THE RELATION BETWEEN PSYCHOLOGICAL FLEXIBILITY AND THE
BUDDHIST PRACTICES OF MEDITATION, NONATTACHMENT, AND
SELF-COMPASSION

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THE RELATION BETWEEN PSYCHOLOGICAL FLEXIBILITY AND THE
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SELF-COMPASSION

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Dissertation

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ABSTRACT

The purpose of this study was to add to the empirical literature in the growing area of psychological flexibility. Specifically, this study investigated the Buddhist practices of nonattachment, self-compassion, and meditation as they related to the Acceptance and Commitment Therapy (ACT) construct of psychological flexibility among Buddhists. In addition, it was examined whether differences existed in levels of psychological flexibility among Buddhists and other religious and spiritually oriented individuals. Buddhist participants (N = 299) completed the Acceptance and Action Questionnaire – II (AAQ-II), Nonattachment Scale (NAS), Self-Compassion Scale – Short Form (SCS-SF), and a demographic questionnaire. Non-Buddhist participants (N=303) completed the AAQ-II and demographic questionnaire. Although findings indicated significant differences in degrees of psychological flexibility between Buddhists and non-Buddhists, the actual difference in mean scores was very small. Number of years of regular meditation practice, nonattachment, and self-compassion contributed to a significant degree of variance in degree of psychological flexibility among Buddhists, while the overall model was significant, accounting for \( R^2 \) 42.2% of the variance in psychological flexibility. Implications of results for clinical practice and counselor education, along with recommendations for future research are discussed.
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CHAPTER I
INTRODUCTION

Introduction to Mental Illness and Suffering

Experiencing physical and emotional pain is intrinsic to human nature, whether that pain is produced from mental or physical illnesses, trauma, interpersonal relationships, or general challenges or circumstances of life (Follette & Pistorello, 2007; Hanson, 2009). Psychological suffering is also a part of human nature due to how the cognitive processes of the human brain and mind function in response to pain (Fletcher, Schoendorff, & Hayes, 2010). Although suffering is a very evident aspect of life, its amelioration is frequently not well understood, nor is the limited understanding often effectively put into practice (Safran, 2003). This dissertation explored whether practicing meditation, nonattachment to mental fixations, and self-compassion, can in turn facilitate the development of psychological flexibility and reduce suffering.

Typically in western culture, the terms “pain” and “suffering” are used interchangeably, whereas in other cultures, such as the cultural and philosophical traditions of Buddhism, a distinction is made between pain, an affliction, and our suffering from that pain. Often the term “physical” is used to describe pain, while “mental” is used to describe suffering. Sensations of pain actually involve complex interactions at physical, psychological, and spiritual/existential levels (Austin, 1998). Suffering involves the reaction that is created following experiences of pain at any of
these interconnected levels (Safran, 2003). The additional suffering that is attached to pain can be eliminated from one’s life by actually not trying to escape, reduce, suppress, or eliminate the initial pain (Follette & Pistorello, 2007). Experiences of pain are inevitable, yet a distinction made in Buddhism, and by Hayes, Strosahl, and Wilson (1999), is that the mishandling of, or reaction to, pain through prolonged suffering does not have to be inevitable. Psychological flexibility, which may involve aspects of nonattachment and self-compassion, may be essential in reducing such reactions to pain.

Suffering is very evident in the world. Unfortunately, so too is the frequency of mental illnesses such as Major Depressive Disorder, Bipolar Disorders, personality disorders, anxiety disorders, and Schizophrenia and psychotic disorders, both in the United States of America and internationally. The National Institute of Mental Health (NIMH, 2009a) reported that an estimated 1 in 4 American adults have a diagnosable mental disorder, while 1 in 17 are diagnosed with a serious mental illness. Within the U.S.A. and Canada, mental illnesses are currently the leading cause of disability for individuals between the ages of 15 and 44, while it is estimated that depression will be the second largest, most expensive, and most debilitating global disease by 2020 (World Health Organization [WHO], 2004).

The United States Department of Health and Human Services (US-DHHS, 2009) reported that suicide is the 11th leading cause of death in the U.S.A., and is the fourth leading cause of death in adults between ages 18 and 65. The US-DHHS further reported that an individual in the U.S.A. dies by suicide about every 16 minutes, while WHO (2004) reported that over 1 million people die by suicide in the world every year and on average, 1 person dies by suicide every 40 seconds in some part of the world. In
addition, over 90% of individuals who die by suicide have a diagnosable psychiatric disorder (Moscicki, 2001; NIMH, 2009b).

Mental illnesses cause extreme psychological suffering, decreased productivity and vitality, unemployment, and often lead to suicide (US-DHHS, 1999). Those with mental illnesses often exhibit psychological inflexibility by using avoidance strategies to manage pain or trauma (Kashdan & Rottenberg, 2010). They often have feelings of worthlessness and depletion of self-compassion (Neff, 2003b), experience stigma and self-stigma (Ritsher & Phelan, 2004), and have a tendency to avoid negative experiences along with habitual inclinations to control their environment (Kashdan & Rottenberg, 2010). The majority of those with mental illnesses do not seek treatment, with stigma of having a mental illness as a primary contributing factor (US-DHHS, 1999). These individuals may benefit from increased psychological flexibility, self-compassion, and acceptance, fostering the willingness to seek and continue with mental health treatment.

Individuals with mental illnesses often bypass living their lives with meaning and vitality in order to avoid painful experiences, and engaging in this type of experiential avoidance, or other aspects of psychological inflexibility, often cause individuals to suffer and not actualize their individual potential (Harris, 2008). These consequences of experiential avoidance and psychological inflexibility can be addressed through fostering psychological flexibility (Harris, 2008). This is done by involving various processes that reduce defensive responses towards internal experiences, and allow a value congruent life despite experiences of pain, illness, discomfort, challenges, or trauma.

The brain’s capacity to learn and change physically, called neuroplasticity, makes it possible for the mind to train the brain, and to respond to pain, in ways
conducive to increased psychological flexibility and decreased suffering (Begley, 2007; Davidson & Lutz, 2008; Doidge, 2007). Responses to painful life circumstances can involve either psychological inflexibility or psychological flexibility, where decreased suffering and promotion of valued living most often occur with the latter (Harris, 2008). Psychological flexibility may thus be an important aspect of mental health in general and specifically for those with mental illnesses.

Introduction to Psychological Flexibility

Psychological flexibility is “the ability to contact the present moment more fully as a conscious human being, and to change or persist in behavior when doing so serves valued ends” (Hayes, Luoma, Bond, Masuda, & Lillis, 2006, p. 7). The construct is derived from Acceptance and Commitment Therapy (ACT, pronounced as a word, not an acronym) (Hayes et al., 1999). ACT is a “third generation” or “third wave” psychological intervention with beginnings in modern behavioral psychology and Relational Frame Theory (RFT) (Hayes, Barnes-Holmes, & Roche, 2001). This third generation of cognitive psychology involves mindfulness-based approaches such as Functional Analytic Psychotherapy (FAP) (Kohlenberg & Tsai, 1991), Dialectical Behavior Therapy (DBT) (Linehan, 1993), Mindfulness-Based Stress Reduction (MBSR) (Kabat-Zinn, 1990) and Mindfulness-Based Cognitive Therapy (MBCT) (Segal, Williams, & Teasdale, 2002). As explained by Hayes et al. (2001), ACT stands out from other third wave therapies, and most other psychological theories, as it is an application based on its own extensive theoretical and empirical research on human language and cognition, RFT.
According to Hayes, Luoma et al. (2006), ACT fosters psychological flexibility through mindfulness and acceptance processes, in addition to committed action and behavior change processes. Although building on previous theory and research from the first two waves of therapy (psychodynamic and cognitive), third wave therapies have many differences. One difference pointed out by Hayes (2004) is that problematic thoughts or behaviors are not pathologized during treatment, as flexible approaches are taken that focus on underlying processes of psychological health by way of contextual and experiential change processes. A majority of other therapies tend to focus on extinguishing pain or reducing undesirable symptoms (Hayes, 2004). During treatment, these control strategies are released in an effort to foster acceptance of painful experiences and a defusion of the literality of cognitions (VandenBos, 2007). Empowering clients to accept pain, and themselves, leads to increased engagement in, and commitment towards, action that affirms one’s life values (Wilson, Sandoz, Kitchens, & Roberts, 2010).

Psychological flexibility is constituted through six interconnected core subprocesses. Its proposed mechanisms of action in alleviating suffering are acceptance, cognitive defusion, contact with the present moment, self-as-context, values clarification, and committed action (Ciarrochi, Bilich, & Godsall, 2010). These involve the ability to have awareness of one’s present experience and to be engaged in a specific activity without internal distraction, while having a nonjudgmental and open attitude (Hayes, Shenk et al., 2006). Mindfulness, a mental state of awareness, openness, and focus, is a key component in psychological flexibility (Fletcher et al, 2010). Mindfulness is increasingly being recognized as a means to develop self-awareness,
acceptance, emotional intelligence, and awareness of thought processes, while reducing reactivity to painful experiences, and fostering equanimity and healthy relationships (Harris, 2008). All six core processes are explained in the following chapter.

When describing the construct of psychological flexibility, it is important to describe the construct of experiential avoidance (EA), as they are in essence opposite experiential processes (Hayes et al., 1999). EA is an emotional avoidant behavior occurring when one is “unwilling to remain in contact with particular private experiences (i.e., bodily sensations, emotions, thoughts, memories, behavioral predispositions)” while one also “takes steps to alter the form, frequency, or situational sensitivity of these events, even when doing so causes psychological harm” (Hayes et al., 1996, p. 1154). Psychological suffering is often prolonged due to the process of EA, along with the process of cognitive fusion, during which thoughts are ineffectively regulated (Hayes et al., 1999). EA and similar defensive response patterns involved in psychological inflexibility are viewed by Hayes et al. (1996) as a pervasive occurrence within human behavior underlying psychopathology.

When considering the above statistics on mental illness and suicide, the importance of understanding the processes underlying suffering, psychological inflexibility, and mental illnesses, should appear more evident. This is particularly true when considering that an evidence base has been established supporting the efficacy of increasing psychological flexibility in regard to various disorders and diseases within a wide variety of populations, including adults and children (Hayes, Luoma et al., 2006). Research has indicated that psychological flexibility is associated with better mental health outcomes while inversely associated with various forms of psychopathology (e.g.,
Bach & Hayes, 2002; Bond et al., 2009; Chapman, Gratz, & Brown, 2006; Dahl, Wilson, & Nilsson, 2004; Kashdan, Barrios, Forsyth, & Steger, 2006; Zettle & Hayes, 1987).

The majority of research on psychological flexibility has been conducted within the area of clinical psychology. It has been found that psychological inflexibility is associated with anxiety, depression, poor work performance, inability to learn, substance abuse, phobias, antisocial behavior, low quality of life, social anxiety, trichotillomania, sexual abuse, risky sexual behavior, thought suppression, alexithymia, disability, and psychosis, along with symptomatology of Borderline Personality Disorder (BPD), Generalized Anxiety Disorder (GAD), and Obsessive Compulsive Disorder (OCD) (Hayes, Luoma et al., 2006; Ruiz, 2010).

In the area of health psychology, there has been extensive randomized controlled trials (RCT’s) providing evidence for the efficacy of increasing psychological flexibility among individuals with chronic pain, while also studies among those with nicotine addiction, diabetes, epilepsy, multiple sclerosis, cancer, human immunodeficiency virus (HIV) prevention, obesity stigma, weight loss, lupus, and tinnitus (Ruiz, 2010). Other studies have been completed in areas of autism, chess and sport performance, worksite stress, stigma, burnout, racial prejudice, and stigmatizing attitudes of therapists (Ruiz, 2010).

As reported by Hayes, Luoma et al. (2006), increasing psychological flexibility appears to be effective within a broad range of disorders, while also often more effective than other treatments such as Cognitive Behavior Therapy (CBT), especially with more severe conditions. These authors also reported that current outcome evidence suggests that ACT appears to not be working through general change processes, but through the
proposed processes of psychological flexibility, which are not frequently targeted in other treatments. There is an increasing amount of data on ACT for it to be considered an empirically supported treatment for various disorders, while ACT is currently listed by Division 12 of the American Psychology Association (APA) (2010) as an empirically supported treatment for both depression and chronic pain.

The fact that the reduction of psychopathological symptoms is not the primary aim of treatment (although often a byproduct), is pointed out by Wilson et al. (2010) as presenting challenges to psychological flexibility research in determining how it works. The authors explained that this is in part due to the fact that treatments to increase psychological flexibility, when compared to traditional psychological treatments, are different in regards to change processes and focus of treatment outcomes, where the six subprocesses involved in psychological flexibility are often viewed as mediators of change. Despite these challenges, the authors noted that much research on psychological flexibility has been, and is currently being conducted, which is providing continued strides in improving research methodologies.

Introduction to Buddhism, Attachment, and Self-Compassion

The following section gives an overview of Buddhism and core aspects of its philosophy and psychology. The Buddhist practices of mindfulness, meditation, nonattachment, compassion, and self-compassion are briefly described.

Buddhist Psychology and Response to Suffering

Buddhism refers to a collection of philosophical, psychological, ethical, religious, and cultural traditions that came about as a response to suffering (Kelly, 2008).
The Buddhist population has been growing in recent years, and currently the worldwide Buddhist population is estimated at between 1.2 billion and 1.6 billion, while the population in North America is estimated at 6.5 million (Snyder, 2009). Previous literature has provided much in terms of Buddhist psychology theory and applications to western counseling practice (Wallace & Shapiro, 2006), yet limited research is available. In addition, research focused on the growing Buddhist population may add to specific knowledge relevant to their mental health treatment.

The assumptions of both ACT and Buddhist psychology differ from modern psychology in many ways, especially in their explanations of suffering and how well-being is promoted (Ekman, Davidson, Ricard, & Wallace, 2005; Hayes, 2002). In ACT, aspects of psychological inflexibility, such as EA and cognitive fusion, are seen as the underlying cause of suffering and psychopathology (Hayes et al., 1996). Similarly, Buddhism emphasizes the roles of craving and aversion/avoidance in suffering, which are both forms of attachment (Harris, 1997). ACT did not emerge from Buddhism, but has a conceptual overlap with broad components of its philosophy and psychology (Hayes, Shenk, Masuda, & Bunting, 2006). For instance, while mindfulness processes are a key component of the construct of psychological flexibility, mindfulness and meditation practices have been practiced within Buddhism for thousands of years (Hayes, 2002).

Both disciplines stress the importance of meditation and mindfulness in facilitating understanding of the mental processes involved in suffering and its alleviation (Hayes, 2002), along with the importance of qualities such as nonattachment and compassion in developing cognitive, metacognitive, and psychological flexibility.
Theoretical and empirical research has provided support that the core Buddhist practices of meditation, mindfulness, nonattachment, and self-compassion play a significant role in aspects of mental health such as psychological flexibility (e.g., Fletcher et al., 2010; Hayes, 2002; Neff, 2003a, 2003b; Sahdra, Shaver, & Brown, 2010). Due to the focus of these practices in the daily lives of Buddhists, they may exhibit higher levels of psychological flexibility than non-Buddhists. To clarify this hypothesis, a brief overview of the Buddhist conception of and response to suffering is provided.

Suffering is the central theme within Buddhism, not with the intention of being pessimistic, but as a vehicle to gain understanding of the mind and self in order to end suffering (Glaser, 2005). In essence, Buddhism views mental health in part as arising due to one’s insight into the causes of suffering and taking committed action for its elimination (Safran, 2003). Buddhists are encouraged to observe their own suffering in order to gain insight and identify its many forms and causes, while practicing self-compassion and nonattachment towards oneself and one’s suffering (Harris, 1997).

The role of attachment in suffering is reflected in the Buddhist teachings of the four noble truths, which Schuhmacher and Woerner (1994) described as consisting of the truth of suffering, the truth of the origin of suffering, the truth of the end of suffering, and the truth of the path leading to the end of suffering (p. 109). Within Buddhism, life is considered unsatisfying, while containing all types of suffering, due to all conditioned pleasurable experiences being impermanent (Chen, 2006). Attachment to experiencing pleasure or avoiding pain keeps people in habitual cycles of suffering (Schuhmacher & Woerner, 1994). Suffering can be extinguished through nonattachment and elimination of the mind’s craving and aversion, and the means to bring this about is through the
eightfold path (Schuhmacher & Woerner, 1994). The eightfold path espouses a nonattached, compassionate, healthy, and practical way of living through valued actions that foster ethical and mental development (Hayes, Shenk et al., 2006).

There is no attempt to solely eliminate pain within Buddhism, but effort towards individual liberation through ending attachment and the conditioning of the mind (Chen, 2006; Hayes, 2002). Chen (2006) explained that the mind’s habitual reactive patterns and resultant suffering are in direct relation to one’s unwillingness to accept both painful and pleasurable experiences. Instead of rejecting pain and grasping pleasure, Chen continued, they are accepted with equanimity, involving a nonattachment to the mind’s reactivity, and allowing for increased awareness and clearer perception of reality.

Buddhism identifies the source of stress and suffering as coming from within the mind, not external circumstances (Chen, 2006). Buddhists are encouraged to respond to suffering, as described by Chen (2006), in a more profound way than just utilizing a particular coping mechanism when stress happens to occur. Buddhist coping is viewed by Chen as an ongoing state of transformation where coping with suffering is an end in itself versus a means to relieve stress or psychopathology. The author explained that Buddhist values such as nonattachment, equanimity, and compassion, are considered at the core of this response rather than just applying some aspect such as mindfulness or meditation as a method, treatment, or therapy for eliminating pain. Buddhism thus appears to view techniques such as cognitive defusion and mindfulness as quite limiting unless they are connected with a broader perspective of transformation of ego-attachment, values, entire way of being, and consciousness (Chen, 2006).
Mindfulness and Meditation

Approaches to psychological health are benefiting from applying aspects of Buddhist psychology to clinical practice (e.g., Epstein, 1995; Hayes, 2002; Kabat-Zinn, 1990; Linehan, 1993; Segal et al., 2002). Many health professionals and therapists are aware that the two Buddhist practices of mindfulness and meditation are increasingly being utilized as ways of coping with stressful situations and improving both physical and psychological health (Kelly, 2008). Unfortunately, there is limited understanding about the underlying principles of these practices, or about other forms of Buddhist practice, while research that has been conducted has rarely focused on the practices in a Buddhist context or within the Buddhist population (Kumar, 2002; Rosch, 2007).

Mindfulness and meditation play an important role in Buddhism and ACT. As reported by Sahdra et al. (2010), nonattachment and positive qualities, such as self-compassion and psychological flexibility appear to be developed through meditation. Meditation, as described by Walsh and Shapiro (2006), is a main focus of Buddhist practice that originated over 3,000 years ago and is widely researched in the field of psychology. This research has provided increased understanding of the interactions between the mind, brain, and body. Walsh and Shapiro reported that historically, meditation has been practiced in most all of the world’s religious and spiritual traditions, yet is most notable in those from eastern cultures such as Buddhism.

McGee (2008) described meditation as various practices where one observes non-judgmentally the sensations, thoughts, and feelings that are experienced, often leading to increased attention and concentration, in addition to calmness, relaxation, and mental balance. McGee explained that this training of the mind often leads to increased
awareness in daily life, with an ability to relate and respond to sensations, thoughts, and feelings in a more mindful and less ego-grasping manner. Meditation was traditionally based in religious practice and integrated with philosophies among various cultures (Lutz, Dunne, & Davidson, 2007). Today, as indicated by McGee, individuals are utilizing meditation outside of these traditions and cultures as research findings have found that meditation, especially when used in conjunction with mental health counseling, can promote mental health, character change, and resolution of neurosis.

In regard to psychological flexibility, Buddhism’s focus on mental development and mindfulness through contemplative practice is in essence to help train and develop one’s mind to be psychologically flexible in order to generate and incorporate insight, wisdom, and compassion into one’s life (Kumar, 2002; Lutz et al., 2007). These processes often begin with awareness of the mind’s cognitive activity, as Toneatto (2002) explained that all cognitive activity, including unpleasant cognitive states, have value and can increase an individual’s self-understanding. The author clarified that these states are important because just as physical pain is a signal that is important to health, unpleasant cognitions provide a motivation whereby one may change various aspects of their life, behavior, relationships, values, etc. Buddhist teachings on being mindfully aware of cognitions is highlighted by Toneatto as being a strategy that is extremely effective in reducing unskillful or harmful metacognitive activity.

Attachment and Nonattachment

Attachment is a psychological energy that distorts reality through attributing increased importance to particular individuals, objects, thoughts, feelings, concepts, or
sensations (Tart, 1997). This intrapersonal process of mind continues to keep one misperceiving whatever they are attached to, and to avoid whatever they perceive as painful (Dillon, 2008; Tart, 1997). In comparison, the practice of nonattachment involves

not automatically giving psychological energy to whatever thoughts, feelings and perceptions come along, but rather having a commitment to more realistic perception, thinking and feeling, and so using various psychological and meditative techniques to reduce these automatized attachments (Tart, 1997, p. 2).

In addition, the spaciousness and energy released through nonattachment allows for other experiences such as insight, compassion and self-compassion to arise (Harris, 1997; Tart, 1997).

Similarly, Sahdra et al. (2010) explained that attachment in Buddhism may present itself in various forms, such as feeling that one owns other individuals or objects, grasping or craving things, being defensive, avoidant, and feeling anxious about acquiring, escaping, or avoiding painful or dissatisfying aspects of life. The authors explained that attachment involves an inability to both deal with change and to be aware of impermanence, while also involves a sense of happiness that is dependent on circumstances that satisfy a craving or the ego (object-derived pleasure). There is a grasping for pleasurable experiences whereby one is fixated on the object of attachment and a longing to create or control ones experiences. Dillon (2008) explained that nonattachment cannot exist unless in relation to attachment, yet all attachment, no matter how conditioned the mind, has the potential to be transformed through nonattachment.

Because nonattachment is a release from mental fixations based on awareness of the impermanence of mental representations and of the self (Sahdra et al., 2010),
nonattachment may play a crucial role in the processes of psychological flexibility. This is supported by Sahdra et al. (2010), in their finding that “nonattachment can be expressed and therefore observed as psychological flexibility (lack of fixation, nonreactivity (even mindedness), more quickly recovering from upsets, allowing, releasing, supporting others’ capacity to choose, and a sense of ease)” (p. 118).

Nonattachment may then be expressed through the six core processes of psychological flexibility, allowing for committed action towards valued living and objectless pleasure, a pleasure or joy that is not dependent on objects or circumstances.

In summary, the inner transformative process of meditation can develop nonattachment and prevent unnecessary expenditure of mental and physical energy, and thus allow for the energy, openness, and insight needed for compassion of others and self to arise (Tart, 1997). Nonattachment within Buddhism is not asceticism or detachment from others or society, as it is more of a prerequisite for genuine caring and concern for others and the action needed to reduce suffering in the world (Harris, 1997). It includes consciously cultivating compassion, and through thought or action, providing and creating conditions which end the suffering of others (Lampert, 2005).

*Compassion and Self-Compassion*

Compassion in the Buddhist tradition is defined as a gentle approach towards oneself and others that is proactive and diminishes suffering (Schuhmacher & Woerner, 1994). Compassion is based on the oneness of all beings, is expressed to all sentient beings, and when accompanied by wisdom, provides one of the most effective tools, or skillful means, to apply to the suffering of others and oneself (Schuhmacher & Woerner,
Compassion is essential for psychological health, and is cultivated internally, not through external circumstances, which often occurs with self-esteem (Neff, 2003a). It involves an openness towards another’s suffering through understanding that everyone is imperfect and capable of making mistakes, along with involving a desire to create conditions that limit suffering (Neff, 2003a).

In the Buddhist tradition, compassion and self-compassion are inseparable, while both are also inseparable from suffering and the alleviation of suffering (Harris, 1997). Neff (2003a) explained that self-compassion involves mindful awareness, being kind and nonjudgmental toward oneself, and having an awareness of our common humanity where experience is perceived as part of human experience versus an individual and isolating one. According to Neff, mindfulness is applied to experiences of pain so that one does not fuse with or over-identify with them. Neff described that with self-compassion, an individual is able to be open to one’s own suffering without avoiding the experience, while becoming empowered to take steps to alleviate it. Both nonattachment and self-compassion have been found to promote physical and psychological health (e.g., Naidu & Pande, 1999; Neff, 2003a, 2003b; Sahdra et al., 2010). Nonattachment has been shown to have a significant positive relationship with both self-compassion, and psychological flexibility (Sahdra et al., 2010).

In summary, the ACT theory of psychological flexibility has parallels with the psychology of Buddhism. Theoretical and empirical research literature supports that the practice of Buddhist meditation may reinforce psychological flexibility through developing the six core processes of psychological flexibility. Nonattachment and self-compassion may either underlie or be associated with these processes.
Statement of the Problem and Purpose of the Study

The disturbing frequency of mental illness, suicide, and general suffering and dissatisfaction in the world has been documented. Addressing attachment, EA, and psychological inflexibility may be beneficial as treatment goals rather than exclusive symptom reduction. The study of life affirming action and values has received minimal research focus compared with the multitude of psychopathological symptoms and syndromes (Wilson et al., 2010). One indication of the importance of addressing EA and psychological inflexibility verses symptom reduction, is that EA has been found to influence the lives of suffering individuals even when symptoms and functioning have been improved (Eifert & Forsyth, 2005; Hayes et al., 1999).

Within the field of counseling, understanding the psychological processes involved in meditation, nonattachment, and self-compassion, and their role in promoting psychological flexibility and mental health, has the potential to improve treatment interventions designed to assist both practicing Buddhists and non-Buddhists. Those with mental illnesses are becoming treated more often by mental health counselors, rather than solely psychiatrists and psychologists. The constructs under investigation may have implications for many mental health professionals if found to be important determinants in the psychological health of those experiencing mental illnesses.

