate over time, as the client becomes more skilled at utilizing the benefits of mindfulness independently in their own lives. The goal being that at the conclusion of the therapy process, the client will be

empowered with the skills and resources they have learned during therapy to address their suffering independently of the therapy process. Therein, the mindfulness strategies learned in therapy are generalized to all of life, not just therapy, or the therapy specific issues being addressed. The practice of mindfulness in daily life becomes a way of being.

### **Universality and Instillation of Hope**

Universality is included as a unique component in this model because of the strong emphasis of this concept within both Buddhist psychology and Western psychology. Within the Western psychotherapy literature, universality and instillation of hope were posited as important therapeutic factors necessary for change in group psychotherapy by Yalom & Leszcz (2005). Universality occurs when group members recognize that other members share similar feelings, thoughts, and problems that they do. Instillation of hope occurs when a group member recognizes that other members' success can be helpful for their own outlook and as a result, the member develops optimism that they too will improve (Yalom & Leszcz, 2005). Within Buddhist psychology, the concept of universality, or the idea that one is not alone in suffering and that suffering is in fact common to the experience of all human beings, is a necessary prerequisite to experiencing the instillation of hope. The realization that one's suffering is not unique and that others also suffer interestingly often instills hope for the achievement of being free from that suffering. However, Buddhism also emphasizes a non-attachment to hope because this could lead to future-oriented thinking that may result in suffering. Rather, the Buddhist conception of realization of hope is a realization of one dimension of being human. T. S. Eliot (1943) describes hope this way:

I said to my soul, be still and wait without hope  
For hope would be hope for the wrong thing; wait without love,  
For love would be love of the wrong thing; there is yet faith  
But the faith and the love and the hope are all in the waiting.  
Wait without thought, for you are not ready for thought:  
So the darkness shall be the light, and the stillness the dancing. (p. 128)

### **Therapeutic Outcome**

Therapeutic outcome quite simply refers to the goal that the client is working towards, whatever that may be. It could potentially be an increased sense of well-being, healthier psychological adjustment, or reduced symptoms of depression or anxiety. etc. His Holiness the Dalai Lama is often cited as saying that the common goal that all human beings are seeking on this planet is happiness, which could also be a client goal. This future therapeutic outcome should therefore be maintained within conscious awareness of both client and therapist. The therapist should be evaluating what interventions might be utilized to work towards achievement of those goals. The therapist should also regularly check in with the client to determine how the client feels about those goals and whether or not the client believes they are getting any nearer to attaining them. This could open more avenues for exploration within the therapy relationship, reveal therapeutic "stuck" points, and facilitate genuineness, goal consensus, and promote alliance within the relationship.

### **Summary and Conclusions**

The theoretical conceptual model proposed is informed by a critical review of the research. It was intended to be founded in evidenced-based practice research, yet

developed to remain flexible and adaptable to any therapist's preferred integrative treatment approach. As a result, previous research in the field of mindfulness is theoretically quite compatible with this framework, as well as across theoretical orientations of the clinician seeking to integrate mindfulness into their clinical practice.

Overall, this conceptual model offers distinct contributions to the current body of the clinically applied mindfulness literature in several key areas. First, this model attempted to explore the connections between the Buddhist approach to suffering and the path to healing with the Western psychotherapy approaches to the alleviation of suffering. In order to introduce the benefits of mindfulness practice to Western audiences, mindfulness has been thoroughly analyzed in a Western fashion to explicate the components that might be therapeutically and medically helpful. This Western process of assimilating certain mindfulness principles and techniques, while discarding others, is seemingly fragmented, and it is not altogether impossible that elements from the original Buddhist psychology, philosophy, and ethical principles may have been lost. As a result, this model attempted to reevaluate the essential elements of the Buddhist conception of the path to healing and the cessation of suffering. Exploring the original roots of mindfulness as a part of this conceptual model and dissertation was also conducted in order to try to better theoretically explore and identify if there are any other underlying processes of change that remain empirically untested in the mindfulness literature. It was hoped that in identifying the aspects of the Buddhist understanding of how alleviating from suffering happens and combining this knowledge with a modern Western psychological understanding of what is most effective in psychotherapy, that a more effective mindfulness-informed psychotherapy might be developed.