In addition, counselors in training could benefit, as Strosahl, Hayes, Bergan, and Romano (1998) have reported research findings indicating that training of therapists in the techniques of increasing psychological flexibility produces increased effectiveness. Mental health professionals may find that increasing their own psychological flexibility helps more effectively assist clients in developing such abilities in order to live a value-
congruent life despite challenging and painful experiences. Enhancing qualities found to
be involved in psychological flexibility may be a healthier, non-ego-centric approach
than focusing on the elimination of DSM-categorized symptomology or other emotional
pain. In addition, by looking at these variables through only one theoretical orientation
such as ACT, cognitive psychology, or psychology in general can be limiting. Buddhist
psychological concepts may have much to offer. Studying these constructs provides
promise in the understanding of these processes and in the relieving of suffering, which
is of value to both Eastern and Western psychologies.

Additional research in this area is warranted, as findings have indicated that there
is a strong and enduring effect of psychological flexibility on well-being (Hayes, Luoma
et al., 2006; Pull, 2008; Ruiz, 2010). Although based on extensive RFT research, there
is currently only a moderate amount of research focused on psychological flexibility and
a very limited amount of research on nonattachment and self-compassion (Neff, 2003b;
Ruiz, 2010; Sahdra et al., 2010). Extensive research is available on the practice of
meditation, yet the complexities of this research provide obstacles for application to
clinical practice (Caspi & Burleson, 2005; Rosch, 2007). Research has shown that
relationships exist among the variables of this study (e.g. Sahdra et al., 2010), yet further
research is needed to clarify the mechanisms underlying these relationships. This study
adds to the previous research on this topic.

The general purpose of this study was to add to the research literature in the
growing area of psychological flexibility. Specifically, this study investigated the
relationship between frequency of meditation practice, nonattachment, self-compassion,
and psychological flexibility among Buddhists. In addition it was examined whether
Buddhists exhibit higher levels of psychological flexibility than non-Buddhists (other religious/spiritually-oriented individuals). This study adds to existent research as no prior research to date has focused specifically on these relationships. Future research is needed to demonstrate how these specific processes influence individual levels of mental health. This study addressed these gaps in literature through examining and clarifying these relationships. Participants were recruited mainly through organizational e-mails, while data was compiled through an online survey utilizing standardized instruments to measure the constructs. Based on theory and research available on this topic, this researcher hypothesized that as individuals increase frequency of meditation practice, nonattachment, and self-compassion, the more they will experience psychological flexibility, and that Buddhists will exhibit higher levels than non-Buddhists.

General Research Questions

This study attempted to answer the following general research questions:

1. Are there differences in psychological flexibility between Buddhists and non-Buddhists?

2. Do specific Buddhist constructs or practices (meditation, nonattachment, self-compassion) relate to the degree of psychological flexibility among Buddhists?

Definition of Terms

In order to provide increased clarification of the terms used in this research study, the most frequently used terms are operationally defined in this section.

*Attachment (Buddhist).* An internally driven (intrapersonal) process of mind involving expenditure of psychological energy that distorts reality through attributing
increased importance to the self, or particular individuals, objects, thoughts, feelings, concepts, or sensations (Dillon, 2008; Tart, 1997).

**Experiential Avoidance (EA).** EA is “the phenomenon that occurs when a person is unwilling to remain in contact with particular private experiences (i.e., bodily sensations, emotions, thoughts, memories, behavioral predispositions) and takes steps to alter the form or frequency of these events and the contexts that occasion them” (Hayes et al., 1996, p. 1154).

**Meditation.** Dynamic and interconnected cognitive, emotional, and attentional regulatory strategies (Lutz et al, 2007) that involve a sustained focus of attention towards a specified object, along with awareness of, and nonreactively monitoring, the content of experience (Davidson & Lutz, 2008).

**Nonattachment.** Release from mental fixations that is “based on insight into the constructed and impermanent nature of mental representations” (Sahdra et al., 2010, p. 116).

**Psychological flexibility.** “The ability to contact the present moment more fully as a conscious human being, and to change or persist in behavior when doing so serves valued ends. Psychological flexibility is established through the six core ACT processes” (Hayes, Luoma et al., 2006, p. 7).

**Self-compassion.** Defined by Neff (2003a) as:

Being kind and understanding toward oneself in instances of pain or failure rather than being harshly self-critical; perceiving one’s experiences as part of the larger human experience rather than seeing them as isolating; and holding painful thoughts and feelings in mindful awareness rather than over-identifying with them. (p. 223)
Overview of the Remainder of the Study

Chapter II includes explanation of the theoretical and research literature related to the constructs of this study. Chapter III discusses the methodology of this study including the general research questions, independent and dependent variables, null and directional hypotheses, research design, data analyses, participants, and instruments. Chapter IV provides the results of the statistical analyses and descriptive and inferential statistics. Lastly, Chapter V includes a summary of the statistical results found, a comparison to previous study results, and discussion of results related to theoretical background. Limitations of this study and implications for future research and clinical practice are also presented.
CHAPTER II
REVIEW OF THE RELATED LITERATURE

This chapter describes the theoretical and empirical literature pertaining to the constructs of psychological flexibility, nonattachment, self-compassion, and meditation. The theoretical link between ACT and Buddhist constructs is also described.

Review of Theory on Psychological Flexibility and Mental Health

Suffering involves physical and/or psychological distress (VandenBos, 2007) created by the cognitive processes of the human brain and mind and how they function in response to pain (Fletcher et al., 2010). Although pain and suffering affects everyone, it is clearly notable in those diagnosed with psychiatric disorders. Psychiatric or mental illnesses are disorders that cause impaired functioning by way of a multitude of psychological and behavioral symptoms, of which may be caused by a combination of factors including organic, genetic, chemical, psychological, and/or social (VandenBos, 2007). Mental illnesses affect an estimated 1 in 4 American adults, while 1 in 17 are diagnosed with a serious mental illness (NIMH, 2009a). These disorders frequently involve pervasive suffering, impairment in living, unemployment, and decreased productivity and vitality, while often lead to suicide (US-DHHS, 1999).

One factor that has been found to be involved in a majority of mental illnesses and general suffering, is that of psychological inflexibility, where an individual is unable
to remain in contact with private internal experiences, nor able to take action to change behavior and live according to chosen values (Fletcher & Hayes, 2005). Psychological inflexibility involves processes of mind that cause one to struggle and get caught up in suffering. It is a pervasive occurrence in those with mental illnesses, who frequently exhibit psychological inflexibility through attachment behaviors and relying on avoidance strategies to manage pain or trauma (Kashdan & Rottenberg, 2010).

ACT is one approach that is being utilized to treat psychological inflexibility. ACT is a psychotherapy approach based on functional contextualism, a philosophical worldview where psychological events are interpreted as ongoing actions that are inseparable from current and historical contexts (Hayes, Luoma et al., 2006). Functional contextualism underlies RFT. ACT includes aspects of Behavioral Therapy, CBT, and RFT (Hayes, 2004). RFT is a theory of cognition, language, emotion, and motivation that involves relational conditioning processes (Fletcher & Hayes, 2005). Language is considered inherently problematic and creates psychological suffering, as cognitive processes such as problem-solving and analyzing create behavior that is contextually controlled and governed by rules (Bond, Hayes, & Barnes-Holmes, 2006; Hayes, 2005). Fletcher and Hayes (2005) clarified that when derived relations dominate processes of mind, the ongoing process of thinking is often not separated from products of thought, and thus creates mindlessness, EA, cognitive fusion, and psychopathology. Hayes, Masuda, Bissett, Luoma, and Guerrero, (2004) explained that in RFT, the force behind cognitions is derived from their context in experience versus their form or frequency, and that contexts frequently involve attempts to control and explain private experiences instead of experiencing them.
Unlike most psychology paradigms, ACT proposes that normal thought processes of the human mind often lead to suffering due to how the brain and mind have evolved (Harris, 2008). Human psychopathology and suffering are viewed as being caused by psychological inflexibility, which involves cognitive fusion/entanglement, EA, attachment of a conceptualized self, lack of present centeredness, and inability to take committed action towards values (Hayes et al., 1996). These processes, which are presented in the ACT Hexaflex model of psychopathology (Figure 1), will be described following a brief description of the ACT treatment approach.

Figure 1. ACT Hexaflex model of psychopathology (Hayes, Luoma et al., 2006, p. 6). Reprinted with permission.
As mentioned by Harris (2006) and Hayes et al. (1999), the majority of therapists and their clients have goals of reducing negative or psychopathological symptoms, thoughts, and feelings. Through interventions designed to increase psychological flexibility, both Harris and Hayes et al. clarified that clients are not encouraged to do this, but to instead invest previously wasted energy and time in addressing their psychological suffering through acceptance of all experience and an understanding of the role language plays in suffering. Attempting to change painful thoughts and feelings can lead to additional suffering, yet according to Hayes (2005), the core processes of psychological flexibility offer a new approach.

The basic treatment goal of ACT is to increase psychological flexibility through fully contacting the present moment and committing to behavior that leads to valued living (Hayes, Luoma et al., 2006). ACT, in other words, means: Accepting thoughts and feelings, Choosing directions, and Taking action (Eifert & Forsyth, 2005, p. 7). Psychological flexibility involves the interaction of the six core ACT processes of acceptance, cognitive defusion, contact with the present moment, self as context, values, and committed action (Ciarrochi et al., 2010). Hayes, Luoma et al. (2006) explained that psychological flexibility is established through the interconnections between these processes, and that they are not techniques to decrease psychopathological symptoms, but are healthy psychological skills. They share functional properties and are divided into two categories: acceptance and mindfulness processes, and commitment and behavior change processes (Hayes, Shenk et al., 2006). These categories are presented in the Hexaflex model of six core ACT processes (Figure 2), while a brief description of each process follows.
Contact with the present moment, often referred to as mindfulness, is an increased nonjudgmental awareness of one’s current experience including any thoughts, feelings, sensations, or perceptions (Ciarrochi et al., 2010). As described by Hayes, Luoma et al., 2006, psychologically inflexible individuals are often fixated and relate to current experience through cognitions framed in a feared future or conceptualized past. The authors explained that mindfulness, or being present, is connected with the other processes and allows them to be more effective.
Psychological acceptance is an alternative to EA. EA is an unwillingness to experience negative (or positive) feelings while not attempting to live life according to one’s values (Hayes, Luoma et al., 2006), and can involve a resistance to and disrespectfulness towards the realities of life. EA involves the presence of entangled thoughts (negative and evaluative), which create efforts at pain reduction, such as reason-giving, suppression, or inactivity (Hayes, Strosahl et al., 2004, p. 572). Psychological acceptance, on the other hand, is a willingness to experience negative (or positive) feelings while attempting to live life according to one’s values (Eifert & Forsyth, 2005). It can involve an embracing of and respectfulness towards life.

As explained by Hayes, Shenk et al. (2006), cognitive fusion occurs when language dominates behavior regulating strategies and influences perceptions more than direct experience. When out of contact with direct experience, cognitive fusion can often lead to EA (Hayes et al., 1999). ACT cognitive defusion techniques are described by Hayes, Luoma et al. (2006) as attempting to change one’s relationship to, and creating contexts that decrease, unhelpful functions of thoughts and experiences; this is done instead of trying to change their frequency or form.

Attachment to a conceptualized self, or self-as-content, is described by Bond et al. (2006) as leading to psychological inflexibility due to rigid self-referential cognitions about identity, beliefs, evaluations, or judgments. The authors indicated that self-as-context, or the observer self, allows for a freedom (or nonattachment) from this content through a sense of self that provides a stable and ongoing awareness. Hayes, Luoma et al. (2006) described this aspect of perspective-taking as being experienced as transcendental or spiritual, and noted that it is being found to be important in processes
such as empathy and theory of mind. These authors also explained that acceptance and defusion are developed through self-as-context awareness, as one is nonattached to and noncontrolling of their experiences.

Wilson et al. (2010) described values as ongoing patterns of activity that take a person in a particular meaningful direction, yet they are different from goals, as goals involve a future set of desired outcomes. More specifically, as stated by Wilson and Sandoz (2008), values are “a special class of reinforcers, that are verbally constructed, dynamic, ongoing patterns of activity for which the predominant reinforcer is intrinsic in the valued behavioral pattern itself” (p. 92). Lack of values clarification leads to psychological inflexibility, and Bond et al. (2006) emphasized that this happens when actions become dominated by pliance, which is social compliant behavior such as wanting to be right, look good, or please others, and by avoidant tracking, which is rule-governed behavior such as avoiding unwanted experiences. Wilson and Sandoz theorized that establishing clear values helps an individual to act more wisely and with more meaning. As mentioned by Wilson and Sandoz, similar to returning to the breath during meditation, an individual must return to awareness of their values on a regular basis, which requires commitment and action.

Inaction, impulsivity, and avoidant persistence are characterized by Hayes, Luoma et al. (2006) as distancing individuals from their values and leading to psychological inflexibility. The authors described how experiencing aversive internal stimuli may initiate EA or inaction, yet one is instead able to choose behavior that leads in the direction of one’s values. The authors stated that psychological flexibility is promoted in clients through encouraging them to develop ongoing patterns of committed
action based on their values, also indicating that the other four core processes are relatively unimportant without their connection to these two processes.

**Review of Research on Psychological Flexibility**

ACT research has primarily been conducted in the area of clinical mental health. The largest body of research (other than RFT research) supporting the ACT model of psychological flexibility has utilized various forms of the Acceptance and Action Questionnaire (AAQ) (Bond et al., 2011; Hayes, Strosahl et al., 2004), which measures psychological inflexibility/flexibility. To clarify, all studies within this review utilizing the AAQ or AAQ-II are measuring this construct.

Growing research evidence supports the efficacy of acceptance and mindfulness therapies within various disorders and conditions (Fletcher & Hayes, 2005). Hayes, Luoma et al. (2006), indicated that psychological flexibility is negatively related with nearly all psychopathological symptoms researched, and positively related with general health and quality of life instruments. A meta-analysis provided by Hayes, Luoma et al. examining the relationship between psychological flexibility and measures of psychopathology and quality of life (e.g., depression, post-traumatic stress, anxiety, trichotillomania, stress, pain, job performance, and negative affectivity) (p. 12). Thirty-two studies, involving 6,628 participants, investigated this relationship. Overall results of this meta-analysis found 74 correlations with levels of psychological flexibility, revealed that levels of psychological flexibility had a moderate to high relationship with psychological outcomes, and supported that higher psychological flexibility is associated with improved quality of life. Weighted effect size for all relationships was reported at
In eight studies, psychological flexibility correlated with the Beck Depression Inventory (BDI) at .50, while the average correlation with the General Health Questionnaire (GHQ), in three studies, was .40 (Hayes, Luoma et al., 2006).

Studies using the AAQ and the GHQ produced results showing that increased psychological flexibility was associated with a decreased probability of having a psychiatric illness (Bond & Bunce, 2000, 2003; Donaldson-Feilder & Bond, 2004). Results from the Bond and Bunce (2000) study found that increased acceptance predicted better mental health and more job control among 412 United Kingdom customer service workers, indicating the importance of psychological flexibility in mental and occupational health. The Donaldson-Feilder and Bond (2004) study found that higher levels of psychological acceptance and emotional intelligence predicted mental health and physical well-being. Findings may indicate that reduced attempts at controlling thoughts and feelings through acceptance/psychological flexibility may provide increased benefits for mental health versus attempts at consciously regulating them through emotional intelligence (Donaldson-Feilder & Bond, 2004).

Previous research has demonstrated a significant relationship between psychological inflexibility and depressive disorders (Hayes, Luoma et al., 2006). Twenty studies have obtained 22 correlations between a version of the AAQ and a standard measure of depression (i.e., BDI, Symptom Checklist-90-R, or other), where correlations have been positive in the range between $r = .37$ and $r = .77$ (across all studies, 3,323 participants, weighted correlation: $r = .55$) (Ruiz, 2010, p. 131). Findings support that increased psychological flexibility is associated with less depression and improved mental health.
Psychological inflexibility has similarities to the construct of cognitive fixation (the ability to think about something in only one way), and Zettle (2007) discussed a study showing that vulnerability for suicide has been found to be associated with cognitive fixation and rigidity in thinking (Reinecke, 2006). Zettle suggested that suicidal thinking is often a reflection of psychological inflexibility, and agreed with Chiles and Strosahl (2005), that if suicidality involves an attempt to eliminate suffering, that it represents a rigid/inflexible attempt at doing so. Further research is needed to provide support that suicidal thinking is a manifestation of psychological inflexibility.

Previous research has also demonstrated a significant relationship between psychological inflexibility and anxiety disorders (Hayes, Luoma et al., 2006). In regard to anxiety, 14 correlational studies have been conducted using the AAQ and measures of anxiety such as the State-Trait Anxiety Inventory and the Beck Anxiety Inventory. The correlations found were between $r = .16$ and $r = .76$ (weighted correlation of all studies, 3,043 participants, is $r = .52$) (Ruiz, 2010). Findings supported that increased levels of psychological flexibility correlate with decreased anxiety and increased mental health.

Avoidance strategies have frequently been targeted within psychological research, especially within trauma victims suffering from Post-Traumatic Stress Disorder (PTSD). Avoidant versus non-avoidant coping was examined in a meta-analysis by Suls and Fletcher (1985), where it was found that avoidance strategies (e.g., denial, distraction, repression, and suppression) were more adaptive in the short-run; but that non-avoidant strategies (e.g., attention, noticing, and focusing) had more positive long-term outcomes (p. 249). Kashdan and Kane (2011) studied how recovery from trauma and PTSD requires increased awareness, openness to experience, and committed
action towards values versus EA, and found that trauma survivors who relied on EA exhibited decreased well-being. If EA has long-term effects, this may also be true of other psychological attachment (of which avoidance is one type), and may be suggestive of the potential benefits of developing nonattachment.

In the field of health psychology, the most extensive research on psychological flexibility has been conducted in individuals experiencing chronic pain, as acceptance and other core processes of psychological flexibility are important to their functioning (Vowles & McCracken, 2008). Instead of controlling symptoms, increasing psychological flexibility facilitates acceptance of and willingness to experience pain and other negative experiences such as fear and anxiety (Pull, 2008). In a study of 115 chronic pain patients, McCracken and Vowles (2008) explored the importance of acceptance and values-based action, and found that they predicted the functioning of chronic pain patients later in time. Overlapping variance was reported by McCracken and Vowles between acceptance of pain and valued action, which as stated, may indicate their interacting aspects and that psychologically flexible behavior includes both.

ACT treatment outcome research is described below to provide further support of psychological flexibility as a factor in mental health. ACT is linked to positive outcomes and decreased psychopathology because it increases psychological flexibility (Hayes, Luoma et al., 2006), and some evidence of this is indicated and highlighted.

As reported in various meta-analytic and literature reviews (Hayes, Luoma et al., 2006; Powers, Zum Vorde Sive Vording, & Emmelkamp, 2009; Pull, 2008; Ruiz, 2010), ACT has proven to be efficacious in numerous psychological and physical disorders and conditions in which psychological inflexibility, EA, and cognitive fusion are present.
The studies reviewed provide preliminary evidence that positive treatment outcomes have been demonstrated among individuals with depression, anxiety, trichotillomania, psychosis, chronic pain, epilepsy, diabetes, substance abuse, smoking, prejudice, worksite stress, burnout, cancer, and OCD, including others. In the Hayes, Luoma et al. (2006) meta-analyses, it was found that within 20 RCT’s “ACT was superior to control conditions, wait-lists and treatment as usual (TAU) \( d = .99 \) at post-treatment and \( d = .71 \) at follow-up) and superior to structured interventions \( d = .48 \) at post-treatment and \( d = .63 \) at follow-up)” (Ruiz, 2010, p. 129).

According to Hayes (2002), “the techniques of cognitive defusion reduce the behavioral impact of thoughts” (p. 64). This was examined by Bond and Bunce (2000) who studied 90 adults in a media organization, who were compared between 3 months of an ACT treatment protocol, an Innovation Promotion Program (IPP), and waitlist control. Overall, the process analyses found that “positive behavioral and psychological outcomes in ACT were produced by increases in the acceptance of previously avoided private events” (Hayes, 2002, p. 64), and not by changing the content of thoughts. Findings support the role of acceptance versus EA, and thus psychological flexibility, in mental health and in coping with both emotional and occupational stress.

ACT has been evaluated in the treatment of depression. Zettle and Hayes (1986) compared an initial treatment version of ACT, with two versions of Beck’s cognitive therapy within twelve sessions. It was found that increasing psychological flexibility produced better outcomes than the two Beck cognitive therapies in reduction of depressive symptoms. Through a mediational analysis of this study, Hayes et al. (2006) found that increased changes in believability of depressive thoughts by mid-treatment
(measured by the Automatic Thoughts Believability Questionnaire), predicted an increased effect in scores on the BDI and Hamilton’s Depression Scale (at post-treatment and follow-up). In a similar study, Zettle and Rains (1989) compared a group ACT format with the two cognitive therapy versions, and although no statistically significant differences were found, analyses conducted by Hayes, Luoma et al. (2006) found medium differential effect size between the two forms of treatment \( d = .53 \) at post-treatment and \( d = .75 \) at follow-up (Ruiz, 2010). A mediational analysis by Zettle, Rains, and Hayes (2011) found “that the level of cognitive fusion at post-treatment mediated the effect at follow-up” (Ruiz, 2010, p. 138). These research findings clarify the role of cognitive fusion, believability of depressive thoughts, and psychological inflexibility in depressive symptomology, while providing support for the benefits of increasing psychological flexibility in those experiencing depression.

ACT has also been evaluated in patients with generalized Social Anxiety Disorder (SAD), OCD, and PTSD (Pull, 2008). Such disorders are thought to involve EA and restrictions in behavior, while being maintained through reactivity and cognitive fusion with internal experiences (Hayes, Orsillo, & Roemer, 2010). Dalrymple and Herbert (2007) studied 19 individuals with SAD in a 12-week treatment utilizing ACT and exposure therapy, where results indicated significant improvement in SAD symptoms and quality of life. Results indicated that changes in EA during beginning of treatment predicted decreases in the severity of symptoms by the end of treatment, and that decreases in EA may be a mechanism of change, while also indicating the potential efficacy of ACT for SAD (Pull, 2008, p. 57).
Twohig, Hayes, and Masuda (2006) evaluated an ACT intervention in four individuals with OCD, where after eight sessions, all participants demonstrated clinically significant reductions in compulsions. Increasing psychological flexibility has also been successful in treating individuals with PTSD, possibly due to the focus on reducing EA. PTSD has been conceptualized as being developed and maintained in direct relation to one’s excessive grasping at control of trauma-related experiences, such as thoughts, feelings, sensations, and memories (Orsillo & Batten, 2005; Pull, 2008). More research needs to be conducted to provide further support for the benefits of increasing psychological flexibility within the PTSD population (Batten & Hayes, 2005).

Preliminary support for increasing psychological flexibility in individuals with psychosis has also been documented. Bach and Hayes (2002) studied ACT treatment verses TAU in patients with severe mental illnesses experiencing hallucinations and delusions, and reported a 48% reduction in rehospitalization over 4 months, where ACT+TAU resulted in decreased hallucinations and believability of delusions. Gaudiano and Herbert (2006) replicated this study with similar results. Relevance to the topic of this study may revolve around the role that attachment to internal thoughts, sensations, or other internal stimuli may play in such disorders.

Results of another study involving 427 student participants found that paranoid individuals had lower self-esteem and higher levels of EA/psychological inflexibility than individuals not displaying paranoia, and that EA is especially harmful during high stress levels (Udachina et al., 2009). Further controlled research using larger samples is recommended by Pull (2008) before ACT-based treatment is provided as a regular treatment for psychosis or paranoia. Increasing self-esteem, self-compassion,
nonattachment, and psychological flexibility within this population may provide an increased ability to deal with illness and stress by way of reducing EA, which may help in reducing hospitalizations during high stress levels.

In a study involving 21 patients with chronic pain, Wicksell, Ahlqvist, Bring, Melin, and Olsson (2008) utilized psychological flexibility interventions to influence value-congruent behavior despite experiences of pain. Significant positive differences among the ACT treatment group were found compared to a waitlist control and TAU. Results indicated that increasing value-congruent behavior through psychological flexibility may help individuals improve functioning and live a more satisfying and meaningful life despite chronic physical pain and the psychological pain that accompanies it (Wicksell et al., 2008). In addition to the research on chronic pain, various other health disorders have also been studied. Positive outcomes of increasing psychological flexibility through ACT interventions have been reported in studies involving addictions, the prevention of HIV, diabetes management, multiple sclerosis, tinnitus, weight loss, epilepsy, cancer, breast cancer, and smoking cessation, among others (Hayes, Luoma et al., 2006; Ruiz, 2010).

The final study to be mentioned has particular relevance for the current study. In a study by Cook and Hayes (2010) of acceptance-based coping among Asian American and Caucasian Americans (N = 154 each group), it was found that Asian Americans (Chinese, Korean, and Japanese) utilized less acceptance-oriented coping than Caucasian Americans. The authors stated that literature is mixed when discussing whether Asian Americans use more acceptance-based coping or instead more control-based strategies given the differences in the many Asian cultures and religions such as Buddhism,
Taoism, and Confucianism, and other confounders. In addition, the authors reported that between the Buddhist participants (N = 27) and Christian participants (N = 72) means were nearly identical on all measures. This appears to go against one hypothesis of this study, yet the sample size of the study is small and the population is limited to three ethnicities, while the study is not focused specifically on the Buddhist population. The authors did suggest that psychological flexibility, as measured by AAQ, was found to be applicable to the Asian American population.

In summary, research findings have demonstrated the efficacy of psychological flexibility in numerous disorders, indicating that it may be important in alleviating suffering in those with physical and mental illnesses, where the experience of suffering is often profound. EA/psychological inflexibility underlies the suffering of these individuals because as they attempt to avoid or control thoughts and feelings, their pain and difficulties are increased (Cullen, 2008). This dissertation does not focus on specific psychological or physical disorders, yet focuses on the underlying processes involved in psychological flexibility among Buddhists.

Critique of Research on Psychological Flexibility

Although a moderate amount of research on psychological flexibility has been conducted in the past 20-plus years, several important methodological limitations and weaknesses have been brought to attention. Understanding these limitations is beneficial in expanding research, theory, and clinical practice in this area.

As described above, extensive research indicating significant correlations between psychological flexibility and measures of psychological well-being and
psychopathology have been reported. Despite a clear breadth in the theoretical and foundational development of the ACT approach, many aspects of the model and six core processes of psychological flexibility have yet to be fully explored empirically (Hayes et al., 2006), and thus it is important for researchers to focus on and connect the model and processes of ACT theory to research. Limited research is available and needs to be conducted on each of these individual processes to better understand psychological flexibility. Standardized measures of the six core processes are few and need to be developed, or at least subscales of the processes could be developed for the current measures of psychological flexibility. This would allow for a complete examination of the construct in relation to other psychological processes and constructs. In addition, the conceptual overlap with other constructs such as mindfulness, metacognition, self-compassion, nonattachment, etc. could be further examined.

Although the AAQ-II has made improvements on the initial AAQ version, limitations of current measures of psychological flexibility exist. For instance, clarification on whether the measure is measuring the construct experiential avoidance/acceptance (as initially called and measured with AAQ) or psychological inflexibility/flexibility (as measured with AAQ-II). Both are measures of several core processes that create psychological flexibility. Given the confusion of the measure being keyed both positively and negatively, it may be worthwhile to develop a new version of the AAQ-II, measuring psychological flexibility with subscales of the six core processes, which would clear up the confusion and could specifically measure all six processes.

There is currently a substantial amount of RCT’s demonstrating the efficacy of ACT for numerous disorders and conditions. The United States Substance Abuse and
Mental Health Services Administration (SAMHSA) has listed ACT as an empirically supported treatment in its National Registry of Evidence-based Programs and Practices (NREPP) (2010). ACT is also listed by Division 12 of the APA (2010) as an empirically supported treatment for both depression and chronic pain. Despite this, more research is needed to establish support for other disorders. Also, the fact that psychological inflexibility has been found to relate to so many psychological and physical disorders appears to raise questions regarding its mechanisms of action. Biglan, Hayes, and Pistorello (2008) believed that this may be due to EA/psychological inflexibility being a diathesis creating increased susceptibility and vulnerability to a multitude of stressors, while also exacerbating it.

Although many studies have evidenced the clinical efficacy of ACT in the treatment of various symptoms of disease processes, one should be reminded that the primary goal of treatment is not symptom reduction but increased awareness and acceptance of painful experiences in the process of taking committed action towards valued living. These differences in ACT change processes and outcome focus have presented challenges for ACT-based research (Ciarrochi et al., 2010).

Ciarrochi et al. (2010) described these challenges and examined mediational process of change research to explore why increasing psychological flexibility is effective and whether the processes are different than in other treatments. The authors explained that ACT research focuses on understanding how to predict and influence the six processes of psychological flexibility. The authors reported research indicating that changes in psychological flexibility are not correlates or consequences of reduced symptomology, as changes have been found to occur prior to changes in symptoms.
These findings indicated that high levels of psychological inflexibility may occur prior to stressors and moderate individual responses to stress. It was found that over 50 mediational studies exist, where results indicated that ACT-based treatment increases psychological flexibility through three main actions: “reduces believability of dysfunctional thoughts, increases acceptance of private experiences, and reduces believability that private experience act as a barrier to action” (Ciarrochi et al., 2010, p. 66). It may be beneficial for such research to develop more specific behavioral measures targeting and tracking specific mechanisms of change within particular psychological disorders, such as suggested by Twohig et al., (2006) for their study of OCD.

Research findings have provided additional support that ACT is working through the six core processes of change that are hypothesized in the development of psychological flexibility, and are working through different processes than other treatments such as CBT (Hayes et al., 2006). The empirical status of the ACT approach has recently focused on RCT’s comparing differential effects and methodology of ACT studies verses those employed in CBT studies (Ruiz, 2010). Outcome and component studies have found that acceptance and psychological flexibility based treatment is frequently more efficacious than control and TAU protocols, and other established treatments such as CBT (Hayes, Luoma et al., 2006; Levin & Hayes, 2009; Powers et al, 2009; Ruiz, 2010). Öst’s (2008) meta-analyses suggested that additional research is required and that the methodology of RCT’s can be improved with such things as better controlled studies and larger samples, such as recommended for the Wicksell et al. (2008) study of chronic pain patients. Most of the meta-analyses conducted, such as Suls and Fletcher (1985), could also be improved with an increase in the number of
studies analyzed. Yet these improvements are also needed for other treatments such as CBT. Further research is necessary to continue to clarify the mechanisms of change and provide support that different processes are being targeted (Hayes, Luoma et al., 2006). Comparing ACT and CBT in the treatment of various specific psychiatric disorders would also be beneficial.

Component studies have been conducted on acceptance, defusion, and values clarification procedures, yet further studies of other ACT processes are also needed. Mediational and processes of change research have shown significant results, yet weaknesses of these studies also exist. Some studies utilized measures that did not have published psychometric property data, some studies looked at very specific processes without consideration of the overall model, and some interventions were short and limited in scope (Hayes et al., 2006). As in all research, controlling for other potentially confounding variables could also improve current psychological flexibility research.

Treatment outcome studies have also displayed weaknesses. Many studies are limited to using self-report measures (e.g., McCracken & Vowles, 2004), using some nonstandardized measures, using short ACT treatments, and limitations with TAU comparisons, such as with the Bach and Hayes (2002) and Gaudiano and Herbert (2006) studies with patients with psychosis. Many studies, such the Udachina et al. (2009) study of the relationship between self-esteem, EA, and paranoia, and the McCracken and Vowles’ (2008) study of chronic pain, also rarely empirically examine nonlinearity or bidirectionality between constructs. Other studies, such as the Bond and Bunce (2003) study of customer service workers, focus on very specific populations; while others like Dalrymple and Herbert’s (2007) study of SAD, have small sample sizes, which make it
difficult to generalize to other populations and reduce statistical power. Generalizability would also be gained if studies, such as Kashdan and Kane’s (2011) study of PTSD, used less relatively healthy college students in the study of psychopathology, but instead included broader community samples. More true experimental designs, such as the Bond and Bunce (2000) study would also add support for the ACT treatment model.

A critique of the research has provided some insight into the links between the constructs of this study. For example, correlations of psychological flexibility with numerous constructs of psychological health support the possible relationship with self-compassion and nonattachment, which have also been correlated with well-being. For example, the Bond and Bunce (2000) and Donaldson-Feilder and Bond (2004) studies found that higher levels of acceptance predicted mental health, as might similar constructs of self-acceptance, self-compassion, and nonattachment. The demonstrated efficacy of increasing psychological flexibility in a multitude of psychological disorders may also indicate that such treatment is also beneficial for individuals lacking in abilities of self-compassion and nonattachment, revealing a possible nonlinear or bi-directional relationship between the constructs. For example, individuals high in psychological flexibility could be inclined to meditate more and thus develop more nonattachment and self-compassion. Or, individuals with high levels of nonattachment and self-compassion may be more inclined to then develop psychological flexibility.

In summary, the relationship between psychological flexibility and Buddhist practices is not well understood. In addition to the lack of research in this area, a review of the literature has shown that previous psychological flexibility research has some methodological weaknesses, and as with all research, should be interpreted with caution.
Despite the numerous populations studied in ACT research, no previous research has specifically focused on psychological flexibility among Buddhists and non-Buddhists. Neither has any research specifically examined the relationship between meditation, nonattachment, self-compassion, and psychological flexibility, nor among the Buddhist population. Exploring these areas may provide further understanding. This research study attempted to improve on previous research by utilizing only standardized measures, obtaining a large sample size, and broadening the research scope to investigate a specific population not yet studied. Further psychological flexibility research is needed, as it “will be useful in improving our understanding of the etiology, phenomenology, and treatment of anxiety conditions, general human suffering, and disruptions in hedonic capacity” (Kashdan, Barrios, Forsyth, & Steger, 2006, p. 1301).

Overview of Buddhism and Conceptual Overlap with ACT

Despite the many religious and ethical elements within the traditions of Buddhism, it does not apply a division between science and religion, and is often considered as more of a philosophy, psychology, or contemplative science (Pickering, 1995). Buddhism was founded in the 6th to 5th centuries B.C.E., by the historical Buddha (Siddhārtha Gautama) (Schuhmacher and Woerner, 1994). Through practicing meditation, the Buddha experienced an awakening to the truth of the causes of, and cessation of, suffering (Schuhmacher & Woerner, 1994). This involved insight into the laws of existence and interdependent origination, which involve physical and mental causes of events and the creation of the ego, an aspect of consciousness (Pickering, 1995). Over 2.5 millennia, Buddhism has spread throughout many countries.
Buddhism has brought conceptual and methodological innovations to psychological theory and practice (McGee, 2008). Clinical interventions derived from the practice of Buddhist and other types of meditation are providing new approaches to the alleviation of suffering and are increasingly providing benefits for both patients and professionals (Davidson, 2010). In the discipline of neuroscience, the wisdom of Buddhism and the practice of meditation has contributed to the revealing of information about how our brains work, distinctions between the brain and the mind, how our minds can literally change the structure of the brain, and how these functions shape our experiences (Begley, 2007; Davidson & Lutz, 2008; Doidge, 2007).

The theoretical basis for this research study focused on the parallels between ACT and Buddhist psychology. ACT is not based on Buddhism, yet deals with concepts and practices that have been a part of Buddhist philosophy for thousands of years (Hayes, Shenk et al., 2006). When compared with Western traditions, Eastern cultural traditions such as Buddhism more frequently integrate practices such as meditation, nonattachment, compassion, and mental equanimity and flexibility (Fontana, 2000; Kissman & Maurer, 2002). The inclusion of these aspects in Buddhist culture and daily life may provide an explanation to this study’s hypothesis that Buddhists would exhibit higher levels of psychological flexibility than non-Buddhists.

The ubiquity of human suffering is addressed in both Buddhism and ACT (Hayes, 2002). In Buddhism, human suffering is considered an intrinsic part of existence and its source is seen as being attachment, craving, and aversion distorting psychological processes (Shuhmacher & Woerner, 1994). Hayes (2002) explained that ACT also describes suffering as being an intrinsic part of existence due to the bi-
directional nature of human language, and that when individuals intensify their pain through cognitive processes and self-knowledge, pain then leads to EA and suffering. Therefore, ACT undermines the role of attachment in suffering through reducing the literality of language and EA (Hayes, Shenk et al., 2006). In providing an example of how Buddhist concepts and practices can be described more scientifically through ACT, Hayes (2002) described how the Buddha’s idea that attachment comes from sensations of craving pleasure and avoiding displeasure, involves aspects of RFT that explain these experiences as being directly related to processes of verbal construction such as comparison and evaluation. These verbal processes are thus seen by Hayes as underlying the Buddhist concept of attachment, which keeps individuals from taking committed action towards valued living.

Mindfulness and acceptance are processes described by both Buddhism and ACT. In the Buddhist process of eliminating craving, aversion, attachment, and suffering, one must first have awareness and acceptance of them (Hartman & Zimberoff, 2003). In applying RFT/ACT concepts, Hayes (2002) described how this elimination does not involve a change in the form or frequency of the attachment, craving, or aversion, but a different level of transformation whereby allowing the experience to exist, letting go (nonattachment) of any type of reaction to them can occur. This type of transformation is explained by Hayes as the result of cognitive defusion, whereby thoughts are changed within the context that they reduce taking effective action.

In Buddhism, healthy ways of dealing with pain do not involve suppressing or fixing it, but involve training of the mind to understand and have perspective about it (Hayes, Shenk et al., 2006). Manipulation of pain and emotions is not recommended as
the experiencing of them allows for acceptance and a letting go of resistance (Hayes et al., 1999). ACT and Buddhism practice techniques that utilize one’s innate ability to understand, use, communicate, and learn from emotions, while also responding effectively to them, which is called emotional intelligence (Ciarrochi & Godsell, 2006).

Both Buddhism and ACT also promote helping individuals to embody ethical, skillful, and valued action. Providing an example, Hayes (2002) explained how the Four Noble Truths and Eightfold Path are “orientations to action” (p. 64), versus just a set of beliefs, whereby one takes action in various realms to live a valued life. The Eightfold Path involves applying mindfulness and committed action to all aspects of life. The nonattachment aspects of psychological flexibility may allow one to live a valued life, without attachment to or exacerbation of painful circumstances, mental or physical illness, traumatic experiences, or any type of dissatisfaction.

Additional parallels are found when discussing experiences of self. Hayes (2002) explained the conceptualized self as an attachment to the conception of one’s identity or experience. Pagnoni, Cekic, and Guo (2008) suggested that meditation practice may disrupt this self-structure through equanimity, whereby one gains awareness of the attachment, fostering freedom of thought and action, in addition to nonattachment to the self. Hayes depicted the self-as-process concept as involving awareness of self through continuous changing processes, which have similarities with the Buddhist concepts of impermanence and interdependence. The transcendent or observer self (self-as-context), was explained by Hayes (2002) as a type of knowing or consciousness that fosters greater perspective-taking, allowing for an unchanging aspect
of self that provides clients in treatment with an unthreatening sense of self with which to confront painful experiences (p. 65).

Both ACT and Buddhism propose that increasing awareness of subtle internal experiences of pain allows for an increased ability to apply awareness during experiences of more severe pain (Kabat-Zinn, 2002). Through meditation, and awareness of impermanence, of the nonexistence of an independent self, and of causes of suffering, one gains an increased understanding of pain and ability to transform the experience into one that creates an opportunity for growth for oneself and others (Kabat-Zinn, 2002). This growth allows for one’s experience to change, where one can access their ability to take committed action with wisdom, compassion, and self-compassion, creating liberation from suffering (Kabat-Zinn, 2002).

In summary, similarities between the two approaches exit. Most importantly, both disciplines propose that the additional suffering that is attached to pain can be eliminated from one’s life by actually not trying to escape, reduce, suppress, or eliminate the initial pain (Follette & Pistorello, 2007). Experiencing pain is painful, yet avoiding or trying to get rid of pain creates even more pain and suffering (Hayes, 2002). Psychological flexibility, which may involve or be associated with aspects of nonattachment and self-compassion, may be essential in reducing such reactions to pain.

Overview of Theory and Research on Nonattachment

Attachment (āsakti or raga in Sanskrit [Skt.]) is the root of suffering in Buddhism, whether that attachment is expressed through excessive desire, craving, grasping, or avoidance (Schuhmacher & Woerner, 1994). Attachment involves an
unnecessary expenditure of mental energy towards grasping at a misperception of reality (Tart, 1997), which according to Sahdra et al. (2010), involves exaggerating admirable qualities or ignoring undesirable qualities of an object, experience, individual, view, belief, self-image, or life itself. If one is attached, they depend on a particular object or circumstance to feel secure, whereas without the particular object or circumstance they may feel internal insecurity, anxiety, or emptiness (Sahdra et al., 2010).

The activity of the mind and consciousness habitually grasps at subtle attachments, one after another, which fosters mindlessness (Krystal, 1994). The Pali word panañca is explained by Piyananda (1974) as describing this tendency of the mind to not only wander and grasp but often to become attached to thoughts where thoughts are embellished and elaborated on to a degree that they are perceived as absolute reality versus just thoughts. Piyananda explained that through culturalization and habitual patterns of the mind, the mind becomes conditioned, yet that through the practices of meditation and nonattachment this panañca mind can be brought under control. These practices enable the mind to become unconditioned, which is a quality of the highest level of consciousness attained through Buddhist practice and the state of liberation from suffering (Schuhmacher & Woerner, 1994).

The concept of nonattachment is at the core of Buddhist philosophy and is derived from the Sanskrit terms virāga and anāsakti (Pande & Naidu, 1992). According to Pande and Naidu (1992), virāga implies having an absence of attachment to desire and an indifference to pleasure and pain. For restraint of unhealthy aspects of the mind, mental bias and conditioning need to be deconditioned through sustained practices of nonattachment (Shakti, 2010). Pande and Naidu explained that anāsakti involves
acceptance of life circumstances without attachment to them, along with committed action (anāsakt action), without expectations of rewards or results. The authors stated that anāsakt action does not mean refraining from physical activity, but involves intense and impartial action while not being focused on evaluation or desire for success or gain. The authors further explained that anāsakt action thus involves an individual becoming one with his or her actions, minimizing energy expenditure, which allows for more energy to focus on producing increased quality and productivity among most daily tasks.

The Buddhist concept of nonattachment is often misperceived to mean detachment from life, when in actuality it is quite the opposite (Hoffman, 2007). Zimberoff and Hartman (2002) suggested that nonattachment parallels the Buddhist concept of emptiness (Skt.: śūnyatā), where everything is insubstantial and interdependent and thus connected to and inseparable from all things. In this context, the concept of attachment does not make sense, as there is nothing separate to attach to. Zimberoff and Hartman also explained that nonattachment parallels the Buddhist concept of impermanence (Skt.: anitya), where there is wisdom that all things are conditioned to change, and in response to recognizing this in ourselves and everything around us, nonattachment, compassion, and self-compassion are cultivated.

Nonattachment also has similarities to the Buddhist concept of equanimity, a balanced mind state where mental reactions are observed while the mind remains peaceful. Equanimity, as explained by Hanson (2009), involves observing the content passing through the mind, as it “breaks the chain of suffering by separating the feeling tones of experience from the machinery of craving, neutralizing your reactions to those feeling tones” (p. 109). The author indicated that this deconditioning and non-grasping
approach to life can allow the dormant potential of positive emotions and action such as compassion to arise. Eventually, nonattachment and equanimity lead to actions being guided by values and not by habitual craving, avoidance, or other reactions to positive or negative internal mental stimuli (Hanson, 2009).

Sahdra et al. (2010) explained that the ability to experience nonattachment is available to both Buddhists and non-Buddhists, as everyone is able to take part in contemplative activities that increase awareness and promote letting go, such as spirituality, art, psychotherapy, martial arts, or everyday activities. Other activities and life experiences other than meditative/contemplative ones are also observed by Sahdra et al. (2010) as having the potential to facilitate nonattachment. All challenging experiences, such as pain, illness, or trauma may provide a learning opportunity that initiates growth, letting go, and the capacity of the brain to change (Hanson, 2009).

Attachment is involved in many aspects of mental illness, as there is frequent grasping for circumstances to either be different or stay the same (Zimberoff & Hartman, 2002). Attempts are made to relieve pain or fill a psychological emptiness through attachment to objects, patterns of thinking, or through methods such as alcohol, sleeping, food, sex, etc. Developing nonattachment is indicated by Zimberoff and Hartman (2002) to have implications for many such illnesses and disorders. In developing the resilient qualities of nonattachment and psychological flexibility, when repeated pain and suffering occur, an individual may come to an understanding that one can persist in living a valued, meaningful life despite ongoing challenges (Wilson & Sandoz, 2008).

Nonattachment has relevance for the fields of counseling and psychology. Komagata (2009) explained that conceptually, Buddhist attachment is different than the
concept of attachment in Attachment Theory (Bowlby, 1988), where there exist patterns of attachment developed between child and caregiver which may influence future relationship dynamics.

Attachment in Buddhism is the basis of suffering, yet nonattachment does not exist without attachment (Dillon, 2008). Buddhism does not negate the importance of connectedness/attachment in human relationships, although it is viewed as a transient experience, where transcendence of this duality based type of attachment occurs in the process of developing nonattachment (Dillon, 2008). Dillon explored how psychotherapists utilize Buddhist approaches towards cultivating nonattachment within psychotherapeutic practice, and explained that helping clients to be nonattached to fixed identifications can allow for an opening and spaciousness, whereby their experience of self and other can emerge. Nonattachment is claimed by Dillon to be involved in lessening clients’ suffering through increasing awareness of such identifications, while reducing attachment to emotional content. As proposed by Dillon, it is crucial that therapists model self-acceptance and nonattachment, while understanding their own attachments and identifications, or else client change will not proceed beyond a cognitive level to an experiential level.

Very limited research is available on the construct of nonattachment. Pande (1990) developed a measure nonattachment which was based on Buddhist Karma Yoga. In a sample of 465, 30- to 50-year-old Hindu adults, Pande and Naidu (1992) utilized the Measure of Anāsakti to explore the role of anāsakti and health. The researchers reported modest correlations, indicating that individuals who exhibited higher levels of anāsakti experienced less distress and exhibited fewer symptoms of ill health when faced with
stressful life events than those who exhibited lower levels. Tewari and Srivastava (1998) modeled anāsakti as a skill with positive motivational implications, and utilized the Measure of Anāsakti in a study to examine whether aggression would moderate the relationship between anāsakti and mental health. Results did not support significant relationships of anāsakti with aggression and mental health. The authors explained that this may be due to the measure’s cultural influences, while Tewari (2000) indicated that there are difficulties in translating the Hindi measure to English.

Another measure of nonattachment, the Nonattachment Scale (NAS), was developed by Sahdra et al. (2010). The measure is based on Buddhist psychology. No other research has utilized the measure other than initial validation studies. These studies hypothesized that as nonattachment is developed through meditation, meditators would exhibit higher levels of nonattachment. Sahdra et al. found modest effect sizes between meditators and non-meditators on levels of nonattachment, and this was thought to be due to the inclusion of all forms of meditation that participants took part in. The results indicated that meditation may influence levels of nonattachment.

Sahdra et al. (2010) found that levels of nonattachment were correlated moderately to highly with other measures of psychological adaptive functioning ($rs = .35-.60$), and that nonattachment had a negative relationship with anxious attachment, avoidant attachment, dissociation, alexithymia, neuroticism, and materialism, while having a positive relationship with mindfulness, nonreactivity, noncontingent happiness, extroversion, and higher autonomous motivation. The study also found that nonattachment was positively related to agreeableness, conscientiousness, openness to experience, subjective well-being, and eudemonic well-being, while being inversely
associated with anxiety, stress, depression, and difficulties in emotion regulation.
Nonattachment was found by Sahdra et al. to increase positive interpersonal functioning, as levels of nonattachment were shown to have a positive relationship with empathy and generosity, while having a negative relationship with personal distress.

Although no other research explores the specific hypotheses of this dissertation study, both self-compassion and psychological flexibility were evaluated in establishing convergent validity in the initial development of the NAS. Nonattachment was found by Sahdra et al. (2010) to be positively related with psychological flexibility (as measured by the AAQ-II; .60, p < .001, alpha .87), and self-compassion (as measured by the Self-Compassion Scale [SCS]; .59 and .50, p < .001, alpha .92, .92). These significant correlations provide initial support for one hypothesis of this dissertation study. In addition, Sahdra et al. found that numerous Buddhist experts agreed that “nonattachment can be expressed and therefore observed as psychological flexibility” (p. 118). From a theoretical perspective, nonattachment may contribute to self-compassion and psychological flexibility through the energy that was previously tied up in attachment being available to more clearly perceive reality and the self, and to have the mental flexibility to take committed action towards valued living.

In summary, initial evidence is suggestive that nonattachment is associated with mental health. Significant relationships have been found between nonattachment and numerous constructs similar to psychological flexibility/inflexibility such as anxious attachment, avoidant attachment, dissociation, alexithymia, neuroticism (negatively) and openness to experience, mindfulness, nonreactivity, and noncontingent happiness (positively) (Sahdra et al., 2010). In addition, the links between psychological
flexibility, nonattachment, and self-compassion are also supported by the correlations found between the NAS, AAQ-II, and SCS. Nonattachment may be associated with, support, and/or be supported by the six core processes of psychological flexibility. These links are further clarified through review of theory and research on self-compassion and meditation.

Overview of Theory and Research on Self-Compassion

Concepts such as self-compassion, nonattachment, and cognitive flexibility have played a part in Eastern philosophy for centuries, whereas they are not yet a part of mainstream psychology. Knoblauch (1985) described such issues as being partially due to the differences in Eastern and Western values, such as intuition rather than rationality, and acceptance versus control. Knoblauch explained that Western psychology is often based on an individual putting volition into improving themselves through things like self-esteem or controlling symptoms. The author highlighted that Eastern approaches to change involve acceptance instead of self-enhancement. This appears consistent with both the Buddhist view of self-compassion and the ACT view of acceptance.

Self-compassion, as defined by Neff (2003a), and conceptualized in Buddhist psychology, involves experiencing feelings of kindness, caring, and understanding towards oneself versus self-critical appraisals; recognizing that one is not isolated, but a part of the human experience; while also being mindfully aware of painful thoughts and emotions versus over-identifying with or ruminating about them (p. 224). A nonjudgmental perspective is taken to all experience, including one’s limitations and negative affect (Neff, 2003b). Nonattachment appears to underlie these processes of
self-compassion. The healthy self-attitudes underlying self-compassion, paradoxically are arrived at through de-emphasizing (not being attached to) the separate self, rather than building up (being attached to) one’s personal identity (Neff, 2003b, p. 96), which has parallels with the self-as-context process of psychological flexibility.

Although scarce empirical research has been conducted on self-compassion, steps are beginning to be taken in this area of research, particularly following the development of the SCS. The majority of research on self-compassion involves defining self-compassion and its application to mental health. Neff (2003a) found that self-compassion had a significant negative association with anxiety, rumination, depression, self-criticism, and thought suppression, as well as a significant positive association with connectedness, emotional intelligence, self-determination, subjective well-being, and personal growth initiative (pp. 233-235). Studies such as conducted by Neff, Kirkpatrick, and Rude (2007) have indicated that self-compassion is positively correlated with psychological well-being, curiosity, exploration, wisdom, happiness, optimism, and positive mood; that “self-compassion helps buffer against anxiety when faced with an ego-threat”; and that self-compassion is associated with approach versus avoidance life goals (p. 139).

In order to investigate the cognitive and emotional processes involved in self-compassion that help individuals deal with unpleasant experiences, five studies were conducted by Leary et al. (2007). Individuals with higher self-compassion were found to exhibit less negative reactions to bad events, while self-compassion enabled individuals to accept responsibility for a negative experience and protected individuals from negative events differently, and in some cases more effectively than self-esteem (Leary
et al., 2007, p. 901). Findings also indicated that self-compassion is of importance for individuals with low self-esteem, as those with low self-esteem who were compassionate did as well as or better than those with high self-esteem. There is specific relevance for the current study due to the authors’ findings that self-compassion is related with an increased willingness to be aware of painful cognitions and decreased need for avoidance, or in other terms, decreased need for EA and psychological inflexibility.