Secondly, as a result of the investigation into the connections between the Buddhist and Western psychological understandings of suffering and the cessation of suffering, this model was designed to emphasize two key areas, (1) the importance of the therapeutic relationship and (2) the integration of multicultural considerations as a part of mindfulness-informed psychotherapy. Although it is widely acknowledged in the Western clinical psychology literature that the therapeutic relationship can have a significant influence on therapeutic outcome, the mindfulness literature in Western psychology does not often devote much attention to this fact. This seems particularly confusing when considering that within Buddhism, the relationship between mindfulness student, teacher, and *sangha* is considered an essential, perhaps necessary, part of a Buddhist's journey towards cessation from suffering. As a result, it seemed significant to revisit the importance of the fact that the mindfulness-based interventions themselves, do not occur in a vacuum, but are enacted within a *relationship* between two connected human beings, the psychotherapist and the client.

The importance of integrating multicultural considerations as a part of this conceptual model was found to be of significance as a review of the mindfulness-based literature revealed that there has been little attention given to the inherent compatibility between Buddhist ethics and the multicultural competency standards of clinical psychologists and other mental health practitioners. In addition, a review of the literature found that few to none of the outstanding mindfulness-based therapies discuss how multicultural considerations can be integrated with their approaches. Perhaps this occurs because multiculturally competent practice is implied, however, neglecting to include this important topic can convey a message that issues of multiculturalism, diversity, and

social justice are unimportant. As a result, this model is distinct from other mindfulness-based therapies in that it specifically incorporates multicultural considerations and attempts to encourage multicultural competency, continual multicultural conceptualization, and facilitates clinician awareness of one's role as a social justice advocate.

Third, this conceptual model for a mindfulness-informed psychotherapy encourages clinicians to develop a competency in mindfulness through the development of their own formal mindfulness practice. At times the mindfulness literature presents differing opinions and views concerning the importance of the clinician's own mindfulness practice. However, given the review of the Buddhist literature on mindfulness practice, it seems as though an individual's formal mindfulness practice is essential to being able to model and communicate an understanding of the philosophies and strategies to another individual. Therefore, clinicians wishing to use this model are encouraged to engage with their own mindfulness practice as often as they have the opportunity, whether by attending workshops or retreats, or practicing silently at home several times a week. In many respects, clinicians are invited to view this conceptual model to be a mindfulness practice itself. The interconnected and interdependent nature of the model itself offers a continual reminder and challenge that the clinician attend to each present moment, just as it is, without judgment, and to remain open to the intention to be awake within the therapeutic process.

Finally, this conceptual model offers a unique contribution to the current body of mindfulness literature because it is the first such model that has attempted to conceptualize a mindfulness-informed psychotherapy. In particular, this conceptual



model tries to connect the clinician with the hypothesized mechanisms of change within mindfulness-based interventions and how they may be useful in addressing particular processes of psychopathology that cross multiple diagnostic categories, such as emotion regulation, experiential avoidance, increased physiological arousal, and rumination. The theoretical implications of this conceptual model may include helping researchers and clinicians imagine what a mindfulness-informed psychotherapy practice might look like in session with a client, based upon a specific diagnostic issue or presenting problem.

Overall, this model provides a general framework from which the therapist can adapt their integration of Western psychotherapy and Buddhist oriented approaches very specifically based upon the mechanisms of psychopathology that the clinician and therapist collaboratively determine are particularly salient. This framework was created in this general manner, rather than more specifically, with intentionality, as there remains the possibility that there is no one right way to administer a mindfulness-based intervention in treatment, for ironically, from a Buddhist perspective, this would be a way in which the therapist or client attempts to control or change an aspect of experience. For example, when thinking about what mindfulness-based intervention or approach to use when applying this model, the clinician will need to understand how to implement the mindfulness practice and exercises, maintain an awareness and consideration of what mechanism of psychopathology each particular mindfulness practice might be addressing, and balance all of this with a conceptualization of what unique tendencies the client may have for self-judgments, attempts to control their experience, or avoidance and thought suppression. Based on these variables, a clinician and client may work together to collaboratively choose a particular intervention that may be more specific to that client.

For example, a client who struggles with intense self-judgment may benefit from loving-kindness practices, while someone who struggles with depressive rumination may benefit from practicing mindful awareness in order to work towards decentered awareness. It is the hope of this model that by the end of the clinician's work with the client, the client will have learned the mental and emotional mindfulness tools that they can utilize at any time, essentially alleviating their own suffering with the skills that they have learned.

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