Findings of the Leary et al. (2007) studies indicated that the positive benefits usually attributed to high self-esteem may instead be caused by self-compassion. Leary et al. (2007) felt further self-compassion research is warranted as self-compassion “accounted for more of the unique variance in outcomes that are usually regarded as correlates of self-esteem” (p. 902). In addition, self-compassion has been found by Van Dam, Sheppard, Forsyth, and Earleywine (2011) to be a better predictor of symptom severity, psychological health, and quality of life verses just mindfulness. In a community sample of 504 adults seeking help for anxiety, these researchers reported that self-compassion accounted for up to ten times the unique variance than mindfulness.

In a study with relevance to the construct of psychological flexibility, Thompson and Waltz (2008) hypothesized that exposure to trauma and the following PTSD symptoms may be related to self-criticism and avoidance of negative internal experiences. In a sample of 210 university students, 100 of which had experienced trauma, the relationships between self-compassion and PTSD symptoms were examined. Thompson and Waltz reported that avoidance symptoms significantly correlated with self-compassion ($r = -.24$, $p \leq .05$), indicating that individuals with higher self-
compassion may experience less avoidant strategies following a traumatic incident, and that experiential avoidance may play a role in the maintenance of PTSD symptoms.

Self-compassion has been studied in academic contexts. Two studies by Neff, Hseih, and Dejitthirat (2005) examined the “relationship between self-compassion, academic achievement goals, and coping with perceived academic failure” (p. 263). Results of the first study of 222 undergraduates found that self-compassion was positively associated with mastery goals while negatively associated with performance goals (Neff & Lamb, 2009). The second study confirmed the above findings and indicated a positive relationship between self-compassion and emotion focused coping strategies, and a negative relationship with avoidance oriented strategies (Neff et al., 2005). The distinction between mastery goals versus performance is similar to values versus goals in ACT, and anāsakt action versus attached action.

Self-compassion research has also examined group differences such as cross-cultural variables. In a study where levels of self-compassion were compared between individuals in Thailand, Taiwan, and the United States, Neff, Pisitsungkagarn, and Hseih (2008) found that levels were highest in Thailand, lowest in Taiwan, with the U.S.A. in the middle. The results found by Neff et al. were explained as being influenced by how Buddhist teachings of self-compassion in Thailand are applied frequently in daily life, and how in Taiwan there is a Confucian emphasis on improving oneself even through self-criticism. The results also found interdependent self-construal to be linked to self-compassion in only Thailand, whereas independent self-construal was linked to self-compassion in both the U.S.A. and Taiwan. Neff concluded that this suggests that East-West differences may not play as large a part in levels of self-compassion versus cultural
factors (Neff et al., 2008). Additional results revealed that in all three cultures, self-compassion correlated with decreased depression and greater life-satisfaction, suggesting a universal benefit of self-compassion (Neff et al., 2008; Neff & Lamb, 2009).

In a study by Neff (2003a), it was hypothesized that Buddhists should report higher levels of self-compassion than others due to the construct being derived from Buddhist psychology and is an aspect of Buddhist culture. Results reported revealed that 43 practicing Buddhists had significantly higher levels of self-compassion ($M = 23.19$) than the levels of 232 undergraduate students ($M = 18.26$): $F (1, 271) = 62.03$, $p < .005$. Length of Buddhist practice was correlated with level of self-compassion ($r = 0.35$), supporting that self-compassion may be enhanced through meditation practice.

Researchers have only recently begun to study the neuroanatomy of how happiness is promoted through compassion and meditation. Lutz, Brefczynski-Lewis, Johnstone, and Davidson (2008) researched the brains and experiences of Buddhist monks who meditate on and cultivate unconditional compassion. Results supported the role of limbic circuitry, and also indicated that the degree of compassion meditation training determined levels of activation taking place in brain circuitry that has been linked to empathy and theory of mind (Lutz et al., 2008). Findings of this study, along with studies by Neff (2003a) also indicated support that a relationship exists between self-compassion and compassion for others.

In summary, research evidence continues to grow suggesting that self-compassion is associated with mental health. Despite this, the role of compassion and self-compassion in psychological flexibility is not well defined although having similarities with a number of the six core processes, such as acceptance, defusion, self-
as-context, and mindfulness. Self-compassion may influence these processes, or in turn be affected by them. Mindfulness is a component of self-compassion and therefore may have conceptual overlap with psychological flexibility. The relationship between self-compassion and psychological flexibility are supported by research findings. For example, self-compassion had positive correlations with acceptance-oriented emotional processing (Neff, 2003a), and negative correlations with constructs similar to experiential avoidance, such as trauma avoidance symptoms (Thompson & Waltz, 2008), along with thought suppression and rumination (Neff, 2003a). Future research, such as principle component analysis, would be helpful in clarifying these relationships.

Overview of Theory and Research on Meditation

Both Buddhism and ACT propose that mindfulness and meditation practices promote psychological health through the development of qualities such as psychological flexibility, nonattachment, and self-compassion (Baer, 2010; Hayes, 2002; Kumar, 2002; Lutz et al., 2007). The practice of meditation, as described by McGee (2008) involves numerous practices where a practitioner observes non-judgmentally the sensations, thoughts, and feelings that are experienced, often leading to increased attention and concentration, in addition to calmness, relaxation, and mental balance.

Lutz et al (2007) defined meditation techniques as dynamic and interconnected cognitive, emotional, and attentional regulatory strategies. Davidson and Lutz (2008) described two main types of meditation: focused attention (FA) and open monitoring (OM), which are often combined. In FA meditation, one focuses attention in a sustained fashion on an internal experience such as one’s breath or a mantra that is repeated,
and/or an external focus on an object such as a spot on the wall or floor (Lutz et al., 2007). If one’s mind begins to wander to various thoughts or feelings, one simply and gently brings awareness back to the object of focus. OM meditation involves observing the content of experience in the moment, including sensations occurring within the body, emotions, the contents and procession of one’s emotional and cognitive patterns, and reactions to all three (Davidson & Lutz, 2008).

Mindfulness is a core process of both self-compassion and psychological flexibility. Tirch (2010) explained that through Buddhist meditation training mindfulness is developed, followed by compassion training, suggesting a directional relationship between the two. This relationship, along with the role of nonattachment in self-compassion is further supported by Kristeller and Johnson’s (2005) two stage process model of how meditation cultivates compassion for self and others. The first stage proposes that meditation increases one’s awareness of habitual patterns of avoidance and attachment, leading to disengagement, or nonattachment from, the conditioned habitual patterns. The second stage of this model involves how this letting go of conditioned responses then allows for an increased ability for awareness of others’ needs, and compassion for them and for the self to arise.

Following extended practice of meditation, the development of nonattachment and self-compassion may allow for these resources to be available when in pain. According to Neff (2003b), self-compassion may be related to self-regulation processes in coping with stress, as self-compassionate coping strategies parallel psychologically flexible coping rather than approaches to stress that involve EA strategies. Neff explained that self-compassionate individuals may have an increased ability to identify
ways in which their actions may be creating suffering and an increased flexibility to utilize more effective responses to painful experiences.

Techniques of meditation are increasingly being applied to counseling and psychotherapy practice and research, in addition to psychiatric and other medical practices (Kelly, 2008). The National Center for Complementary and Alternative Medicine (NCCAM, 2010), a component within the National Institutes of Health (NIH), conducts research on complementary and alternative medicine (CAM). A survey by the United States government in 2007 asked about the use of CAM in a sample of 23,393 U.S. adults and results showed that 9.4% of respondents had utilized meditation in the past 12 months, while 1% of a sample of 9,417 children had also (NCCAM, 2010). The occurrence of meditation practice in individuals with mental illnesses has not been well documented, yet research by Russinova, Wewiorski, and Cash (2002) presented findings on a national purposive nonprobability sample of 157 adults with serious mental illnesses, and found that 43% practiced meditation.

Extensive research has reported findings indicating that meditation is beneficial for both physical and psychological health (e.g., Miller, Fletcher, Kabat-Zinn, 1995; Moore & Malinowski, 2009; Pagnoni & Cekic, 2007; Segal et al., 2002, Shapiro, Astin, Bishop, & Cordova, 2005; Shapiro, Brown, & Biegel, 2007; Shapiro, Shapiro, & Schwartz, 2000; Teasdale et al., 2000; Walsh & Shapiro, 2006). According to McGee (2008) meditation research has indicated that it is effective in treating anxiety, stress, addictions, aggression, suicidality, depression, chronic pain, insomnia, and hypertension. Meditation has also been found to enhance functioning of cognitive flexibility, attention, insight, perceptual clarity and receptivity, problem-solving, executive processing,
decreased autonomic arousal/reactivity, improved immune functioning, cerebral blood flow, increased grey matter of brain, EEG activation and coherence, along with brain longevity, plasticity, and learning (e.g., Davidson et al., 2003; Lazar et al., 2005; Lutz, Greischar, Rawlings, Ricard, & Davidson, 2004; McGee, 2008; Pagnoni & Cekic, 2007).

The formation of the Mind and Life Institute in 1987, and the recent opening of the Center for Investigating Healthy Minds in 2010, are substantial achievements in creating a collaboration and research partnership between science and Buddhism. Research conducted by members of these centers has provided evidence that meditation practice can provide a means of consciously cultivating human qualities such as joy and compassion. Research has demonstrated that the practice of meditation is linked to brain processes suggestive of healthy functioning and indicates that meditation and mindfulness practices promote self-compassion, emotional flexibility, and mental health. Future research may lead to an understanding of the psychological processes and neural correlates of a nonattached, self-compassionate, and psychologically flexible brain/mind.

Research by Moore and Malinowski (2009) investigated the link between meditation, attention, mindfulness, and cognitive flexibility. Cognitive flexibility involves being able to restructure knowledge in an adaptive response to changing demands (Spiro & Jehng, 1990) or the ability to adapt attention and cognition to face new and unexpected conditions (Cañas, Quesada, Antolí, & Fajardo, 2003). Moore and Malinowski described mindfulness meditation as requiring an individual to repeatedly return to a state of increased awareness, and thus hypothesized that mindfulness training fosters non-habitual responding and increased cognitive flexibility. This non-habitual or nonattached response could be hypothesized to also underlie psychological flexibility.
Moore and Malinowski found that meditation and mindfulness were positively related to attentional performance and cognitive flexibility, and that meditators performed better than a meditation-naïve control group on measures of attention and mindfulness.

In two studies by Ortner (2006), mindfulness meditation was examined in the development of emotional flexibility and mental health. Ortner examined whether mindfulness meditation affects an individual’s ability to let go of (e.g., nonattachment to) emotions through emotional flexibility. Findings revealed that “a longer history of meditation practice was significantly associated with better disengagement of attention from unpleasant stimuli and with higher scores on questionnaire measures of mindfulness and psychological well-being” (pp. ii-iii). In the second study, Ortner (2006) reported that participants of a mindfulness meditation training group were the only group to exhibit improvement “in the ability to disengage their attention from unpleasant stimuli”, to exhibit a reduction in “ratings of feelings of intensity in response to unpleasant stimuli”, and to exhibit a reduction in physiological arousal (p. iii). In addition, the author reported that the meditation group exhibited increased scores on measures of self-compassion, mindfulness, and mental health. Meditation may produce increased emotional flexibility and improve mental health (Ortner, 2006).

Although a significant amount of positive treatment outcomes have been documented with the application of meditation, research has been difficult to standardize and quantify due to the numerous and multifaceted types of meditation and the difficulty in objectively observing the processes involved (Caspi & Burleson, 2005). Meditation research must consider methodological issues affecting research design and analysis.
been extensive, yet many studies have been based on small samples of meditators usually among one meditative tradition, making it difficult to generalize to the general population, and difficult to clarify which aspects of Buddhist, spiritual, or meditation practices are producing the observable effects (Fletcher et al., 2010). The effects could be from meditation alone or a combination of a multitude of other aspects of practice like nonattachment or self-compassion as this dissertation research explored.

Need for the Study and Rationale for the Approach

There is extremely limited research, and lack of understanding, about the roles that nonattachment, self-compassion, and meditation play in the core processes of psychological flexibility. Nonattachment and self-compassion appear to be associated with many of the core processes, and this understanding may provide insights into their mechanisms of action. No research to date has specifically examined whether meditation, nonattachment, and self-compassion are associated with psychological flexibility. No research has focused specifically on empirically examining levels of psychological flexibility among Buddhists and non-Buddhists. This study helps fill these gaps in research and provide additional understanding of the processes that have been shown to produce greater psychological flexibility. This study may also provide results relevant for informing future research.

The practices of meditation, nonattachment, self-compassion, and psychological flexibility are likely to be interconnected concepts within Buddhism and ACT. The underlying cause of suffering from a Buddhist perspective involves processes of attachment and avoidance which parallel processes involved in psychological
inflexibility and the ACT treatment process (Hayes, 2002). Both traditions distinguish alternate processes that allow for the elimination of suffering and the enhancement of physical, emotional, and spiritual health (Hayes, 2002). Research reviewed has indicated that meditation, nonattachment, and self-compassion have beneficial effects on both mental and physical health. It would be beneficial to understand such aspects of Buddhism more scientifically (Hayes, 2002), which could potentially add to the understanding of ACT-based theory and treatment. This dissertation adds to existent research supporting the role of Buddhist practices in developing psychological flexibility.

The first hypothesis of this study was that Buddhists will exhibit higher levels of psychological flexibility when compared to non-Buddhists. The second, third, and fourth hypotheses were that increased levels of meditation, nonattachment, and self-compassion are associated with increased levels of psychological flexibility among Buddhists. The reported findings of the psychological benefits of meditation, nonattachment, and self-compassion appear to provide a possible explanation for such hypotheses. Given that these core Buddhist practices are frequently incorporated into daily life, Buddhists may exhibit increased psychological flexibility. If Buddhists are found to have higher levels of psychological flexibility, it may indicate that such practices could benefit other populations as well. It may also indicate that Buddhists experiencing mental illnesses or other disorders could be especially suited for and benefit from ACT and Buddhist based treatment approaches. Research results indicative of the mental health benefits from these three interconnected Buddhist practices may
explain why these practices should reinforce psychological flexibility and mental health among this population.

Although the focus of this dissertation was not on mental health counseling, the above review of research has shown that Buddhist practices and psychological flexibility have been found to repeatedly correlate with mental health. Meditation practices, along with increased self-compassion have been found to be of benefit for health care professionals (e.g., Shapiro et al., 2005), and counselor trainees could benefit from training in these areas to improve counseling and counselor supervision effectiveness (Batten & Santanello, 2009). Training in meditation practices could potentially allow for increased self-compassion, nonattachment, and psychological flexibility. Enhancing self-care strategies such as self-compassion could involve healthier self-attitudes developed through nonattachment, decreasing attachment to one’s separate self, versus enhancing or embellishing one’s personal identity and self-esteem (Neff, 2003b). Beneficial effects could then potentially enhance client care and therapeutic outcomes.

Empathy, comprehending another’s emotional state, is commonly known to be an important aspect of counseling. Yet even with empathic skills, change within treatment may not be promoted if compassion and self-compassion are not present with the desire to relieve a client’s, and one’s own, suffering (Dillon, 2008; Glaser, 2005; Newsome, 2010). Meditation has been found to assist counselors in developing empathy (Lesh, 1970). Meditation may help increase awareness of self-as-context, the component of psychological flexibility that is a form of perspective-taking and which can allow individuals to understand perspectives of others, an essential quality of empathy (Fletcher et al., 2010). Meditation activates areas of the brain involved in introspection
and perspective-taking, which may be interconnected aspects of developing qualities such as empathy, compassion, and self-compassion (Fletcher et al., 2010). Therapists may benefit from Buddhist practices through additional research into understanding these parallels (Hayes, 2002). Further implications are explored in Chapter V of this manuscript.

Previous theoretical literature has provided much in terms of Buddhist psychology theory and applications to western counseling practice. Yet despite efforts such as studies by Phillips et al. (2009), which examined variables of religious coping among American Buddhists, there is very limited research in these areas. Studying Buddhist practices among Buddhist individuals may add to specific knowledge relevant to their mental health. Studying Buddhists also has the potential to initiate future research into treatment interventions specifically designed to assist this population, and help develop approaches which integrate Buddhist and western therapeutic traditions. In addition, since the majority of treatments in western psychotherapy have been derived from attempts at decreasing psychopathology, very little research has focused on variables related to cultivating positive attributes of mind in those with or without mental disorders (Ekman et al., 2005), as this dissertation attempted to do.
CHAPTER III

METHODOLOGY

The purpose of this study was to examine the Buddhist practices of meditation, nonattachment, and self-compassion as they relate to psychological flexibility among Buddhists. A review of the related literature revealed that relationships exist between these variables and that further research may clarify these relationships. In addition, this study examined levels of psychological flexibility of Buddhists compared with non-Buddhists. Prior research on the topic is limited and no past studies have addressed the specific hypotheses of this study. Therefore, the relationships between these variables were empirically examined by analyzing data collected from two international online samples. Hypotheses were tested through the methodology as it is delineated below.

This chapter provides a description of the study’s variables, research questions, null and directional hypotheses, instrumentation, research design, data analyses, participants, delimitations, and procedures.

General Research Questions

This study attempted to answer the following research questions:

1. Are there differences in psychological flexibility between Buddhists and non-Buddhists?
2. Do specific Buddhist constructs or practices (meditation, nonattachment, self-compassion) relate to the degree of psychological flexibility among Buddhists?

Null and Directional Hypotheses

*Null hypothesis 1.* There is no statistically significant difference between psychological flexibility among Buddhist and non-Buddhist participants.

*Directional hypothesis 1.* Buddhist participants will exhibit higher levels of psychological flexibility than non-Buddhist participants.

*Null hypothesis 2a.* There is no statistically significant relation between number of weekly hours of current meditation practice and psychological flexibility among Buddhist participants.

*Directional hypothesis 2a.* Among Buddhist participants, number of weekly hours of current meditation practice will be positively related to psychological flexibility.

*Null hypothesis 2b.* There is no statistically significant relation between number of years of regular meditation practice and psychological flexibility among Buddhist participants.

*Directional hypothesis 2b.* Among Buddhist participants, number of years of regular meditation practice will be positively related to psychological flexibility.

*Null hypothesis 3.* There is no statistically significant relation between nonattachment and psychological flexibility among Buddhist participants.

*Directional hypothesis 3.* Among Buddhist participants, there will be a positive relation between nonattachment and psychological flexibility.

*Null hypothesis 4.* There is no statistically significant relation between self-compassion and psychological flexibility among Buddhist participants.

*Directional hypothesis 4.* Among Buddhist participants, there will be a positive relation between self-compassion and psychological flexibility.
Independent and Dependent Variables

In order to test null hypothesis 1, psychological flexibility was the variable examined. Psychological flexibility scores were measured utilizing the Acceptance and Action Questionnaire – II (AAQ-II) (Bond et al., 2011). In order to test null hypotheses 2a, 2b, 3, and 4, and gain further understanding about the construct, psychological flexibility was the dependent variable, measured by the AAQ-II. Four independent variables were used. Frequency of current meditation practice and number of years of regular meditation practice were measured by specific questions on a demographic questionnaire. Nonattachment scores were measured utilizing the Nonattachment Scale (NAS) (Sahdra et al., 2010). Self-compassion scores were measured utilizing the Self-Compassion Scale – Short Form (SCS-SF) (Raes, Pommier, Neff, & Van Gucht, 2011).

Instruments

This section reviews information regarding the development, validity, and reliability of the three instruments and demographic questionnaire used in this study.

Demographic Questionnaire

A demographic questionnaire (see Appendix C) was developed by the researcher in order to gather information from the participants for describing the sample and providing meditation practice independent variables. Question 1 asked where the participant lived (U.S.A., Canada, Other). If “Other” was chosen the individual was notified that they were unable to participate in the study. Questions 2 and 3 on the questionnaire asked for age and self-reported gender (male, female, or transgender). Question 4 asked for current relationship status including single, married, separated,
divorced, widowed, involved in a committed relationship, or other. Question 5 asked for number of years of education. Question 6 asked for occupation including student, self-employed, household/domestic, medical doctor, office job, healthcare professional, business or administrative professional, unemployed, retired, and other. Question 7 asked for race including White/European, Black/African, Hispanic, Asian, Middle Eastern/Arabic, Native Indian/Alaskan Native, Multi-racial, or other. Question 8 asked how long participants have lived in either the U.S.A. or Canada.

Question 9 asked for religious, spiritual, or philosophical worldview (Buddhist, Taoist, Hindu, Sikh, Spiritual/not religious, Jewish, Muslim, Baha’i Faith, Protestant Christian, Catholic Christian, None, Agnostic, Atheist, or Other). Question 10 asked for number of years involved in the religious or spiritual orientation reported in question 9. After a provided definition of meditation, question 11 asked whether one meditates or not. Participants were notified that prayer, rosary, scripture reading, and other reflective practices were not included in the definition of meditation provided. If participant chose “Yes” they were directed to the last three questions, whereas those answering “No” were not. Question 12 asked for type of meditation most frequently practiced (vipassana, shamatha, mantra/koan/chanting, anapanasati, transcendental, mindfulness-based stress reduction, metta/loving kindness/tonglen, or other). Question 13 asked for frequency of meditation practice on average per week in numbers of hours. Question 14 asked for number of years of regular meditation practice.
**Acceptance and Action Questionnaire – II**

The Acceptance and Action Questionnaire – II (Bond et al., 2011) is a 7-item survey designed to obtain a total score for assessing an individual’s level of psychological inflexibility and experiential avoidance, or psychological flexibility when reversed scored (see Appendix D). Psychological flexibility is composed of six core subprocesses, and thus the AAQ-II is measuring psychological inflexibility/flexibility indirectly through the measurement of processes correlated with psychological inflexibility/flexibility (Ciarrochi et al., 2010). The seven items are rated on a 7-point Likert-type scale ranging from 1 “never true” to 7 “always true,” with intermediate scores indicating “very seldom true” (2), “seldom true” (3), “sometimes true” (4), and “frequently true” (5), and “almost always true” (6) (Bond et al., 2011). Scoring of the AAQ-II is conducted by summation of the seven item scores, which results in a total score ranging from 7-49, where higher scores indicate higher levels of psychological inflexibility, and lower scores indicate lower levels of psychological inflexibility. The measure is commonly reversed scored, where higher scores indicate higher levels of psychological flexibility, and lower scores indicate lower levels of psychological flexibility (Bond et al., 2011). The reversed scored method was utilized for this study.

Bond et al. (2011) explained that the AAQ-II is derived from an original version of the AAQ (Hayes et al., 2004), and that the original AAQ (AAQ-I) has proven to be useful, as demonstrated by Hayes, Luoma et al. (2006). Research utilizing the AAQ-I has found moderate to high significant correlations with general mental health and well-being, including stress, negative affect, quality of life, depression, anxiety, and psychological distress (Ciarrochi et al., 2010). Research has demonstrated predictive,
convergent, and criterion validation for the AAQ-I, in addition to longitudinal research having indicated that the AAQ-I predicts future mental health (Bond & Bunce, 2003; Hayes, Strosahl et al., 2004). The AAQ-I has had some difficulties obtaining sufficient alpha levels. The issues involved have been resolved with the development of the AAQ-II, and it has thus been recommended by Bond et al. that researchers use the AAQ-II instead of the AAQ-I. Both scales were designed to assess psychological inflexibility, and the two scales correlate at .82. The authors recommended that the AAQ-I can be used, but that using the AAQ-II may provide better psychometric results.

Bond et al. (2011) explained that a team of 12 ACT experts ensured the content validity of an AAQ-II item pool. Factor structure procedures included examination of corrected item-total correlations and exploratory factor analyses across three samples. Confirmatory factor analyses on the samples all indicated a single factor solution, finding that the AAQ-II is a unidimensional measure assessing the construct of psychological inflexibility (experiential avoidance). Bond et al. reported the results as indicating that it does so across different samples, including U.S. university students, financial service workers in the U. K., and substance abuse clients in New York City.

Although the initial factor analyses revealed a two factor solution and a 10-item scale, additional analyses revealed that the second factor included only the three positively worded items, “suggesting that the second factor resulted from a method effect and did not represent a second substantive dimension” (Bond et al., 2011, p. 23). Internal and external validity comparisons were examined for the 7-item and 10-item scales, and the two factor solution was rejected, so that the three positively worded questions were removed (Bond et al., 2011).
According to Bond et al. (2011), evidence of adequate factor structure, reliability, and validity of the AAQ-II across seven samples totaling 3,280 participants was found. The following mean scores were reported by Bond et al.: mean score for university students and community samples = 50.72 (SD = 9.19); mean score for substance misuse clients = 39.80 (SD = 12.55). The AAQ-II demonstrated good internal consistency, where values for Cronbach’s index of internal consistency were reported by Bond et al. to range between 0.76 and 0.87, having an overall average alpha coefficient of 0.83 across the seven samples tested. Test re-test reliability was examined by Bond et al. in a community sample over a 3-month period (α = 0.80) and a 12-month period (α = 0.78).

Concurrent, predictive, convergent, discriminant, and incremental validity of the AAQ-II were also evaluated. According to Bond et al. (2011), the measure “is associated with variables to which it is theoretically tied” (p. 23). An example was given by Bond et al., reporting that higher psychological flexibility is related to lower levels of psychological distress, depression, anxiety, whereas other results indicated that lower psychological flexibility may be a risk factor for mental illness. Results have also provided support for the construct by demonstrating that the AAQ-II predicts significant variance beyond other constructs, such as in mental health and work-related outcomes (Bond et al., 2011).

As explained by Bond et al. (2011), “the AAQ-II was not designed as a tool for diagnosing mental disorders”, as measures that are intended for diagnosis are based upon symptoms of a particular disorder, whereas assessing the six core processes of psychological flexibility is done so through a specific model of mental health (p. 22). The authors also explained that the AAQ-II was “not devised to establish a cut-off point
at which people are likely to meet the criteria for a diagnosable psychiatric disorder”, yet they did identify a range of AAQ-II scores related with cut-off points of three measures (Beck Depression Inventory - II [BDI-II], Global Severity Index of the Symptom Checklist-90-Revised [SCL-90-R-GSI], and the GHQ) (p. 22). These findings are suggested by Bond et al. (2011) to provide support that scores on the AAQ-II “indicate a clinically relevant level of distress” (p. 22).

Nonattachment Scale

The Nonattachment Scale (Sahdra et al., 2010) operationalizes the Buddhist concept of nonattachment in modern psychological terms, and was created to reflect how nonattachment may present among a normative American population (see Appendix E). The NAS is a 30-item survey designed to obtain a total score assessing an individual’s level of nonattachment. Questions are rated on a 6-point Likert-type scale ranging from 1 “disagree strongly” to 6 “agree strongly,” with intermediate scores indicating “disagree moderately” (2), “disagree slightly” (3), “agree slightly” (4), and “agree moderately” (5). Scoring of the NAS is conducted by reverse scoring of items 4, 13 and 24 (e.g., by subtracting their scores from 7), then computing the mean of the 30 items using the reversed scores of the three items. Score summation results in a score ranging from 1.0 to 6.0, where a higher score indicates a higher level of nonattachment and a lower score indicates a lower level of nonattachment (Sahdra et al., 2010).

No other research has utilized the NAS measure other than the initial four validation studies. Sahdra et al. (2010) described that after a brief survey of nine experts in Buddhism where 72 items were chosen from the initial 135 items, the first study was
then conducted in a sample of 382 American university students and a sample of 511 American adults. Exploratory factor analyses revealed that 30 items consistently loading highly (above .40) on a single factor, explained 35.24% of the variance, with a coefficient alpha of .94 (Sahdra et al., 2010, p. 119). Confirmatory factor analyses on a third adult sample (N = 302) also supported a single factor model. Internal validity was high in all three samples, and Sahdra et al. reported that the results of the first study found participants’ NAS scores to be structurally valid and internally consistent.

As nonattachment is developed through meditation, it was hypothesized by Sahdra et al. (2010) that meditators would obtain higher NAS scores than non-meditators. Known-groups validity was evaluated in the second study. Sahdra et al. reported that the 85 meditators in the study scored higher on nonattachment (M = 4.64, SD = 0.82) than the control group (M = 4.39, SD = 0.76), t(168) = 2.06, p = .04 (Cohen’s d = 0.32), with a more pronounced difference when the 22 meditators who practiced more than 3 hours per week (M = 4.98, SD = 0.72) were compared with 22 non-meditators (M = 4.33, SD = 0.79), t(42) = 2.85, p = .007 (Cohen’s d = 0.86) (pp. 120-121). NAS scores of meditators were also significantly related with the number of weekly meditation practice hours (r = .25, p = .02) and years of practice (r = .23, p = .04), indicating that the NAS is sensitive to differences in meditators (Sahdra et al., 2010, p. 121). The NAS found modest effect sizes between meditators and non-meditators. The authors believed that the modest effect sizes were due to meditation being broadly defined, as all forms of meditation that participants took part in were included.
The third study by Sahdra et al. (2010) was an online survey that was completed by 67 college students and then completed again 1 month later by 42 of the initial 67. An intraclass correlation (ICC) was conducted for the 42, revealing a correlation of .869 ($p < .0001$), indicating that 73.8% of variance was accounted for by nonattachment (Sahdra et al., 2010). Analyses looking at test-retest reliability “indicated that scores on the NAS are stable over time and may be suitable for use in short-term longitudinal studies” (Sahdra et al., 2010, p. 121). In the fourth study of 503 adults, Sahdra et al. attempted to show that the measure is different from other similar constructs, and so they examined convergent and discriminant validity along with correlations with other measures of well-being and psychological adaptive functioning. The NAS was reported by the Sahdra et al. (2010) as being correlated moderately to highly with measures assessing convergent validity ($rs = .35-.60$), and nonattachment was found to have a significantly negatively relationship with anxious attachment and materialism, while having a significantly positive relationship to “mindfulness, acceptance, nonreactivity, self-compassion, noncontingent happiness, and higher autonomous motivation” (p. 124).

Sahdra et al. (2010) reported that discriminant validity was demonstrated as the NAS revealed “null or inverse relations ($rs = .02$ to -.35) with avoidant attachment and all subscales of dissociation and alexithymia” (p. 124). Correlations between the NAS and indicators of well-being and adaptive psychological functioning were demonstrated. The authors reported that the NAS was inversely related to neuroticism and positively related to extroversion as measured by the Big Five Inventory. The NAS was also reported by the Sahdra et al. (2010) as being positively related with agreeableness, conscientiousness, openness to experience, subjective well-being, and eudemonic well-
being, while being inversely correlated with “depression, anxiety, stress, and difficulties in emotion regulation” (p. 124). In regards to the Buddhist theory of nonattachment being able to “promote positive interpersonal functioning, the NAS was found to be positively related to empathy and generosity (but as expected, inversely related to personal distress)” (Sahdra et al., 2010, p. 125).

Specific to this study, the AAQ-II and SCS measures were used in the initial development of the NAS. According to Sahdra et al. (2010), NAS scores were found to be positively related to psychological flexibility (as measured by the AAQ-II) and self-compassion (as measured by the SCS). Convergent validity was established between the constructs, as the correlation between NAS and AAQ-II scores was .60, p < .001 (alpha .87), and correlation between the NAS and SCS scores were .59 and .50, p < .001 (alpha .92, .92). This dissertation study aimed to extend the research of Sahdra et al. (2010) and further examine the relation between these constructs.

**Self-Compassion Scale – Short Form**

The Self-Compassion Scale – Short Form (Raes et al., 2011) is a 12-item survey designed to measure “levels of self-compassion as conceptualized in Buddhist psychology” (Neff, 2003a, p. 226) (see Appendix F). A total self-compassion score is obtained through six subscale scores assessing self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus over-identification (Raes et al., 2011). Questions are rated on a Likert scale from 1 “almost never” to 5 “almost always.” The total score is derived by taking the mean of each subscale and adding them together. The coding key is: Self-Kindness Items (reverse scored: 2, 6); Self-Judgment...
Items (11, 12); Common Humanity Items (5, 10); Isolation Items (reverse scored: 4, 8); Mindfulness Items (3, 7); and Over-identified Items (reverse scored: 1, 9). Full scale score summation results in a total score ranging from 12 to 60, where a higher score indicates higher self-compassion and a lower score indicates lower self-compassion.

The development of the original SCS involved looking at the factor structure of the SCS through a confirmatory factor analysis (CFA), whereby Study 1 found that a two-factor model demonstrated adequate fit to the data for each of the three components, creating a final six-factor model (Neff, 2003a). Twenty-six items were selected for the final version of the SCS, and a CFA was conducted to assess the fit of the six factors to these items (Neff, 2003a). According to Neff (2003a) the model fit the data adequately well (NNFI = .90; CFI = .91, p < .001) and internal consistency of the SCS was .92. Neff reported that construct validity of the SCS was also demonstrated. According to results reported by Neff (2003a), the original SCS predicted mental health outcomes, whereby it revealed significant negative correlations with the depression using the Beck Depression Inventory (r = -.51, p < .01) and anxiety using the Spielberger Trait Anxiety Inventory (r = -.65, p < .01), in addition to a significant positive correlation with life satisfaction utilizing the Life Satisfaction Scale (r = .45, p < .01), and a significant negative correlation with neurotic perfectionism (Discrepancy subscale of the Almost Perfect Scale) (r = -.57, p < .01).

Construction and validation of the short form version of the SCS involved two Dutch samples that were used to construct and cross-validate the SCS-SF factor structure (Raes et al., 2011). Sample 1 included 271 first-year psychology Dutch speaking university students, while sample 2 consisted of 185 adult participants. An English
sample of 415 students at the University of Texas at Austin, USA, was then utilized which provided validity for the measure. Psychometric properties were found to be good and similar for the English SCS-SF as for the Dutch SCS-SF, providing robustness to the findings.

Item correlations between the SCS and SCS-SF subscale scores were conducted. Raes et al. (2011) reported individual item correlations ranging between .68 and .88 for the full SCS, and .80 and .92 for the SCS-SF. Internal consistency reliabilities were conducted, and as reported by Raes et al. (2011), “the SCS-SF demonstrated adequate internal consistency (Cronbach’s alpha ≥ .86 in all samples) and a near-perfect correlation with the long form SCS (r ≥ .97 all samples)” (p. 250). Correlations between SCS and SCS-SF subscales for were reported by Raes et al. (2011) as “r = .91 for Self-Kindness; r = .93 for Self-Judgment; r = .84 for Common Humanity; r = .86 for Isolation; r = .87 for Mindfulness; and r = .88 for Over-Identification” (p. 252). Raes et al. also reported that a CFA on the SCS-SF provided support for the same six-factor structure and one higher-order factor, as found in the original SCS.

Raes et al. (2011) recommended that the long form SCS be used when subscale information is very important for a study. This was explained to be due to the SCS-SF subscales’ internal consistencies being relatively low. They ranged between .55-.81 for the Dutch SCS-SF and .54-.75 for the English SCS-SF. Reliabilities for all but one subscale (self-kindness) were above .60. The authors stated that Cronbach’s alphas of .60 and above are typically considered acceptable for group use, yet they still recommended using the SCS long form if subscale information is crucial. For total score information, the authors concluded that the SCS-SF represents a reliable and valid SCS
alternative, due to both having the same factor structure and good internal consistency, and a near-perfect correlation between the SCS-SF and the SCS.

The AAQ-II, NAS, and SCS-SF were chosen due to being standardized instruments with adequate reliability and validity, while also being the most prominently used in previous psychological flexibility, nonattachment, and self-compassion research respectively. The short form of the original SCS was chosen to facilitate administration.

Research Design and Data Analysis

This study implemented a quantitative versus qualitative research design, as the study was predictive as opposed to interpretive, specific hypotheses were formulated to test, data in the form of numbers not words, pictures, or objects, and objective measurement were required as opposed to subjective individual interpretation (Pagano, 2001). A nonprobability and convenience survey sampling method was utilized for this preliminary research. For hypothesis 1 of this study, a between groups design was utilized. A non-experimental, correlational design was most appropriate and was utilized for hypotheses 2a, 2b, 3, and 4 of this study. An experimental or quasi-experimental design was not appropriate as the study was interested in relationships between naturally occurring individual characteristics that were not being controlled or manipulated. The research design adequately tested the research hypotheses, used a large sample size, gathered and analyzed data from standardized instruments, and is replicable for other researchers.

Prior to examining the statistical hypotheses, descriptive statistics were examined for all variables including means, standard deviations, frequencies, and percentages for
information gathered from the Buddhist and non-Buddhist samples. Demographic variables included frequency of current meditation practice and number of years of regular meditation practice. Additional demographic information gathered included place of residence, age, self-reported gender, relationship status, number of years of education, occupation, race, number of years of U.S.A. or Canadian residency, religious/spiritual worldview, number of years of religious/spiritual affiliation, whether one meditates or not, and type of meditation practice.

Descriptive statistics were reported for all demographic variables. Inferential statistics were then used to test the hypotheses. In order to examine differences in psychological flexibility between Buddhists and non-Buddhists and test null hypothesis 1, significance testing included utilizing a one-tailed independent-samples \( t \) test. An independent-samples \( t \) test is a parametric statistic used to determine whether two independent data samples are statistically different from each other (Pagano, 2001). The null hypothesis is thus assumed when the means of the two groups are not significantly different. This analysis was appropriate for this study to compare means between the independent Buddhist and non-Buddhist groups. Assumptions underlying the \( t \) test include: the mean distribution of the sample is normal, the two samples are independent of each other, variables must be measured on an interval or ratio scale, and variances of the groups are similar (Pagano, 2001). The independent-samples \( t \) test was analyzed using the Predictive Analytics Software 18.0 (PASW), also called the Statistical Package for the Social Sciences (SPSS).

In order to examine whether specific Buddhist practices related to the degree of psychological flexibility among Buddhists, and test hypotheses 2a, 2b, 3, and 4, a
Pearson Product Moment Correlation Coefficients (Pearson r) analysis was conducted utilizing PASW. To determine significance of results, an alpha level of .01 was selected. Pearson r is an “index that measures the degree of linear relationship between two variables” (Newman & Newman, 1994). The AAQ–II full scale score was analyzed to determine whether it correlated with the NAS full scale score, the SCS-SF full scale score, and two meditation practice scores including frequency of current meditation practice and number of years of regular meditation practice.

To determine if the statistically significant independent variables were associated with or predicted psychological flexibility, a standard multiple regression analysis with an alpha level of .05 was conducted using PASW. Only those variables found to be statistically significant were entered in the multiple regression analysis. This researcher examined the amount of variance in the dependent variable (rating on the AAQ-II, that is, level of psychological flexibility) that was explained by the independent variables (ratings on the NAS, SCS-SF, and meditation variables; that is, levels of nonattachment, self-compassion, frequency of current meditation practice, and number of years of regular meditation practice).

Multiple regression is a multivariate statistical method for predicting a dependent (criterion) variable by two or more independent (predictor) variables, and can be used in passive, correlational research designs in order to describe the relationship between the independent and dependent variables (Heppner, Kivlighan, & Wampold, 1999). In standard, simultaneous multiple regression, all of the independent variables are entered into the equation at the same time as there is not a basis for entering certain variables before others (Heppner et al., 1999). Assumptions underlying multiple regression
include that the predictor variables have a high correlation with the criterion variable, while also having a low correlation, or multicollinearity, with each other (Pedhazur & Schmelkin, 1991). In order to satisfy the assumption of absence of multicollinearity, variance inflation factors (VIFs) were assessed using PASW.

Participants and Delimitations

The participants in this study were recruited through various Buddhist and non-Buddhist (other religious/spiritual) organizations and two social media groups to complete an online survey. This study included 602 participants who were partially delimited to those who are members of Buddhist-oriented or other religious/spiritual organizations. All participants were 18 years of age or older and were delimited to the geographic regions of the U.S.A. or Canada. Members of Buddhist organizations were informed that they needed to identify as Buddhist to complete the survey as a delimitation of members who may identify as another religion/spirituality yet take part in Buddhist practices. An initial message was read by the participants to inform them of these qualifications. In order to help allow for a diverse sample and enhance generalizability of results, delimitations were not placed on participants’ age, gender, race, occupation, relationship status, social economic status, or educational background.

For the independent-samples t test, a power analysis showed that with an alpha level of $p < .05$, and a hypothesized medium effect size, a power of at least .80 would be achieved with 64 participants (Cohen, 1992). This was achieved with a total sample size of 602. For the multiple regression, a power analysis revealed that with a total of four independent variables, an alpha level of $p < .05$, and a hypothesized medium effect size,
a power of at least .80 would be achieved with 84 participants (Cohen, 1992). The power should be set at a high level in order to have a high probability of rejecting a null hypothesis that is not true (Cohen, 1992). This was achieved with a Buddhist sample size of 299.

Descriptive statistics were calculated for participant demographic characteristics including residence, gender, relationship status, occupation, ethnicity, the use of meditation and types of meditation. The descriptive statistics for the Buddhist sample will be provided first followed by the statistics for the non-Buddhist sample.

The initial total Buddhist sample included 316 participants. A total of 305 participants completed the survey, whereas 11 dropped out after starting the survey and were eliminated from the study. Descriptive statistics and frequency distributions were conducted to determine that data were within possible range of values. The presence of outliers was tested by the examination of standardized residuals. Standardized values, z scores, were created for each variable of interest and participants were examined for values that fell above 3.29 and values that fell below -3.29 (Tabachnick & Fidell, 2006). After removing six participants that contained outliers, the total Buddhist sample size was then 299. All Buddhist sects/affiliations were included in the recruitment process and the sample was derived from across the U.S.A. and Canada. All Buddhist participants answered demographic and meditation practice questions, filling out the online demographic questionnaire. Information obtained is described and displayed in Table 2 of frequency distributions.

In terms of current residence, 86.5% of the Buddhist participants lived in the U.S.A. \( (n = 259) \), while 13.4% lived in Canada \( (n = 40) \). Regarding self-reported
gender, 47.8% of the participants self-identified as male (n = 143), 51.5% self-identified as female (n = 154), and 0.7% self-identified as transgender (n = 2). In terms of relationship status, 21.1% indicated that they were single (n = 63), 48.2% married (n = 144), 1.7% separated (n = 5), 12.7% divorced (n = 38), 1.7% widowed (n = 5), 12.7% in a committed relationship (n = 38), and 2.0% other (n = 6) (ordained/celibate monk or nun [n = 3], divorced/in a new relationship [n = 2], and polyamorous [n = 1]). When asked their occupation, 8.0% of participants indicated student (n = 24), 15.4% self-employed (n = 46), 0.7% household/domestic (n = 2), 1.0% medical doctor (n = 3), 7.4% office job (n = 22), 12.0% healthcare professional (n = 36), 11.7% business or administrative profession (n = 35), 8.7% retired (n = 26), 1.3% unemployed (n = 4), 10.7% teacher or university professor (n = 32), 3.3% counselor, psychologist, or social worker (n = 10), 7.0% religious professional: Buddhist monk, nun, bhikkhu, chaplain, minister, clergy, abbess, or meditation center worker/director (n = 21), 2.0% engineer (n = 6), and 10.7% other (n = 32). Due to the initial “other” category being very large, calculation was done to form the last four additional categories listed above. Following this, the specified other category then included: biologist, bail bond agent, firefighter, public employee, architect, executive director of school for deaf, media/tv, writer, cartographer, consultant, attorney (n = 2), farmer, lawyer (n = 2), mother, disabled, café manager, audio editor, designer, trade/advocacy, musician, warehouse, marketing manager, forensic scientist, IT project manager, entrepreneur, research director, corporation manager, software, corrections, and librarian.

In terms of ethnicity, Buddhist participants self-identified as 89.3% White/European (n = 267), 1.3% Black/African (n = 4), 2.3% Hispanic (n = 7), 3.7%
Asian \((n = 11)\), 1.0\% Middle Eastern/Arabic \((n = 3)\), 0.0\% Native Indian/Alaskan Native \((n = 0)\), 1.7\% multi-racial \((n = 5)\), and 0.7\% other \((n = 2)\) (Turkish, human, each with \(n = 1\)). In terms of religious/spiritual/philosophical affiliation, 100\% of participants \((n = 299)\) indicated that they identified as Buddhist.

Regarding meditation practice, 100\% \((n = 299)\) of Buddhist participants reported that they meditate. In terms of which type of meditation was practiced most frequently, participants reported 14.7\% vipassana \((n = 44)\), 38.8\% shamatha \((n = 116)\), 9.7\% mantra, koan, or chanting \((n = 29)\), 4.7\% anapanasati \((n = 14)\), 0.0\% transcendental \((n = 0)\), 1.7\% mindfulness-based stress reduction \((n = 5)\), 2.0\% metta \((n = 6)\), 9.0\% shikantaza/zen/zazen \((n = 27)\), 5.7\% vajrayana, dzogchen, or Tibetan \((n = 17)\), 3.0\% tantra \((n = 9)\), 6.7\% combination of types \((n = 20)\), and 3.9\% other \((n = 12)\). Due to the initial “other” category being very large, calculation was done to form the last four additional categories listed above. Following this, others specified then included: shine, dhyana, guru yoga, sadhana \((n = 3)\), mahamudra \((n = 2)\), yoga/movement meditation, awareness without a specific object, won hwa do, and mindfulness-Thich Nhat Hanh.

In addition to the Buddhist sample, descriptive statistics were also calculated for the non-Buddhist sample. The initial non-Buddhist sample had a total of 331 participants. A total of 305 non-Buddhist participants completed the survey, whereas 26 dropped out after starting the survey and were eliminated from the study. After removing two participants that contained outliers, the total sample size was then 303. Individuals of any religious affiliation were able to take part in the study, yet the religious organizations most represented included Taoist, Hindu, Sikh, Jewish, Muslim, Baha’i, Protestant Christian, and Catholic Christian. The sample was derived from
across the U.S.A. and Canada. All non-Buddhist participants also answered
demographic and meditation practice questions, filling out the online demographic
questionnaire. Information obtained is described and displayed in frequency
distributions in Table 2.

In terms of current residence, 88.8% of the non-Buddhist participants lived in the
U.S.A. \( (n = 269) \), while 11.2% lived in Canada \( (n = 34) \). Regarding self-reported gender,
47.2% of the participants self-identified as male \( (n = 143) \), 52.8% self-identified as
female \( (n = 160) \), and 0.0% self-identified as transgender \( (n = 0) \). In terms of
relationship status, 22.1% indicated that they were single \( (n = 67) \), 64.7% married \( (n =
196) \), 0.0% separated \( (n = 0) \), 5.3% divorced \( (n = 16) \), 0.7% widowed \( (n = 2) \), 7.3% in a
committed relationship \( (n = 22) \), and 0.0% other \( (n = 0) \).

When asked their occupation, 17.2% of non-Buddhist participants indicated
student \( (n = 52) \), 7.3% self-employed \( (n = 22) \), 2.0% household/domestic \( (n = 6) \), 0.7%
medical doctor \( (n = 2) \), 9.9% office job \( (n = 30) \), 4.3% healthcare professional \( (n = 13) \),
14.5% business or administrative profession \( (n = 44) \), 5.9% retired \( (n = 18) \), 0.3%
unemployed \( (n = 1) \), 5.0% teacher or university professor \( (n = 15) \), 1.3% counselor or
psychologist \( (n = 4) \), 26.4% religious professional: minister, priest, clergy, chaplain,
pastor, rabbi, imam, missionary, religious professional, or campus chaplain/ministry \( (n =
80) \), 1.7% engineer \( (n = 5) \), and 3.6% other \( (n = 11) \). Due to the initial “other” category
being very large, calculation was done to form the last four additional categories listed
above. Following this, the specified other category then included: police officer,
VP/social, aerospace, consultant, legal assistant, chairman/CEO, lab technician,
childcare, non-profit program director, retail, and event planner.
In terms of ethnicity, non-Buddhist participants self-identified as 80.9\% White/European \((n = 245)\), 4.6\% Black/African \((n = 14)\), 0.7\% Hispanic \((n = 2)\), 7.3\% Asian \((n = 22)\), 2.6\% Middle Eastern/Arabic \((n = 8)\), 0.3\% Native Indian/Alaskan Native \((n = 1)\), 2.0\% multi-racial \((n = 6)\), and 1.7\% other \((n = 5)\) (Mohawk/Irish, human, Jewish \([n = 2]\), and Iranian).

Frequencies and percentages were calculated for the non-Buddhist participants to assess their religion. In terms of religious/spiritual/philosophical affiliation, 0\% of participants \((n = 0)\) indicated that they identified as Buddhist, 1.0\% Taoist \((n = 3)\), 2.6\% Hindu \((n = 7)\), 1.3\% Sikh \((n = 4)\), 1.0\% spiritual/not religious \((n = 3)\), 11.1\% Jewish \((n = 34)\), 6.2\% Muslim \((n = 18)\), 9.2\% Baha’i Faith \((n = 28)\), 53.4\% Protestant Christian \((n = 163)\), 12.1\% Catholic Christian \((n = 37)\), 0.3\% Agnostic \((n = 1)\), 1.0\% Atheist \((n = 3)\), 0.3\% none \((n = 1)\), and 0.3\% other \((n = 1)\) (Interfaith). The majority of the participants were Protestant Christians \((n = 163, 53.4\%)\). The next most common response was Catholic Christian \((n = 37, 12.1\%)\). The majority of the sample \((n = 280, 92.0\%)\) consisted of Abrahamic religions (monotheistic with origins related to Abraham) including Protestant Christianity, Catholic Christianity, Judaism, Islam, and Baha’i Faith. Frequencies and percentages for non-Buddhist religions are presented in Table 1.
Table 1
Frequency Distributions of the Religions of Non-Buddhist Participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Buddhist religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taoist</td>
<td>3</td>
<td>1.0</td>
</tr>
<tr>
<td>Hindu</td>
<td>7</td>
<td>2.6</td>
</tr>
<tr>
<td>Sikh</td>
<td>4</td>
<td>1.3</td>
</tr>
<tr>
<td>Spiritual not religious</td>
<td>3</td>
<td>1.0</td>
</tr>
<tr>
<td>Jewish</td>
<td>34</td>
<td>11.1</td>
</tr>
<tr>
<td>Muslim</td>
<td>18</td>
<td>6.2</td>
</tr>
<tr>
<td>Bahai Faith</td>
<td>28</td>
<td>9.2</td>
</tr>
<tr>
<td>Protestant Christian</td>
<td>163</td>
<td>53.4</td>
</tr>
<tr>
<td>Catholic Christian</td>
<td>37</td>
<td>12.1</td>
</tr>
<tr>
<td>Agnostic</td>
<td>1</td>
<td>0.3</td>
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<tr>
<td>Atheist</td>
<td>3</td>
<td>1.0</td>
</tr>
<tr>
<td>None</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Regarding meditation practice, 19.5% \( (n = 59) \) reported that they meditate, while 80.5% \( (n = 244) \) reported that they did not. In terms of which type of meditation was practiced most frequently, participants reported 11.9% vipassana \( (n = 7) \), 6.8% shamatha \( (n = 4) \), 6.8% mantra, koan, or chanting \( (n = 4) \), 5.1% anapanasati \( (n = 3) \), 5.1% transcendental \( (n = 3) \), 49.2% mindfulness-based stress reduction \( (n = 29) \), 1.7% metta \( (n = 1) \), and 13.6% other \( (n = 8) \) (Taoist, Christian centering, sitting quietly, meditation, spiritual meditation/chanting, healing Tao system, nonspecific, and contemplation).
In comparing the two samples, the majority of the participants were residing in the USA for both Buddhist \((n = 259, 86.5\%)\) and non-Buddhist \((n = 269, 88.8\%)\) participants. Although nearly equal in number of male and female participants, more participants were female for both Buddhist \((n = 154, 51.5\%)\) and non-Buddhist \((n = 160, 52.8\%)\) participants. There were more married non-Buddhists \((n = 196, 64.7\%)\) than Buddhists \((n = 144, 48.2\%)\). The majority of the participants were White European for both Buddhists \((n = 267, 89.3\%)\) and non-Buddhists \((n = 245, 80.9\%)\). The occupation of all participants were widely spread with self-employed being the largest Buddhist response \((n = 46, 15.4\%)\) and religious professional being the largest non-Buddhist response \((n = 80, 26.4\%)\). It may be noteworthy that 7.0\% of Buddhists \((n = 21)\) were religious professionals, whereas 26.4\% of non-Buddhists \((n = 80)\) were religious professionals, possibly indicating a higher degree of religiosity and/or religious education among the non-Buddhists. All of the Buddhists practice meditation \((n = 299, 100\%)\) and the majority of the non-Buddhists do not \((n = 244, 80.5\%)\). Shamatha (Mindfulness, Concentration) was the largest practiced meditation type by Buddhists \((n = 116, 38.8\%)\) while Mindfulness Based Stress Reduction was the largest meditation type practiced by non-Buddhists \((n = 29, 49.2\%)\). Frequencies and percentages for participant demographic characteristics are presented in Table 2.
Table 2

Frequency Distributions of Demographic Information

<table>
<thead>
<tr>
<th>Research variable</th>
<th>Buddhist</th>
<th>Non-Buddhist</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>259</td>
<td>86.5</td>
</tr>
<tr>
<td>Canada</td>
<td>40</td>
<td>13.4</td>
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<tr>
<td>Gender</td>
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<tr>
<td>Male</td>
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<td>Female</td>
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<td>Transgender</td>
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<td>Married</td>
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<tr>
<td>Divorced</td>
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<td>Widowed</td>
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<td>1.7</td>
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<tr>
<td>In a committed relationship</td>
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<td>12.7</td>
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<tr>
<td>Other</td>
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<td>2.0</td>
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<tr>
<td>Occupation</td>
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<tr>
<td>Student</td>
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<td>Self-employed</td>
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<tr>
<td>Household/domestic</td>
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<td>0.7</td>
</tr>
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<td>1.0</td>
</tr>
<tr>
<td>Office job</td>
<td>22</td>
<td>7.4</td>
</tr>
<tr>
<td>Health care professional</td>
<td>36</td>
<td>12.0</td>
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</table>

*(table continues)*
Table 2 continued

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<th>Research variable</th>
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<th>Non-Buddhist</th>
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<td></td>
<td>$n$</td>
<td>%</td>
<td>$n$</td>
<td>%</td>
</tr>
<tr>
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<td>0.3</td>
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<td>3.3</td>
<td>4</td>
<td>1.3</td>
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<td>80</td>
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<td>Engineer</td>
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<td>5</td>
<td>1.7</td>
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<td>Ethnicity</td>
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<td>245</td>
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<td>22</td>
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</tr>
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<td>0.3</td>
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<td>Multiracial</td>
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<tr>
<td>Other</td>
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<td>1.7</td>
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<tr>
<td>Meditation</td>
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<td></td>
</tr>
<tr>
<td>Yes</td>
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<td>59</td>
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<tr>
<td>No</td>
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<td>0.0</td>
<td>244</td>
<td>80.5</td>
</tr>
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<td>Mediation type</td>
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</tr>
<tr>
<td>Vipassana/Insight/Wisdom</td>
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<td>14.7</td>
<td>7</td>
<td>11.9</td>
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<tr>
<td>Shamatha Mindfulness Concentration</td>
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<td>38.8</td>
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<td>6.8</td>
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<tr>
<td>Mantra Koan/Chanting</td>
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<td>9.7</td>
<td>4</td>
<td>6.8</td>
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</table>

*(table continues)*
Table 2 continued

<table>
<thead>
<tr>
<th>Research variable</th>
<th>Buddhist</th>
<th>Non-Buddhist</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n$</td>
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<tr>
<td>Anapansati Insight Concentration</td>
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<td>Transcendental TM</td>
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<tr>
<td>Mindfulness Based Stress Reduction</td>
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<td>Metta Loving Kindness/Tonglen</td>
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<td>Zazen/Zen/Shikantanza</td>
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<td>Tantra</td>
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<tr>
<td>Other</td>
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<td>3.9</td>
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</table>

Means and standard deviations were calculated for age, education, number of years living in the USA/Canada, hours of meditation per week, years involved in meditation, and years affiliated with religious or spiritual orientation. The average age for Buddhists ($M = 49.99, SD = 12.62$) was slightly larger than the non-Buddhists ($M = 44.83, SD = 16.04$). The education for both Buddhists ($M = 18.19, SD = 3.08$) and non-Buddhists ($M = 17.69, SD = 3.31$) were both close to 18 years of education. The Buddhists have lived at their location ($M = 47.12$ years, $SD = 14.67$) slightly longer than the non-Buddhists ($M = 41.28$ years, $SD = 18.13$). The 100% ($n = 299$) of Buddhists who meditate, on average spend over double the amount of time meditating per week than the 19.5% ($n = 59$) meditating non-Buddhists. For those who meditate, on average, the total years involved in a regular meditation practice were close to the same for the Buddhists ($M = 14.31$ years, $SD = 11.42$) and the non-Buddhists ($M = 14.45$ years, $SD = 94$).
Buddhists on average spent fewer years affiliated with their religious or spiritual orientation \( (M = 16.74 \text{ years}, \ SD = 11.93) \) than the non-Buddhists \( (M = 36.67 \text{ years}, \ SD = 18.02) \). Means and standard deviations for participant characteristics are presented in Table 3.

Table 3

Means and Standard Deviations of Participant Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
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<th></th>
<th>Non-Buddhist</th>
<th></th>
</tr>
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<tr>
<td>Age</td>
<td></td>
<td>M (49.99)</td>
<td>SD (12.62)</td>
<td></td>
</tr>
<tr>
<td>Education (years)</td>
<td></td>
<td>M (18.19)</td>
<td>SD (3.08)</td>
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<tr>
<td>Years lived in US/Canada</td>
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<td>M (47.12)</td>
<td>SD (14.67)</td>
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<tr>
<td>Hours of meditation per week</td>
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<td>M (6.66)</td>
<td>SD (5.72)</td>
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<tr>
<td>Years involved in meditation</td>
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<td>M (14.31)</td>
<td>SD (11.42)</td>
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</tr>
<tr>
<td>Years affiliated with religious or spiritual orientation</td>
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<td>M (16.74)</td>
<td>SD (11.93)</td>
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<td></td>
<td></td>
<td>M (36.67)</td>
<td>SD (18.02)</td>
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</tbody>
</table>

Procedures

After obtaining approval from the Institutional Review Board at The University of Akron to conduct this study, two convenience samples were recruited through multiple Buddhist and non-Buddhist (other religious/spiritually-oriented) organizations and two Buddhist-affiliated social media groups (BAYAS@yahoogroups.com, Northeast Ohio Buddhist News Facebook page). The organizations were obtained from online databases and directories such as the buddhanet.net World Buddhist Directory and multiple other religious-based directories. Individual administrators of Buddhist and
non-Buddhist organizations were contacted by e-mail with a request to forward the survey created for this study to that organization’s member listserv.

All administrators and participants were informed of the purpose, procedure, and of the fact that participation in the study was voluntary. After initial e-mail notification, participants selected an embedded link to obtain more information and to take part in the survey. A survey response rate was not able to be determined for this study due to some organizations not having member listservs, some organizations not forwarding to their listservs, and not knowing the number of listserv subscribers of those that did. Although, it can be estimated that the response rate was low due to the large number of individual organizations contacted through e-mail. For the Buddhists, 762 organizations were contacted, while for the non-Buddhists, 2,396 organizations were contacted. Thus, the response rate was much lower for the non-Buddhists, taking the 5-minute survey, versus the Buddhists, taking the 15-minute survey. This may reflect the more formal organizational structure of most monotheistic, non-Buddhist religions, and may also reflect an increased willingness among the Buddhist participants to take part in research.

The online assessment survey consisted of an informed consent form for Buddhists (see Appendix A) and non-Buddhists (see Appendix B) which contained researcher related contact information. The forms included the benefits that the research may bring to the general community as well as describing how the confidentiality of records was maintained and who has access to the records. Participants were informed that participation was voluntary and that their answers would be kept confidential. Participation was solely on a voluntary basis, as participants chose to complete or not
complete an online questionnaire after having read an initial e-mail description of the study.

In order to protect the confidentiality of the participants, no identifying information or signatures were requested. Participants indicated their informed consent to participate in the study by checking a box next to “I agree” and by completing the online survey. Buddhists completed the demographic questionnaire, AAQ-II, NAS, and SCS-SF, while non-Buddhists completed the demographic questionnaire and AAQ-II. The completed assessments were submitted directly online to the survey hosting service QuestionPro™, a confidential and secure website whereby data was collected. Eleven Buddhist participants and 26 non-Buddhist participants dropped out after starting the survey and were eliminated from the study. Once the Buddhist survey participants reached a total of 305 completed surveys, the Buddhist survey was ended/deactivated. Then, once the non-Buddhist survey participants in turn reached 305 completed surveys, that survey was also ended/deactivated. The average completion time was 15 minutes for the Buddhist survey and 5 minutes for the non-Buddhist survey. All data was inputted into PASW 18.0 for data analyses.

Summary of Methodology

The purpose of this research was twofold. First, was to compare psychological flexibility between Buddhists and non-Buddhists. Second, was to determine what relationship exists between meditation, nonattachment, self-compassion, and psychological flexibility among Buddhists. Participants included one convenience sample of Buddhists and one convenience sample of non-Buddhists solicited through
organizational memberships throughout the U.S.A. and Canada. Participants read an informed consent statement to inform them of study conditions and their rights regarding voluntary participation. Buddhist participants completed a demographic questionnaire, Acceptance and Action Questionnaire–II, Nonattachment Scale, and Self-Compassion Scale–Short Form. Non-Buddhist participants filled out the demographic questionnaire and AAQ-II. This study obtained a total sample size of 602 participants.

In summary, four types of statistical analyses were used for this study. First, descriptive statistics were reported of the means, standard deviations, frequencies, and percentages for demographic, independent, and dependent variables. Second, an independent t test was conducted to compare differences between Buddhist and non-Buddhist samples. Third, Pearson Product Moment correlation analysis assessed the relationships between nonattachment, self-compassion, meditation, and psychological flexibility. Fourth, a multiple regression analysis was conducted to determine the degree that the independent variables accounted for the variance of psychological flexibility. Results of these analyses are presented in the following chapter.
CHAPTER IV
RESULTS

The purpose of the present study was to statistically investigate the relation between nonattachment, self-compassion, meditation practice, and psychological flexibility. This chapter presents the statistical findings of the present study and is organized into three sections. First, the pre-analysis data screening section describes testing for missing data and outliers. Second, the descriptive statistics of the measures used in the study are presented. And third, the inferential statistics utilized to test the five research hypotheses of this study are described. A summary of the results is also provided.

Pre-Analysis Data Screening

In order to ensure data accuracy and validity, pre-analysis data screenings were conducted. The initial Buddhist sample included 316 participants. A total of 305 Buddhist participants completed the survey, whereas 11 dropped out after starting the survey and were eliminated from the study. The initial non-Buddhist sample included 331 participants. A total of 305 non-Buddhist participants completed the survey, whereas 26 dropped out after starting the survey and were eliminated from the study. Thus, a total of 610 participants completed the survey; 305 participants were Buddhist and 305 participants were non-Buddhist. Data was transferred into PASW 18.0 for
statistical analysis. Data was first examined to be certain that participants met all inclusion criteria. To take part in the study participants needed to be at least 18 years of age and reside in either the United States or Canada. No participants were removed for not meeting inclusion criteria.

Descriptive statistics and frequency distributions were conducted. The presence of outliers was tested by the examination of standardized residuals, where standardized values (z scores) were created for each variable of interest and cases were examined for values that fell above 3.29 and values that fell below -3.29 (Tabachnick & Fidell, 2006). Four participants’ responses to number of years of education, two participants’ responses to current hours of meditation per week, and two non-Buddhist AAQ-II scores were determined to be outliers. Since these eight individual data points were determined to be outliers, the eight participants were removed from the data. All participants were examined for missing data and nonrandom patterns; no missing data was found and no participants were removed due to missing data. The data from 299 Buddhists and 303 non-Buddhists were used in the analyses; there were 602 participants in total.

Descriptive Statistics

The Nonattachment Scale (NAS) and the Self-Compassion Scale – Short Form (SCS-SF) full scale scores were included as independent variables. Two additional independent variables obtained from questions on a demographic questionnaire included frequency of current meditation practice and number of years of regular meditation practice. The Acceptance and Action Questionnaire – II (AAQ-II) full scale score was included as the dependent variable.
Buddhist participants were scored on the AAQ-II, NAS, and SCS-SF while non-Buddhists were only scored on the AAQ-II. The AAQ-II composite scores range from 7 to 49, where higher scores indicated a greater level of psychological flexibility (lower levels of experiential avoidance). On the AAQ-II, the Buddhists scores ranged from 24.00-49.00 ($M = 40.51$, $SD = 5.10$) and the Non-Buddhists scores ranged from 22.00-49.00 ($M = 39.48$, $SD = 6.34$). On average, the Buddhists scored slightly higher on the AAQ-II than the non-Buddhists. The NAS total mean scores range from 1-6, where higher scores indicated higher levels of nonattachment. For Buddhists on the NAS, the scores ranged from 3.70 – 5.57, and the average score was 4.93 ($SD = 0.39$). The SCS-SF total mean scores range from 1-5 with higher scores indicating higher levels of self-compassion. For Buddhists on the SCS-SF, the scores ranged from 2.25-5.00, and the average score was 3.97 ($SD = 0.56$). Means and standard deviations for the AAQ-II, NAS, and SCS-SF scales are presented in Table 4.

Table 4

Means and Standard Deviations of Participant Scoring on the Acceptance and Action Questionnaire - II, Nonattachment Scale, and Self-Compassion Scale - Short Form for Buddhists and Non-Buddhists

<table>
<thead>
<tr>
<th>Variable</th>
<th>Buddhist</th>
<th></th>
<th>Non-Buddhist</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Acceptance and Action Questionnaire - II</td>
<td>40.51</td>
<td>5.10</td>
<td>39.48</td>
<td>6.34</td>
</tr>
<tr>
<td>Nonattachment Scale</td>
<td>4.93</td>
<td>0.39</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Self-Compassion Scale - Short Form</td>
<td>3.97</td>
<td>0.56</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Inferential Statistics

Inferential statistical results are reviewed in this section. First, preliminary analyses utilizing Cronbach’s alphas were conducted to examine the internal consistency reliability of the following scales: AAQ-II \((n = 602)\), NAS \((n = 299)\), and the SCS-SF \((n = 299)\). The alpha coefficients are presented in Table 5 where the scales are shown to be good according to the rules of thumb suggested by George and Mallery (2003) where “\(> .9 – \text{Excellent}, > .8 – \text{Good}, > .7 – \text{Acceptable}, > .6 – \text{Questionable}, > .5 – \text{Poor}, < .5 – \text{Unacceptable}\)” (p. 231).

Table 5

<table>
<thead>
<tr>
<th>Scale</th>
<th>(N)</th>
<th>Items</th>
<th>(\alpha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptance and Action Questionnaire - II</td>
<td>602</td>
<td>7</td>
<td>.851</td>
</tr>
<tr>
<td>Nonattachment Scale</td>
<td>299</td>
<td>30</td>
<td>.846</td>
</tr>
<tr>
<td>Self-Compassion Scale – Short Form</td>
<td>299</td>
<td>12</td>
<td>.807</td>
</tr>
</tbody>
</table>

Research Question 1

RQ1: Are there differences in psychological flexibility between Buddhists and non-Buddhists?

Directional hypothesis 1. Buddhist participants will exhibit higher levels of psychological flexibility than non-Buddhist participants.

To examine research question 1 and assess directional hypothesis 1, a one-tailed, independent sample \(t\) test was conducted to determine if there were differences in
psychological flexibility between Buddhists and non-Buddhists. To assess normality, skew and kurtosis were assessed to determine whether there was bias in the dispersion of the data and the degree of peakedness of the distribution. The t test is quite robust against any violations of normality (Morgan, Leech, Gloekner, & Barrentt, 2007). For both Buddhists and non-Buddhists, skew was found to be less than two and kurtosis less than seven, meeting the assumption of normality. The assumption of equality of variance was assessed with a Levene’s test. The test was significant, violating the assumption of equality of variance. Therefore, the Welch estimate for the t test was used. The results of the t test were significant, t (576.70) = 2.20, p = .028, suggesting that the Buddhist sample had significantly higher psychological flexibility than the non-Buddhist sample. Actual difference in mean scores was very small between the Buddhist (M = 40.51, SD = 5.10) and non-Buddhist (M = 39.48, SD = 6.34) samples. According to Cohen (1988), a d = .18 indicates a small effect size.

Research Question 2

RQ2: Do specific Buddhist constructs or practices (meditation, nonattachment, self-compassion) relate to the degree of psychological flexibility among Buddhists?

Directional hypothesis 2a. Among Buddhist participants, number of weekly hours of current meditation practice will be positively related to psychological flexibility.

Directional hypothesis 2b. Among Buddhist participants, number of years of regular meditation practice will be positively related to psychological flexibility.
Directional hypothesis 3. Among Buddhist participants, there will be a positive relation between nonattachment and psychological flexibility.

Directional hypothesis 4. Among Buddhist participants, there will be a positive relation between self-compassion and psychological flexibility.

To assess the four directional/alternative hypotheses listed above, four Pearson product moment correlations were conducted to determine if there were relationships between weekly hours of current meditation practice, years of regular meditation practice, self-compassion as measured by the SCS-SF, and nonattachment as measured by the NAS, with psychological flexibility as measured by the AAQ-II.

The results of the Pearson correlation between weekly hours of current meditation practice and psychological flexibility were significant, $r = 0.16$, $p = .006$, suggesting that as the hours of current meditation practice increased, psychological flexibility also increased. The results of the Pearson correlation between years of regular meditation practice and psychological flexibility were significant, $r = 0.24$, $p < .001$, suggesting that as the years of regular meditation practice increased, psychological flexibility also increased. The results of the Pearson correlation between nonattachment and psychological flexibility and were significant, $r = 0.56$, $p < .001$, suggesting that as nonattachment increased, psychological flexibility also increased. The results of the Pearson correlation between self-compassion and psychological flexibility were significant, $r = 0.58$, $p < .001$, suggesting that as self-compassion increased, psychological flexibility also increased.

According to Cohen’s standard (1988), where less than .30 represents a small effect size, .30-.49 represents a medium effect size, and .50 or larger correlations
represent a large effect size, the correlation coefficients of .16 and .24 both represent small effect sizes, while .55 and .58 represent large effect sizes between each pair of variables. The results of the Pearson correlation analyses provided support for the directional/alternative hypotheses 2a, 2b, 3, and 4. Results of the Pearson correlation analyses are presented in Table 6.

Table 6
Pearson Correlations between Weekly Hours of Current Meditation, Years of Regular Meditation, Nonattachment, and Self-compassion with Psychological Flexibility

<table>
<thead>
<tr>
<th>Variable</th>
<th>Psychological flexibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly hours of current meditation practice</td>
<td>.16**</td>
</tr>
<tr>
<td>Years of regular meditation practice</td>
<td>.24**</td>
</tr>
<tr>
<td>Nonattachment</td>
<td>.56**</td>
</tr>
<tr>
<td>Self-compassion</td>
<td>.58**</td>
</tr>
</tbody>
</table>

*Note.* *p* < .05. **p** < .001.

To further assess research question 2, a multiple regression analysis was conducted. An alpha level of .05 was used to indicate statistical significance. This analysis was conducted to determine if, for Buddhists only, do levels of nonattachment (NAS), self-compassion (SCS-SF), hours per week of current meditation practice, and number of years of regular meditation practice predict psychological flexibility (AAQ-II). The independent variables included were those shown to have a significant relationship with the dependent variable. The relationship was assessed based upon the Pearson product moment correlations from null hypotheses 2a, 2b, 3, and 4.
The assumptions of normality and homogeneity were assessed and verified by observing scatterplots. Normality assumes a straight line and homogeneity assumes scores are rectangularly distributed above and below the regression line (at 0) (Pagano, 2001). The assumption of absence of multicollinearity was assessed by examining the variance inflation factors (VIFs). All VIFs were under 10, verifying the assumption.

The results of the multiple regression were significant, $F (4, 294) = 53.64, p < .001$, suggesting that the full model of NAS, SCS-SF, hours of meditation per week, and number of years of regular meditation practice accounted for ($R^2$) 42.2% of the variance in psychological flexibility. Standard multiple regression analysis results indicated that three of the four independent variables each made an independent statistically significant contribution towards the prediction of the Buddhist participants’ levels of psychological flexibility. In other words, self-compassion, nonattachment, and years of regular meditation practice each independently accounted for a significant amount of variance in psychological flexibility while at the same time controlling for the influence of the other independent variables. Self-compassion demonstrated the strongest influence, followed by nonattachment and then years of regular meditation practice.

Results showed that years practicing meditation regularly is a statistically significant predictor of the AAQ-II, $t = 2.16, p = .032$, suggesting that for every one year increase in regular meditation practice, the AAQ-II score increased by ($B$) 0.05 points. The results also showed that the NAS was a statistically significant predictor of the AAQ-II, $t = 5.52, p < .001$, suggesting that for every one unit increase in NAS score, the AAQ-II score increased by ($B$) 3.98 points. Results showed that the SCS-SF was a
statistically significant predictor of the AAQ-II, $t = 7.14$, $p < .001$, suggesting that for every point increase in SCS-SF, the AAQ-II score increased by ($B$) 3.52 points. Lastly, results showed that current hours of meditation per week was not a statistically significant predictor of the AAQ-II ($t = 0.62$, $p = .619$). The overall regression model was significant and null hypotheses 2b, 3, and 4 were rejected in favor of the directional/alternative hypotheses. Results of the regression are presented in Table 7.

Table 7

Multiple Regression with Nonattachment, Self-compassion, Years Practicing Meditation Regularly, and Hours of Meditation per Week Predicting Psychological Flexibility for Buddhists

<table>
<thead>
<tr>
<th>Source</th>
<th>$B$</th>
<th>SE</th>
<th>$\beta$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours of meditation per week</td>
<td>0.21</td>
<td>0.04</td>
<td>0.02</td>
<td>.619</td>
</tr>
<tr>
<td>Years practicing meditation regularly</td>
<td>0.05</td>
<td>0.02</td>
<td>0.10</td>
<td>.032*</td>
</tr>
<tr>
<td>Nonattachment</td>
<td>3.98</td>
<td>0.72</td>
<td>0.30</td>
<td>.001**</td>
</tr>
<tr>
<td>Self-compassion</td>
<td>3.52</td>
<td>0.49</td>
<td>0.38</td>
<td>.001**</td>
</tr>
</tbody>
</table>

Note. * $p \leq .05$. ** $p \leq .001$.

Summary of Results

Null hypothesis 1 was rejected in this study, as the results of the $t$ test were significant, suggesting that the Buddhist sample had significantly higher levels of psychological flexibility than the non-Buddhist sample, although the actual difference in mean scores was very small. Results of the Pearson correlation analyses provided support for directional/alternative hypotheses 2a, 2b, 3 and 4. Psychological flexibility
(AAQ-II full scale score) was found to be significantly related to frequency of current meditation practice, number of years of regular meditation practice, nonattachment (NAS full scale score), and self-compassion (SCS-SF full scale score).

In regard to the standard multiple regression analysis, three of the four null hypotheses (2b, 3, 4) were rejected in this study. Results indicated that three of the four independent variables made statistically significant contributions towards the prediction of the Buddhist participants’ levels of psychological flexibility. Self-compassion demonstrated the strongest influence, followed by nonattachment and then years of regular meditation practice. Null hypothesis 2a was not rejected in this study, indicating that current hours of meditation practice per week did not make a statistically significant contribution towards the prediction of psychological flexibility among Buddhists. Despite this, the overall regression model was significant, accounting for \( R^2 \) 42.2% of the variance in psychological flexibility. The implications of the results of this study for theory, clinical practice, research, and counselor education and supervision are discussed in the following chapter.
CHAPTER V
DISCUSSION

This chapter discusses the study findings related to the two research questions. This chapter is organized into six sections: descriptive summary and interpretations of statistical results, comparison of the results of this study to previous theory and research, implications for theory, clinical practice and research, implications for counselor education and supervision, limitations of the study, recommendations for future research, and summary of discussion and implications.

Descriptive Summary and Interpretation of Statistical Results

The main purpose of the present study was to empirically investigate nonattachment, self-compassion, and meditation practice as they relate to psychological flexibility among Buddhists. In addition, this study examined levels of psychological flexibility of Buddhists compared with non-Buddhists. Participants in the study consisted of 299 Buddhist and 303 other spiritual/religious oriented individuals. Total sample size was 602 adult participants of multiple races, while the majority of both samples were White/European. The majority of both samples were living in the United States of America, while the rest lived in Canada. The average age of the Buddhist sample was 50 years, while the average age of the non-Buddhist sample was 45 years, and both males and females were approximately equally represented in each sample.
Both samples were highly educated. The non-Buddhist sample consisted of predominantly Protestant and Catholic Christians (in addition to mainly other monotheistic religions: Baha’i Faith, Judaism, Islam).

Null hypothesis 1 was rejected in this study. For the first set of analyses, a $t$ test was conducted to compare differences in psychological flexibility among Buddhists and non-Buddhists. Results revealed that psychological flexibility as measured by the Acceptance and Action Questionnaire - II full scale score was found to be slightly higher among the Buddhist sample, with an associated very small effect size (utilizing suggested labeling cutoffs by Cohen, 1988). The alternative/directional hypothesis 1 was supported in this study, which indicated that Buddhists had a significantly higher level of psychological flexibility than the non-Buddhists, yet the actual difference in mean scores between Buddhists and non-Buddhists was very small.

Pearson correlation analyses were utilized to examine the relations among the variables, which included hours of weekly meditation practice, years of regular meditation practice, nonattachment, self-compassion, and psychological flexibility. An alpha level of $p < .01$ was used to determine the significance of the correlations. Results revealed that reported hours of weekly meditation practice, reported years of regular meditation practice, reported levels of nonattachment (NAS full scale score), and reported levels of self-compassion (SCS-SF full scale score) were all found to be significantly correlated to psychological flexibility (AAQ-II full scale score) in the positive direction. The findings of the Pearson correlations provided support for alternative/directional hypotheses 2a, 2b, 3, and 4, indicating that among this particular
Buddhist sample, levels of meditation practice, nonattachment, and self-compassion were significantly associated with levels of psychological flexibility.

To investigate the degree of variance that the independent variables contributed to the prediction of psychological flexibility, a standard multiple regression analysis was conducted. Since Pearson correlation analyses found statistical significance between all four of the independent variables and the dependent variable, all four variables were entered into the multiple regression model. Results of the regression analysis revealed that years of regular meditation practice, nonattachment, and self-compassion were all important factors in determining psychological flexibility among this Buddhist sample. Specifically, self-compassion demonstrated the greatest influence, followed by nonattachment and years of meditation practice. Hours of weekly meditation practice was not found to be statistically significant in the regression model, yet the overall model was significant, accounting for \((R^2)\) 42.2% of the variance in psychological flexibility. Based on the overall results reported, three of the alternative hypotheses and one alternative sub-hypothesis were supported in this study, while one alternative sub-hypothesis was not supported.

Comparison of Results to Previous Theory and Research

For hypothesis 1, statistical significance was found between the two groups on levels of psychological flexibility, yet there was a very small difference in mean scores between the Buddhists \((M = 40.51, SD = 5.10)\) and the non-Buddhists \((M = 39.48, SD = 6.34)\). These findings may be an artifact of the large sample size and thus there may be limited practical and clinical significance of the findings. This is briefly
discussed later in the chapter. No other research has specifically focused on investigating psychological flexibility between these populations. Research conducted by Cook and Hayes (2010) found that “Asian Americans used less acceptance-oriented coping, and more control-oriented coping as compared to their Caucasian counterparts” (p. 186), and possible explanations for these results were provided. As part of the Cook and Hayes study, levels of coping and psychological flexibility were examined among individuals affiliated with different religious affiliations. The researchers conducted t tests among the two largest religious groups: Buddhists (n = 27) and Christians (n = 72), where a statistical difference was not found between the two groups. Specific means and standard deviations were not provided by Cook and Hayes (2010) for the two religious groups, yet they concluded:

Means were virtually identical between the two groups on all measures, with none farther apart than .14 of the pooled standard deviations. All t values were below .62 and p values above .55. Thus, there was no indication that Asian Buddhists were more psychologically healthy or showed any differences in psychological coping strategies than Asian Christians in this sample. (p. 192)

Although a statistically significant difference was found between the Buddhists and non-Buddhists in this study, given the small effect size and small difference in mean scores, the results are comparable with those found in the Cook and Hayes (2010) study. Other differences between the two studies should also be taken into consideration, such as the sample obtained for the current study being predominantly Caucasian, and the small sample size of the Cook and Hayes study possibly influencing results.

As previously discussed, a moderate amount of prior research supports that Buddhists and non-Buddhists who participate in mindfulness, meditative, and compassion related practices, have increased general and mental health (e.g., Lutz, et
Prior research has also demonstrated that these practices result in significant increases in constructs similar to psychological flexibility such as psychological mindfulness (Wiist, Sullivan, Wayment, & Warren, 2010), cognitive flexibility (Moore and Malinowski, 2009), and emotional flexibility (Ortner, 2006).

When considering that a statistical difference was found in levels of psychological flexibility between the two samples, while a very small difference in mean scores was found, other factors need to be taken into account. In order to focus on the practice of meditation, only a specific definition of meditation practice was utilized for this study. This definition did not include practices such as prayer and other religious or non-religious practices that may have similar effects as meditation in enhancing psychological flexibility. The study results may also indicate that it may not matter so much what religion or specific practice one takes part in, but that one is taking part in a practice that enables one to approach and be open to suffering, and this may be what is most important.

Another factor that may have influenced results is that the non-Buddhist sample included an increased number of religious professionals than the Buddhist sample. The increased religious education and religiosity of the non-Buddhists could have contributed to the indicated small effect size. Given that the non-Buddhist sample was predominantly Christian, it is probable that many of these participants, especially religious professionals, regularly take part in practices such as prayer. Future research
could focus on the differences between practices such as meditation and prayer, and their differential effects on psychological flexibility. Future research could also look at other confounding variables, such as the quality of early life experience. Having parents or others who model psychological flexibility may have large effects on psychological flexibility independent of one’s current practice.

In addition, the non-Buddhist participants had practiced their specific religion a significantly longer time than the Buddhists, again possibly influencing results, as research in general has found religiosity/spirituality to have health benefits (Raiya, Pargament, and Magyar-Russell, 2010). These demographics may suggest that the non-Buddhists were born into their tradition and that Buddhists may have converted to it, which is an increasingly common experience in North America. Individuals converting to Buddhism may be searching for a method of dealing with suffering and adverse experiences. Individuals who were born into other religions, and continue in their religious practice may have inherited psychological flexibility from interaction with parents, religious community, and society in general.

The reviewed research findings of the psychological benefits of meditation, nonattachment, and self-compassion provide support for the finding that these practices predict psychological flexibility among Buddhists. As Buddhists more frequently incorporate these practices into daily life, they may exhibit higher psychological flexibility. Buddhists experiencing mental illnesses or other disorders could be especially suited for and benefit from ACT and Buddhist based treatment approaches, although many cultural and other factors need to be taken into consideration. Many treatment approaches have incorporated the acceptance and mindfulness aspects of
Buddhist practice. Psychological flexibility has been found to be an important aspect of Asian Buddhist’s psychological health (Cook and Hayes, 2010), yet in their study, findings indicated that levels of acceptance/psychological flexibility were not significantly higher among the Buddhist sample. According to Cook and Hayes (2010), these factors suggest that

the recent psychotherapy work on increasing acceptance and psychological flexibility is not merely a replication of existing Buddhist methods when used as part of a religious tradition – otherwise Buddhists would show some trend toward higher level of these processes. (p. 194)

Many considerations need to be taken into account for both studies being discussed, while further research is needed to add empirical support and clarification to such statements.

For sub-hypotheses 2a and 2b, weekly meditation practice and number of years of regular meditation practice were both found to be significantly correlated with psychological flexibility (AAQ-II full scale score) in the positive direction. Number of years of regular meditation practice (sub-hypothesis 2b) also significantly predicted psychological flexibility in the regression model conducted within this sample. As previously discussed, this makes sense given that mindfulness/present moment focus is one of the six core processes underlying psychological flexibility. Comparable findings were reported by Wiist, et al. (2010) where increases in time spent meditating per week, and practicing Buddhism for a longer period of time, were found to have significant relations with increases in psychological mindfulness.

Despite the correlations found between the constructs, the number of hours of weekly meditation (sub-hypothesis 2a) did not predict psychological flexibility in the
regression model conducted within this sample. One possible explanation for this is that there could be overlapping variance between hours of weekly meditation practice and years of regular meditation practice. It is also important to remember that numerous types of Buddhist meditation were practiced by the Buddhists in this sample, and thus specific meditation techniques may provide more benefit to psychological flexibility than others. In addition, it is important to remember that individuals have varying levels of psychological flexibility and mental health prior to beginning meditation practice. Consistent with the study findings, the regularity and diligence of meditation practice may be more important than the current amount.

The possibility also exists that beginning meditation practitioners with low levels of psychological flexibility and poor mental health may actually practice meditation in a way that increases experiential avoidance instead of psychological flexibility. This could happen by way of attempting to suppress thoughts and feel good rather than approach painful emotions or suffering. Overall, it is probable that a number of factors involved in Buddhist practice influence psychological flexibility among Buddhists.

For hypothesis 3, nonattachment (NAS full scale score) was found to be significantly correlated with psychological flexibility (AAQ-II full scale score) in the positive direction, while it was also found to be a significant predictor in levels of psychological flexibility among the Buddhist sample. Previous studies have found similar results. According to Sahdra et al. (2010), scores of nonattachment (as measured by the NAS) were found to be positively related to psychological flexibility (as measured by the AAQ-II). The authors also described the survey-based consensus among numerous Buddhist experts that “nonattachment can be expressed and therefore
observed as psychological flexibility” (p. 118). The findings of the current study are supported by both ACT and Buddhist psychology theory. Nonattachment is most similar to the ACT concepts of acceptance and nonavoidance. In Buddhism, avoidance is a form of attachment, and as Williams and Lynn (2010) described:

Like nonattachment, nonavoidance can be defined as refraining from a pointless and maladaptive behavior, running away when no physical threat is present. This, combined with the maladaptive “running toward” of attachment, results in a definition of acceptance as the capacity to remain available to present experience, without attempting to terminate the painful or prolong the pleasant. Though both nonattachment and nonavoidance may require effort, both can be defined therefore as a nondoing. (p. 9)

The ACT construct of experiential avoidance, where one is unwilling to stay in contact with internal experiences, is thus a form of attachment whereby one attempts to escape their experience despite negative consequences (Hayes, et al., 1996). Current research demonstrates that most all forms of psychopathology involve experiential avoidance (Hayes, et al., 1996). Acceptance and nonattachment, along with the other aspects of psychological flexibility serve as ways to counteract the effects of experiential avoidance and enhance mental health.

For hypothesis 4, self-compassion (SCS-SF full scale score) was found to be significantly correlated with psychological flexibility (AAQ-II full scale score) in the positive direction, while it was also found to be a significant predictor in levels of psychological flexibility among the Buddhist sample. Previous studies have found similar results. In the study by Sahdra et al. (2010), scores of self-compassion (as measured by the SCS) were found to be positively related to psychological flexibility (as measured by the AAQ-II). Self-compassion has also been found to have positive correlations with acceptance-oriented emotional processing (Neff, 2003a) and negative
correlations with constructs similar to experiential avoidance, such as trauma avoidance symptoms (Thompson & Waltz, 2008) along with thought suppression and rumination (Neff, 2003a).

Despite continued growth in research evidence suggesting that self-compassion is associated with mental health, the role of compassion and self-compassion in psychological flexibility is not well defined. A number of the six core processes of psychological flexibility, such as acceptance, cognitive defusion, self-as-context, and mindfulness have similarities with self-compassion, such that these processes may be influencing each other. Further research is needed to clarify these relationships.

An additional major finding of this study was that all of the factors including hours of weekly meditation practice, number of years of regular meditation practice, nonattachment, and self-compassion when combined, significantly predicted levels of psychological flexibility among Buddhists. Previous research findings have been indicative of the mental health benefits from the three interconnected Buddhist practices of meditation, nonattachment, and self-compassion. This study’s findings support that when Buddhists take part in meditation over time, while demonstrating increased levels of nonattachment and self-compassion, they are more likely to experience less experiential avoidance and more psychological flexibility. This study does not tell us what practices Buddhists take part in that enhance nonattachment and self-compassion, but that the practices they do take part in to increase these qualities, also seems to increase psychological flexibility. Future research could clarify whether nonattachment and self-compassion are mediators.
Existing ACT and Buddhist psychology theory also support the results of this study. The practices of meditation, mindfulness, nonattachment, self-compassion, and psychological flexibility are important in both Buddhism and ACT. The underlying cause of suffering from a Buddhist perspective involves processes of attachment, such as grasping and avoidance, which parallel processes involved in psychological inflexibility and psychopathology as described by the ACT treatment model (Hayes, 2002). Both traditions distinguish alternate processes that allow for the elimination of suffering and the enhancement of physical, emotional, and spiritual health (Hayes, 2002). This dissertation adds to the limited existent research supporting the role of Buddhist practices in developing psychological flexibility among the Buddhist population.

Implications for Theory, Clinical Practice, and Research

Previous literature has discussed Buddhist psychology theory and applications to western counseling practice, yet there is very limited research in these areas. Studying Buddhist practices among Buddhist individuals adds to specific knowledge regarding their mental health. Considering that the Buddhist population has been steadily increasing (Snyder, 2009), future research is needed to develop counseling theory, methods and interventions that would most effectively assist this population. Additional research such as conducted by Phillips, et al. (2009) would be useful, as this research examined spiritual coping among American Buddhists, which revealed fourteen most widely utilized Buddhist coping methods.

The results of this dissertation study supports that the Buddhist practice of meditation, and qualities of nonattachment and self-compassion, play a part in predicting
levels of psychological flexibility among Buddhists. Having an understanding of these practices and qualities could provide counselors with increased awareness of the underlying processes of psychological flexibility within this population, in addition to providing knowledge of culturally appropriate practices or exercises that could be utilized to enhance psychological flexibility in Buddhists.

In addition to tailoring ACT to specific Buddhist populations, clinicians must also consider ethnicity when utilizing ACT treatments. Despite the fact that this study’s sample was predominantly Caucasian, it is important to recognize that many Asians living in the United States and Canada are Buddhists and thus implications of results for this population should be considered and researched further. In terms of clinical practice, the importance of promoting culturally competent and equitable counseling services is often undervalued. It is thus important to consider the therapy modality being used with culturally diverse clients, as every therapy itself is ingrained in a specific cultural framework. These factors need to be taken into consideration when deciding which therapy is most appropriate for each client and their particular spiritual or world view, along with individual presenting concerns. Even though ACT has a conceptual overlap with Buddhist philosophy, it does not necessarily preclude that it is a preferable treatment for Buddhists or Asians. Being a method derived from western psychology, ACT has many aspects that may not fit well with a Buddhist or Asian client’s value system, such as a focus on individualized and rationalized treatment methods (individualization) verses reflecting other values such as collectivism, interdependency, and intuition.
Implications of the study results on ACT theory and practice also exist. Meditation, mindfulness, nonattachment, and self-compassion can be further explored for an increased understanding of ways that Buddhist practices can enhance psychological flexibility within the ACT hexaflex model. For example, the theoretical overlap between nonattachment and defusion from thoughts and self-as-content provides one possible explanation for this study’s finding that nonattachment and psychological flexibility are strongly correlated. Practicing meditation and other mindfulness practices allow for an increase in awareness to observe one’s thoughts, feelings, and other cognitive processes while enhancing nonattachment to, or defusion from, these processes. This allows, as mentioned by Fletcher et al. (2010) one to experience the self as context versus content. The purpose of this contextual/observer/transcendent sense of self is not to eliminate or suppress emotions, but to experience the energy of emotions fully and to observe and allow them to dissipate into a clear, open, neutral, spacious energy. Such experiences can also be fostered during interactions with clients in counseling sessions. The increased ability to fully experience emotions can allow for acceptance and openness that results in dissolving barriers, resistance, and impediments to change, while enhancing the courage to face the many challenges and paradoxes of life while living a valued life.

Research conducted on the benefits of enhancing psychological flexibility in both counselors and their clients has previously been described (e.g. Strosahl, et al., 1998). Enhancing psychological flexibility among counselors could allow for broader perspectives when evaluating client progress. An example would be how the majority of mental health professionals are attached to the perspective that the effects of therapy are
evaluated/measured by observed changes that have been made in psychopathological symptoms, emotions, behavior, and general functioning. The ACT approach finds these changes to be a by-product of increasing psychological flexibility by way of acceptance and committed action towards living according to values. This allows nonattachment to outcomes and an alternative perspective in being able to live a valued life despite ongoing symptoms, challenges, and pain. For therapy planning that is individually focused, it may also be worthwhile to assess client psychological flexibility at the beginning of treatment.

Self-compassion was found in this study to account for the greatest amount of variance in psychological flexibility out of all independent variables, and thus may be essential in developing psychological flexibility among Buddhists. Future research could explore whether counselors must first have self-compassion for themselves and compassion for their clients to be able to instill such qualities. When clients are experiencing pain, the ACT treatment approach promotes acceptance and self-compassion together (Fletcher, et al., 2010). Based on the finding that self-compassion predicts psychological flexibility, and that the six core processes of psychological flexibility reflect kindness, mindfulness, and common humanity, it can be hypothesized that the ACT approach promotes self-compassion. Self-compassion is not explicitly in the hexaflex model, yet appears to be an aspect of a number of the processes. For instance, common humanity is promoted through ACT by way of increasing awareness that suffering, cognitive fusion, and experiential avoidance are experienced by everyone. The six processes of psychological flexibility appear to promote self-compassion by way
of self and other perspective-taking, whereby to experience another’s and one’s own suffering, one must be mindful, accepting, willing, and in touch with self-as-context.

Self-compassion may be a key element in non-avoidance of pain and suffering, as in taking a willing approach towards suffering, it seems that one must have kindness towards one’s experience. Possible clinical implications could involve ACT treatment being more effective by introducing self-compassion enhancing practices. Self-compassion may also be a mediator in developing psychological flexibility, and thus future studies could be designed to test whether ACT interventions lead to increased self-compassion, which then leads to increased psychological flexibility.

The findings of this study also have implications for future psychological flexibility research. There is limited research on the topics related to this dissertation and so there are gaps in research that have potential to be filled. The findings support the empirical link between meditation, nonattachment, self-compassion, and psychological flexibility among Buddhists. Whether similar results would be found in other populations could be examined. Additional research could further explore how Buddhist practices facilitate the transition from increased awareness, nonattachment, and self-compassion to increased acceptance and psychological flexibility. For instance, exploring what one actually does in meditation that leads to increased self-compassion and nonattachment could be useful. Different types of meditation may specifically enhance self-compassion (i.e. loving-kindness meditation), where other types may enhance nonattachment, such as nonattachment to the concept of self (i.e., contemplating koans of who one was before being born). Awareness of the breath during meditation may promote concentration which could lead to defusion from thoughts. How
individuals implement meditative ideals into daily life may be as important as meditation practice. All of these hypotheses could be tested with future research to further explore the connections that have been found in the results of this study.

Exploring other similar Buddhist practices and qualities, along with continued research on each of the six core processes (acceptance, cognitive defusion, contact with the present moment, self-as-context, values clarification, and committed action) could lead to a better understanding of the roles that these constructs play in psychological flexibility. Research on different meditation techniques and their differential effects on psychological flexibility could also be conducted. Meditation and mindful practices train the mind to cultivate such qualities and skills, and thus continued research on these practices could offer increased insight into how increased awareness, nonattachment, and self-compassion transform an individual’s experiences of experiential avoidance and cognitive fusion, while fostering committed action towards chosen values.

Although results indicated a statistically significance difference in levels of psychological flexibility between Buddhists and non-Buddhists, the difference is clinically probably not meaningful. Future research should further examine the effects that other non-Buddhist religious/spiritual practices, like prayer or martial arts, have on psychological flexibility. It is possible that ACT treatment could enhance psychological flexibility by promoting practices that are already embedded in someone’s spiritual practice. Future research could also focus on how Buddhist or other spiritual practices may enhance psychological flexibility among clients with specific mental disorders.

It may also be useful to explore which treatment methods, such as ACT, CBT, etc., tend to be more effective for Buddhists. Overall, the parallels between the ACT
concept of psychological flexibility and Buddhist practice could be further examined. Buddhists being treated with ACT might be encouraged to try specific types of meditation that could lead to cognitive defusion, while other types could promote self-as-context or other core processes of psychological flexibility. Understanding and integrating models into treatment other than those based on traditional cognitive science could also be explored in research. One such model, Enactive or Embodied Cognitive Science (Varela, Thompson, & Rosch, 1991), which is based largely on Buddhist philosophy and concepts such as nonattachment, compassion, and intersubjectivity, may offer radically different treatment approaches for clients with differing worldviews, such as Buddhists.

Results of this study revealed that the number of years of regular meditation practice, nonattachment, and self-compassion play a significant role in levels of psychological flexibility among Buddhists. A better understanding of how these influence each other, such that there may exist bi-directional relationships between some of the variables, would be useful to explore. For instance, increased self-compassion and nonattachment may foster psychological flexibility, yet increased psychological flexibility itself may foster nonattachment and self-compassion. It could also be hypothesized that among Buddhists, who practice nonattachment to the idea of a separate self, are thus able to be more compassionate towards others. In addition, being compassionate to oneself can allow one to approach suffering in a way that leads to insight that one’s suffering is a product of non-self related events and processes.

Results of this study found that hours of current meditation practice was not a significant predictor of psychological flexibility, but that years of regular meditation
practice was. One possible explanation for this finding is that meditation could be practiced by some individuals as a form of avoidance. Meditators who practice longer may have overcome this difficulty. Also, Buddhist cultivation practices involve much more than meditation, such as practicing with a group which could reduce the chance that meditation is being practiced in a non-productive way. Buddhists are also trained to approach suffering directly when it is experienced during life, thus more time meditating does not necessarily bring one more in contact with one’s suffering. Buddhists are also trained to refrain from activities that cause more suffering or are used as means of experiential avoidance, such as drinking intoxicating substances. All of these variables may be tied to years of meditation practice, and could be studied to clarify their role in promoting psychological flexibility. This could have valuable implications for therapy because it may give us insights into different methods to promote psychological flexibility, such as group involvement and lifestyle modifications.

Given the extensive research findings indicating that the ACT treatment approach of increasing psychological flexibility has beneficial effects on mental and physical health, continued research in this area is likely to occur. According to Fledderus, Bohlmeijer, Smit, and Westerhof (2010), this research is increasingly acknowledging that the absence of mental illness is not a necessary criteria for mental health, and thus “traditional public mental health interventions that are effective in alleviating mental illness do not necessarily promote mental health” (p. 2372). These researchers feel that it is most important to study how mental health can be promoted, which they accomplished in an empirical study providing continued evidence that
increasing psychological flexibility through interventions targeting acceptance and value-based action is effective in increasing positive mental health.

This relates to the results of the study, as hours of meditation practice did not predict psychological flexibility as much as years of meditation practice. One hypothesis could be that regular practice over years may be more effective in cultivating certain qualities of mind than a brief, intensive practice of mindfulness or meditation. The implication may be that a different model of promoting health would be beneficial, that involves training one’s mind over time rather than applying a therapy intervention to fix a problem in the short term. This could potentially be tested in future research.

Implications for Counselor Education and Supervision

The results of this study have implications for working with Buddhist individuals. Counselors, educators, and supervisors may find it useful to emphasize to clients, students, and supervisees the importance of nonattachment, self-compassion, and ongoing meditation practice in developing psychological flexibility in this population. Since psychological flexibility has been shown to be a significant factor underlying mental health, addressing the six core processes of psychological flexibility with clients and supervisees could promote mental health. Benefits of focusing on psychological flexibility include enhancing one’s ability to experience pain and life challenges while at the same time taking committed action towards living a valued and meaningful life. While counseling and counselor training were not the focus of this research, implications for these areas are briefly discussed.
Counselors need to be sensitive to spiritual, religious, and cultural differences, and so counselor educators should provide the knowledge for students to develop the competencies necessary for their increasingly diverse and multicultural clientele (Sue & Sue, 1999). A basic understanding of various philosophies and religions could be promoted to help ensure that spirituality is not being overlooked in the process of enhancing client mental health.

Many trainees do not receive extensive training pertaining to specific determinants of health in specific populations, such as Buddhists, and thus are unaware of basic practices in this population which may foster mental health. Many trainees are unaware of other religious and spiritual practices other than their own. Therapy should be focused on the client’s direct needs and incorporate the worldview of the client. Counselor educators and supervisors can address such issues in training. Supported by the results of this study, they could advise trainees that among Buddhists clients, to foster psychological flexibility it may be more therapeutic to enhance qualities of self-compassion and nonattachment, in addition to ongoing meditation practice, verses focusing intensely on encouraging a client to increase one’s current meditation practice. They could also advise supervisees working with clients of various spiritual traditions to explore practices within the client’s current tradition that may enhance psychological flexibility, as well as Buddhist practices.

This dissertation is focused on Acceptance and Commitment Therapy and how Buddhist practices may be related to the ACT concept of psychological flexibility, and so the focus is mainly directed towards the discussion to training and supervision in ACT. The training experience in ACT may be enhanced by incorporating Buddhist
practices in order to provide more experiential exposure to psychological flexibility processes. For example, incorporating experiential exercises related to nonattachment and self-compassion in ACT training could allow for increased understanding of the six processes of psychological flexibility. This is particularly true considering study findings suggesting that Buddhist practices and ACT overlap conceptually.

Future research could focus on how Buddhist practices may enhance psychological flexibility among counselors. From the literature and research reviewed, it seems plausible that nonattachment to thoughts and concepts, mindfulness, self-compassion, and psychological flexibility are necessary in order to approach a client’s suffering and “be with” them. Trainee engagement in Buddhist practices such as regular meditation over time could possibly enhance therapist psychological flexibility. In addition, future studies could examine how trainees that come from a non-Buddhist background might be able to use practices from their own cultural or spiritual tradition to enhance their psychological flexibility given the small difference in levels of psychological flexibility found in this study between Buddhists and non-Buddhists. By developing psychological flexibility within themselves, counselors could also enhance counselor effectiveness and client outcomes, as demonstrated in empirical research by Strosahl et al. (1998).

Meditation practice along with increased self-compassion, have been found to benefit health care professionals (e.g., Shapiro et al., 2005). According to Batten and Santanello (2009), training in these areas and in increased emotional awareness could benefit counselor trainees while improving counseling and counselor supervision effectiveness. Training in ACT and other mindfulness-based modalities could enhance
self-compassion, nonattachment, and psychological flexibility. Enhancing self-care strategies such as self-compassion involves decreasing attachment to one’s separate self, versus enhancing or embellishing one’s personal identity and self-esteem (Neff, 2003b). Promoting such development in counselor trainees could improve client care and therapeutic outcomes.

Buddhist and ACT consistent concepts can offer alternative approaches to counselor education and supervision. Incorporating the six core ACT processes in the classroom such as committed action and values-based instruction techniques may enhance educational outcomes, as could encouraging mindfulness, self-compassion, and nonattachment in educational settings. Mindfulness has received the most attention in applications to educational settings (e.g., Langer, 1993). As expressed in a quote from Langer (1993), the focus on static intellectualization in educational settings could benefit from promotion of a more mindful focus related to realization, wisdom, and growth:

The implicit “no pain, no gain” understanding of traditional education is contrasted with a view of education that encourages mindfulness. The former relies on a static conception of information typically communicated in absolute language. Here, “facts” are given as truth, free of context or perspective. The latter relies on variability, communicated through conditional instruction. Here, facts are perspective dependent. Evidence is presented that suggests that mindfulness is not only more effective, but is also more enjoyable. (p. 43)

Similarly, Lief (n.d.) described how a contemplative and balanced education “cultivates abilities beyond the verbal and conceptual to include matters of heart, character, creativity, self-knowledge, concentration, openness and mental flexibility” (p. 1).
In this study, nonattachment was found to be significantly related to and predictive of psychological flexibility, and there exist many possible implications. For example, nonattachment to pre-conceived methods of teaching and supervision in addition to nonattachment to one’s self/ego/identity could enhance more effective methods of instruction. This is promoted in ACT through processes such as defusion from the conceptualized self. Transformation and transcendence of the ego’s grasping and avoidant tendencies can allow for increased psychological flexibility in teaching, supervision, administration, and other academic arenas, while providing examples for students to embody such qualities as well.

Nonattachment to long-held biases, opinions, and stories about what it means to be a student, teacher, counselor, or leader, as well as to be healthy, professionally fit, or human, need to be temporarily let go of so as to allow a nonjudgmental approach and increased awareness of different perspectives and individual potentialities. This can allow for conditioned grasping minds to become liberated through awareness, which is an important aspect of counseling. Although the following excerpt from Cohen and Bai (2008) is referring to counselors, it applies to teachers and supervisors as well.

Counsellors have daily – indeed, moment-to-moment-opportunities to sit in the midst of suffering as it enters our offices with our clients, and of course, as we all know, at times it enters our ‘office’ within us. To the degree that we, the accompaniers, can sit in the midst of the raging fire of life and engage in our process of becoming enlightened, to that degree can we provide service to the suffering persons who come to us for aid. (p. 51)

Thus, in order to sit with the fire of life alongside clients, one must utilize qualities of nonattachment. When considering how individuals often grasp at or avoid emotions, it
may be clearer as to the relevance of the Buddhist practices of meditation, self-compassion, and particularly nonattachment to counseling, education, and supervision.

Working with emotions and experiential avoidance is important for Buddhist practice, the ACT treatment process, and for eliciting change in counseling, education, and supervision. In regard to supervision specifically, Batten and Santanello (2009) discuss the contextual behavioral approach in addressing emotions, while also providing a supervisory model to develop self-awareness among trainees to utilize their own emotions in therapy. The authors feel that incorporating emotional awareness into supervision, while utilizing the trainee as a source of information, can be used to address trainee’s experiential avoidance during therapy and supervision. This functional contextualistic approach does not treat emotions as objects, but instead focuses on aspects of emotional experience as related to “aspects of the therapeutic relationship that may have occasioned these responses, and to the consequences of these processes on the therapeutic relationship” (Batten & Santanello, 2009, p. 149). The authors explained that through incorporation of their model, a trainee will eventually be capable of using emotional awareness to gain insight into the relational dynamics with the client while responding directly during the eliciting interaction.

Future research on meditation, mindfulness, nonattachment, self-compassion, and psychological flexibility within counselor education and supervision could provide increased understanding of potential applications. For example, future research could compare similarities and differences to methods of addressing emotions in Buddhism and during meditation to methods proposed in traditional counselor education and psychology. Considering the literature reviewed in this dissertation, it is probable that
each approach could inform the other. One initial starting point would be to increase understanding of general educational and supervisory implications of ACT, along with functional contextualism and Relational Frame Theory.

The above potential implications for counselor education and supervision were provided to tie in this author’s current program of study. Yet again, this research project focused on ACT and how Buddhist practices may be related to the ACT concept of psychological flexibility. Study findings suggest that Buddhist practices and ACT overlap conceptually. Future research informed by the results of this study could further clarify how training and supervision in ACT can be enhanced by incorporating Buddhist practices for increased understanding of psychological flexibility processes.

Limitations and Recommendations for Future Research

There are a number of limitations of this study that can be identified. The two primary limitations to this study are the homogeneity of the sample and the instruments used. The first part of this study was limited to Buddhists and non-Buddhists (religious/spiritual oriented individuals), while the second part was limited to Buddhists only. All participants were also limited to the geographical region of the U.S.A. and Canada. The main findings of this study are thus applicable only to highly educated, middle-aged, Caucasian Buddhists living mainly in the United States. The results may not be generalizable to other populations. For example, cultural differences may produce different results in Buddhists living in other countries.

In relation to the previous two mentioned limitations, many other ethnic and religious/spiritual groups living in different parts of the world have practices that are
likely to enhance psychological flexibility. For example, a non-Buddhist individual who regularly practices aikido (a non-violent martial art that fosters mindfulness, nonattachment, and compassion) may have greater levels of psychological flexibility than a meditating Buddhist. It is recommended that this study be replicated before generalization of results to other populations.

The AAQ-II instrument was designed to measure several core processes of psychological inflexibility/flexibility, and is keyed both positively and negatively (Bond et al., 2011). The measure does not include subscales, making it difficult to examine the six core processes in relation to other constructs. It is recommended that a measure of psychological flexibility be developed that includes six subscales to measure the six core processes. This is important because having subscales could help identify specific religious or cultural practices that are tied to particular psychological flexibility sub-processes. This would allow ACT interventions to be targeted more specifically. In addition, the NAS and the short form of the SCS instrument have only recently been published and are lacking in research data. Further research is recommended to add to the reliability and validity of these measures.

Another limitation of the study is in regard to the practical significance of the results versus statistical significance. For example, findings indicated that a statistical significant difference in psychological flexibility was found between the Buddhist and non-Buddhist samples. Findings of statistical significance can be found in research when there are very small population differences yet the sample size is large (Heppner et al., 1999). Although the t test was statistically significant in this study, the difference in mean scores between the samples was very small. Thus, as with all statistical findings,
practical significance must be considered, as even if statistical significance and large
effect sizes are found, this does not conclude that the findings are important or useful in
the real world. The difference found between groups in this study was not large enough
to be considered significant in a practical or clinical sense. Limitations of null
hypothesis significance testing exist and other measures of magnitude of effect could be
utilized in future research.

Another limitation is that although years of meditation practice, nonattachment,
and self-compassion were found to account for a significant amount of variance in
psychological flexibility among Buddhists, there exist other factors that influence
psychological flexibility. Given the multitude of variables that have been found to
influence individual levels of psychological flexibility, studies focused on specific
variables at the exclusion of others are always going to have limited practical
significance, yet are still steps toward a better understanding of the construct. When
considering the proposed six core processes that interact to produce psychological
flexibility, the theoretical depth of the construct is apparent, along with awareness that
other processes not examined in this study likely influence each of those individual six
core processes. Continued research on other possible variables needs to continue.

The last limitation to be mentioned is that this study is cross-sectional in design.
If a researcher really wants to know whether meditation and other Buddhist practices can
produce increases in nonattachment, self-compassion, and psychological flexibility, a
longitudinal study that can control for “starting” levels of psychological flexibility and
examining the changes over time would be most useful.
This study has expanded on previous research, such as the studies of Sahdra et al. (2010) and Cook and Hayes (2010), yet a number of recommendations for future research should be considered. Because “science advances through an accumulation of knowledge” (Cone & Foster, 1993, p. 240), it is first recommended that further research be conducted examining the relationships between the variables of this study in order to provide more extensive understanding of the effects of various variables on psychological flexibility. It is also recommended that this research be conducted among individuals with specific mental illnesses in order to assess the impact of Buddhist practices on the mental health of both Buddhists and non-Buddhists.

According to Cone and Foster (1993), “research also advances with improvements in design and measurement” (p. 242). Thus, another recommendation is for further development of the reliability and validity of the measures utilized in this study, along with the creation of new measures that assess the core six processes of psychological flexibility. Clarification of how the six processes interact to produce psychological flexibility could also be obtained through research. ACT research is advancing in such areas. For example, Herzberg et al. (in press) presents two studies involving the development of a new measure of cognitive fusion/defusion called the Believability of Anxious Feelings and Thoughts Questionnaire (BAFT). Also, development of other relevant Buddhist instruments, such as the BCOPE (Phillips, 2009) has the potential to increase knowledge about the Buddhist population and increase the ability to further examine the benefits of Buddhist practices. The limitations of using self-report measures to collect data should also be mentioned as future research could incorporate other methods of data collection.
In considering other measurement issues, it is also recommended for researchers to be aware that Buddhists could interpret questionnaire items in different or contradictory ways than non-Buddhists and to be aware of how this influences interpretation of results. For example, the statement “I am comfortable being an ordinary, less than perfect human being” from the NAS could be interpreted to have two very different meanings. Many Buddhists are not comfortable remaining ordinary, as they do make efforts towards enlightenment, while at the same time nonattachment and humility in regard to the ego identity’s striving to be perfect is also important to Buddhist practitioners. A second example is the AAQ-II item “Emotions cause problems in my life,” where when first practicing Buddhism, many practitioners inexperienced in meditation techniques are not aware of how their emotions are impacting their lives because they are unable to be aware of their more subtle emotions. More experienced practitioners who become increasingly aware of the impact of subtle emotions, for instance annoyance, may then have increased realization that more intense underlying emotions exist, such as anger, and they may then be more apt to find that this increased emotional awareness does cause problems in their lives. Practitioners that are even more experienced may then find that going through the previous practice stages allows them to experience a reduced likelihood of emotions causing problems. So, in other words, Buddhist practitioners at different stages on their paths may respond to items differently.

The last recommendation is for additional qualitative and mixed methods research in the area of psychological flexibility. No research exists that explores how individuals subjectively or intersubjectively have experienced psychological flexibility
during therapy in general or within an ACT framework. In regard to the findings of this study, qualitative research may be helpful in generating hypotheses about which meditative practices enhance which aspects of psychological flexibility. It may also generate hypotheses about how self-compassion and nonattachment are related to the six processes of psychological flexibility. Qualitative methodologies, such as participatory action research can offer understanding into the why, how, and when questions of personal experiences of how ACT treatment increases psychological flexibility while preventing mental illness and maintaining mental health. Themes revealed through these methodologies could then be further explored through quantitative research.

Summary of Discussion and Implications

Discussion of the results of this research study has been provided along with implications for counseling theory, practice, research, and counselor education and supervision. In summary, the research results indicated that years of regular meditation practice, nonattachment, and self-compassion significantly predict psychological flexibility among Buddhists. These results are consistent with previous research on the role of similar constructs in psychological flexibility such as acceptance, mindfulness, cognitive defusion, and valued living. In addition, findings of this study indicated a statistically significant difference in levels of psychological flexibility between Buddhists and individuals affiliated with other religious/spiritual traditions, while the actual difference in mean scores was very small. Replication of this study is recommended within the Buddhist population, as well as within other diverse samples in order to increase generalizability to other populations.
Implications of the results of this study have been discussed. Implications exist for psychological flexibility theory, for ACT treatment and clinical practice in general, and for future research. Possible implications for counselor educators and supervisors were also offered. Counselor educators and supervisors could benefit by promoting psychological flexibility among themselves and their students. They could also help develop student awareness of the importance of addressing client spiritual / existential issues in counseling, while fostering cultural competent counseling practices. Utilizing the results of this study to inform future research is recommended and could provide increased understanding of the role that Buddhist practices and constructs play in psychological flexibility among Buddhists and non-Buddhists alike.

In conclusion, instead of focusing on the elimination of symptoms or changing thoughts and feelings, ACT emphasizes the role of mindfulness, acceptance, cognitive defusion, self-as-context, and committed and value-based action in mental and physical health. The elimination of suffering in Buddhism similarly focuses on addressing the processes of attachment, such as grasping and avoidance, and enhancing qualities such as compassion, equanimity, authenticity, willingness, and transcendence of the ego-focused self. Research has shown that enhancing other qualities such as psychological flexibility, mindfulness, nonattachment, and self-compassion benefit counselors and their clients and can be applied to a wide range of physical and mental health disorders. Both ACT and Buddhist practices can also be applied to counselor education and supervision.

While the findings of this research study were useful, this study was exploratory in nature and is a starting point whereby the generation of new hypotheses can lead to
future research. Future research on psychological flexibility is encouraged in order to advance ACT theory and methods of treatment, while increasing understanding of the potential of Buddhist practices and concepts in increasing psychological flexibility and mental health, while decreasing suffering. According to Hayes (2002), in order to integrate Buddhist philosophical/psychological concepts and methods into empirical clinical approaches, further empirical investigation is necessary. This dissertation research has hopefully contributed towards those scientific directions.
REFERENCES


APPENDICES
APPENDIX A

INFORMED CONSENT - BUDDHISTS

Dear Potential Respondent,

You are invited to participate in a research project being conducted by Heather M. Saini, a doctoral student in the Department of Counseling at The University of Akron, in Akron, Ohio. The purpose of this study is to gain an understanding of the relationship between the practices and constructs of meditation, nonattachment, self-compassion, and psychological flexibility. Approximately two hundred individuals will be participating in this study. If you are 18 years or older and live in the U.S.A. or Canada, and you decide to participate, you will be asked to complete a demographic questionnaire and three survey instruments. Completion time for the online survey will take approximately 15-25 minutes. There are no anticipated benefits or risks to you as a participant, aside from helping us have a better understanding of this research topic. Self-awareness may be enhanced; however, slight discomfort may occur if you are not accustomed to focusing on emotional issues.

Participation in the project is completely voluntary and if you refuse to participate, no penalty is involved. If you agree to participate, you may refuse to answer any questions and may withdraw from the study at any time without penalty. All information will remain anonymous and no identifying data will be collected, including e-mail addresses. Your anonymity will be protected throughout the study and any
publication of results, and further protected by not asking you to sign and return an informed consent document. All data obtained from you through the online survey will be kept confidential and will not be viewed by anyone but the researcher and her advisor.

Confidentiality will be maintained through utilizing a number code system that will be assigned to the online responses. Data for this study will be entered into a password protected computer and aggregated answers of all participants completing the survey will be stored on a secure website.

If you have any questions about this study, you can contact Heather M. Saini by e-mailing her at hwendli@zips.uakron.edu or calling her at (647) 247-4107. You can also contact Dr. Cynthia A. Reynolds, Dissertation Chair, at The University of Akron, at creynol@uakron.edu, or calling her at (330) 972-6748. This research project has been reviewed and approved by the University of Akron Institutional Review Board for the Protection of Human Subjects. Questions about your rights as a research participant can be directed to Ms. Sharon McWhorter, Associate Director, Research Services, at 1-330-972-7666.

Clicking “I agree” below and then clicking on “Continue” to begin the survey will serve as your acceptance that you have read and understood the information provided in this informed consent document and your voluntary consent to participate in this study. Thank you for your cooperation and willingness to help!

☐ I Agree
APPENDIX B

INFORMED CONSENT - NON-BUDDHISTS

Dear Potential Respondent,

You are invited to participate in a research project being conducted by Heather M. Saini, a doctoral student in the Department of Counseling at The University of Akron, in Akron, Ohio. The purpose of this study is to gain increased understanding of psychological flexibility. Approximately two hundred individuals will be participating in this study. If you are 18 years or older and live in the U.S.A. or Canada, and you decide to participate, you will be asked to complete a demographic questionnaire and one survey instrument. Completion time for the online survey will take approximately 5 minutes. There are no anticipated benefits or risks to you as a participant, aside from helping us have a better understanding of this research topic. Self-awareness may be enhanced; however, slight discomfort may occur if you are not accustomed to focusing on emotional issues.

Participation in the project is completely voluntary and if you refuse to participate, no penalty is involved. If you agree to participate, you may refuse to answer any questions and may withdraw from the study at any time without penalty. All information will remain anonymous and no identifying data will be collected, including e-mail addresses. Your anonymity will be protected throughout the study and any publication of results, and further protected by not asking you to sign and return an
informed consent document. All data obtained from you through the online survey will be kept confidential and will not be viewed by anyone but the researcher and her advisor.

Confidentiality will be maintained through utilizing a number code system that will be assigned to the online responses. Data for this study will be entered into a password protected computer and aggregated answers of all participants completing the survey will be stored on a secure website.

If you have any questions about this study, you can contact Heather M. Saini by e-mailing her at hwendli@zips.uakron.edu or calling her at (647) 343-0478. You can also contact Dr. Cynthia A. Reynolds, Dissertation Chair, at The University of Akron, at creynol@uakron.edu, or calling her at (330) 972-6748. This research project has been reviewed and approved by the University of Akron Institutional Review Board for the Protection of Human Subjects. Questions about your rights as a research participant can be directed to Ms. Sharon McWhorter, Associate Director, Research Services, at 1-330-972-7666.

Clicking “I agree” below and then clicking on “Continue” to begin the survey will serve as your acceptance that you have read and understood the information provided in this informed consent document and your voluntary consent to participate in this study. Thank you for your cooperation and willingness to help!

☐ I Agree
APPENDIX C

DEMOGRAPHIC QUESTIONNAIRE

1. Where do you live?  ____U.S.A.  ____Canada  ____Other

2. What is your age?  _____

3. What is your self-reported gender?  ____Male  ____Female  ____Transgender

4. What is your relationship status?
   ____Single  ____Married  ____Separated
   ____Divorced  ____Widowed  ____In a Committed Relationship
   ____Other (Specify_______________)

5. How many years of education do you have?  _____

6. What is your occupation?
   ____Student  ____Self-employed  ____Household/Domestic
   ____Medical Doctor  ____Office job  ____Healthcare Professional
   ____Business or Administrative Professional  ____Retired
   ____Unemployed  ____Other (Specify_______________)

7. What is your ethnicity / race?
   ____White / European  ____Black / African
   ____Hispanic  ____Asian
   ____Native Indian / Alaskan Native  ____Middle Eastern / Arabic
   ____Multi-Racial  ____Other (Specify_______________)

8. How many years have you lived in the U.S.A. or Canada?  _____

9. Which group most accurately reflects your religious, spiritual, or philosophical worldview?
   ____Buddhist  ____Taoist  ____Hindu  ____Sikh
   ____Spiritual (not religious)  ____Jewish  ____Muslim  ____Bahá’í Faith
   ____Protestant Christian  ____Catholic Christian  ____None
   ____Agnostic  ____Atheist  ____Other (Specify_______________)

10. How many years have you been involved in the practices of this religious, spiritual or philosophical orientation / worldview?  _____
11. Meditation is a practice which involves a sustained focus of attention towards a specific object, along with awareness of, and nonreactively monitoring the content of one’s thoughts, emotions, and other experience.

Do you meditate? _____Yes _____No

12. Which type of meditation do you practice most frequently?

_____Vipassana (Insight/Wisdom)  _____Shamatha (Mindfulness/Concentration)
_____Mantra, Koan, or Chanting  _____Anapanasati (Insight & Concentration)
_____Transcendental (TM)  _____Mindfulness-Based Stress Reduction
_____Metta (Loving-Kindness) Tonglen  _____Other (Specify__________________)

13. How many hours do you practice meditation on average per WEEK? _____

14. How many years have you been involved in a regular practice of meditation? _____
APPENDIX D

ACCEPTANCE AND ACTION QUESTIONNAIRE - II (AAQ-II)

AND PERMISSION OF INSTRUMENT USE

AAQ-II

Below you will find a list of statements. Please rate how true each statement is for you by circling a number next to it. Use the scale below to make your choice.

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<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>never true</td>
<td>very seldom true</td>
<td>seldom true</td>
<td>sometimes true</td>
<td>frequently true</td>
<td>almost always true</td>
<td>always true</td>
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</tbody>
</table>

1. My painful experiences and memories make it difficult for me to live a life that I would value. 1 2 3 4 5 6 7
2. I’m afraid of my feelings. 1 2 3 4 5 6 7
3. I worry about not being able to control my worries and feelings. 1 2 3 4 5 6 7
4. My painful memories prevent me from having a fulfilling life. 1 2 3 4 5 6 7
5. Emotions cause problems in my life. 1 2 3 4 5 6 7
6. It seems like most people are handling their lives better than I am. 1 2 3 4 5 6 7
7. Worries get in the way of my success. 1 2 3 4 5 6 7
Hi Heather,

Please feel free to use the AAQ-II in your dissertation research, which I hope goes well.

Kind regards,

Frank

Frank W. Bond, PhD
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APPENDIX E

NONATTACHMENT SCALE (NAS)

AND PERMISSION OF INSTRUMENT USE

The Non-Attachment Scale

To help us understand your general approach to life and your views about yourself, others, and life in general, tell us the extent to which the following statements reflect your experiences at this point in your life. To the left of each item, rate the extent to which you agree with it by selecting a number from 1 to 6 on the scale provided.  
Please answer according to what really reflects your experience rather than what you think your experience should be.

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<tbody>
<tr>
<td></td>
<td>Disagree</td>
<td>Disagree</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td></td>
<td>Strongly</td>
<td>Moderately</td>
<td>Slightly</td>
<td>Slightly</td>
<td>Moderately</td>
<td>Strongly</td>
</tr>
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</table>

1. ____ I can accept the flow of events in my life without hanging onto them or pushing them away.
2. ____ I can let go of regrets and feelings of dissatisfaction about the past.
3. ____ I find I can be calm and/or happy even if things are not going my way.
4. ____ I have a hard time appreciating others’ successes when they outperform me.
5. ____ I can remain open to what life offers me regardless of whether it seems desirable or undesirable at a particular time.
6. ____ I can enjoy pleasant experiences without needing them to last forever.
7. ____ I view the problems that enter my life as things/issues to work on rather than reasons for becoming disheartened or demoralized.
8. ____ I can enjoy my possessions without being upset when they are damaged or destroyed.
9. ____ The amount of money I have is not important to my sense of who I am.
10. ____ I do not go out of my way to cover up or deny my negative qualities or mistakes.
11. ____ I accept my flaws.
12. ____ I can enjoy my family and friends without feeling I need to hang on to them.
13. ____ If things aren’t turning out the way I want, I get upset.
14. ____ I can enjoy the pleasures of life without feeling sad or frustrated when they end.
15. ____ I can take joy in others’ achievements without feeling envious.
16. ____ I find I can be happy almost regardless of what is going on in my life.
17. ____ Instead of avoiding or denying life’s difficulties, I face up to them.
18. ____ I am open to reflecting on my past mistakes and failings.
19. ____ I do not get “hung up” on wanting an “ideal” or “perfect” life.
20. ____ I am comfortable being an ordinary, less than perfect human being.
21. ____ I can remain open to thoughts and feelings that come into my mind, even if they are negative or painful.
22. ____ I can see my own problems and shortcomings without trying to blame them on someone or something outside myself.
23. _____ When pleasant experiences end, I am fine moving on to what comes next.
24. _____ I am often preoccupied by threats or fears.
25. _____ I am not possessive of the people I love.
26. _____ I do not have to hang on to the people I love at all costs; I can let them go if they wish to go.
27. _____ I do not feel I need to escape or avoid bad experiences in my life.
28. _____ I can admit my shortcomings without shame or embarrassment.
29. _____ I experience and acknowledge grief following significant losses, but do not become overwhelmed, devastated, or incapable of meeting life’s other demands.
30. _____ I am not possessive of the things I own.
APPENDIX F

SELF-COMPASSION SCALE - SHORT FORM (SCS-SF)

AND PERMISSION OF INSTRUMENT USE

Self-Compassion Scale – Short Form

HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

*Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

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<tbody>
<tr>
<td>Almost never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

1. _____ When I fail at something important to me I become consumed by feelings of inadequacy.
2. _____ I try to be understanding and patient towards those aspects of my personality I don’t like.
3. _____ When something painful happens I try to take a balanced view of the situation.
4. _____ When I’m feeling down, I tend to feel like most other people are probably happier than I am.
5. _____ I try to see my failings as part of the human condition.
6. _____ When I’m going through a very hard time, I give myself the caring and tenderness I need.
7. _____ When something upsets me I try to keep my emotions in balance.
8. _____ When I fail at something that’s important to me, I tend to feel alone in my failure.
9. _____ When I’m feeling down I tend to obsess and fixate on everything that’s wrong.
10. _____ When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
11. _____ I’m disapproving and judgmental about my own flaws and inadequacies.
12. _____ I’m intolerant and impatient towards those aspects of my personality I don’t like.
“To Whom it May Concern:

Please feel free to use the Self-Compassion Scale – Short Form in your research (12 items instead of 26 items). The short scale has a near perfect correlation with the long scale when examining total scores. We do not recommend using the short form if you are interested in subscale scores, since they’re less reliable with the short form. You can e-mail me with any questions you may have. I would also ask that you please e-mail me about any results you obtain with the scale, and would appreciate it if you send me a copy of any article published using the scale. The appropriate reference is listed below.

Best wishes,
Kristin Neff, Ph. D.
e-mail: kristin.neff@mail.utexas.edu”

Reference:
APPENDIX G

INSTITUTIONAL REVIEW BOARD APPROVAL

April 26, 2011

Heather Michelle Saini
15 Windermere Avenue Unit #510
Toronto, Ontario
Canada, M6S 5A2

From: Sharon McWhorter, IRB Administrator

Re: IRB Number 2011.04.05 "The Relation between Psychological Flexibility and the Buddhist Practices of Meditation, Nonattachment and Self-Compassion"

Thank you for submitting your Exemption Request for the referenced study. Your request was approved on April 22, 2011. The protocol represents minimal risk to subjects and matches the following federal category for exemption:

☐ Exemption 1 – Research conducted in established or commonly accepted educational settings, involving normal educational practices.

☐ Exemption 2 – Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior.

☐ Exemption 3 – Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior not exempt under category 2, but subjects are elected or appointed public officials or candidates for public offices.

☐ Exemption 4 – Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens.

☐ Exemption 5 – Research and demonstration projects conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine public programs or benefits.

☐ Exemption 6 – Tests and food quality evaluation and consumer acceptance studies.

Annual continuation applications are not required for exempt projects. If you make changes to the study’s design or procedures that increase the risk to subjects or include activities that do not fall within the approved exemption category, please contact me to discuss whether or not a new application must be submitted. Any such changes or modifications must be reviewed and approved by the IRB prior to implementation.

Please retain this letter for your files. This office will hold your exemption application for a period of three years from the approval date. If you wish to continue this protocol beyond this period, you will need to submit another Exemption Request. If the research is being conducted for a master’s thesis or doctoral dissertation, the student must file a copy of this letter with the thesis or dissertation.

Co: Cynthia Reynolds - Advisor
Co: Stephanie Woods - IRB Chair

Office of Research Services and Sponsored Programs
Akron, OH 44325-2102
330-972-7585 * 330-972-6281 Fax

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