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Mindfulness and Well-Being

by

Shawn R. Englund-Helmeke, B.S.W.

MSW Clinical Research Paper

Presented to the Faculty of the
School of Social Work
St. Catherine University and the University of St. Thomas
St. Paul, Minnesota
in Partial fulfillment of the Requirements for the Degree of
Master of Social Work

Committee Members
Sarah Ferguson, MA, MSW, Ph.D., (Chair)
Carey Winkler, MSW, LICSW
Leslie Colerin, MSW, LISW

The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings of the study. This project is neither a Master's thesis nor a dissertation.

Mindfulness and Well-Being
By Shawn R. Englund-Helmeke

Research Chair: Sarah Ferguson, MA, MSW, Ph.D.

Committee Members: Carey Winkler, MSW, LICSW; Leslie Colerin, MSW, LISW

Mindfulness practices, including sitting meditation, walking meditation, yoga, and qigong, have been used to promote mental health and physical well-being in general populations. Mindfulness practices are also being incorporated into therapies used to treat mental illness, and to promote mental health and well-being (Carmody & Baer, 2007; Miller et al., 1995; Reibel et al., 2001). This study attempts to determine if there is an association between mindfulness practices, levels of measured mindfulness, and physical and psychological well-being. These variables were examined in a sample of 25 adults from a large Midwestern city who were predominately female, in their 50s and 60s, and who practiced various forms of mindfulness such as sitting meditation, walking meditation, yoga, or qigong for an average of 6 hours per week. Results of this study indicate that an increased mindfulness history is associated with increased emotional functioning and emotional well-being. Specifically, it suggests that the longer someone has had a mindfulness practice, the healthier they are in terms of emotional functioning and well-being. Emotional functioning is defined by the extent to which emotional problems affect the amount and quality of work, the amount and quality of other activities, and how much one has accomplished within the past 4 weeks. Emotional well-being is defined by how much time someone has felt nervousness, cheerfulness, calmness, peace, sadness, and happiness within the past 4 weeks. Overall, this study suggests that mindfulness practices are relevant to clinical social work practice since social work serves populations that struggle with psychological problems and with social and occupational functioning.

Acknowledgments

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According to the Center for Disease Control (2011) mental health is “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (p. 1). Yet it is estimated that only 17 percent of adults in the United States are considered to have an optimal state of mental health. Furthermore, there is evidence that improved mental health is correlated with improved health outcomes. This optimal state of mental health is commonly measured in research through the examination of the following variables; emotional well-being, perceived happiness, life satisfaction, sense of peace, psychological well-being including self-acceptance, meaning in life, personal growth, spirituality, healthy relationships, optimism, control of environment, and life-path. Mental health is indicated by social well-being, which includes beliefs about the possibilities of humanity and people, social acceptance, a sense of community, self-worth, and efficacy to society (Center for Disease Control, 2011).

Mental illness is defined by the Center for Disease Control (2011) as a health condition which causes alterations in behavior, mood and thinking, and is associated with distress or impaired functioning. Depression is the most common form of mental illness since it affects more than 26 percent of the adult population in the United States. Furthermore, there are estimates “that by the year 2020, depression will be the second leading cause of disability throughout the world, trailing only ischemic heart disease” (Center for Disease Control, 2011, p. 1).

According to the National Institute of Mental Health (2006), there is an estimated 26.2 percent of Americans over the age of 18 who suffer from a diagnosable mental

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disorder in any given year; this is about one fourth of the adult population. Even more alarming, in the United States suicide was the tenth leading cause of death in 2007. It was also the third leading cause of death for young people between the ages of 15-24 (National Institute of Mental Health, 2007).

These are serious and alarming statistics regarding individuals who suffer from a mental health disorder. In health care and in public health fields much more emphasis and resources are being placed on diagnosis, testing, and treating mental illness rather than on the promotion of mental health. Additionally, there has been little done to safeguard the mental health of those without a mental illness. More preventive action needs to take place in order to maintain mental health and as a means to prevent the onset of a mental illness (Center for Disease Control, 2011).

Mindfulness practices have been integrated into multiple therapies to treat a variety of mental illnesses and medical conditions. Mindfulness is defined in general terms as a non-judgmental, moment-to-moment awareness of the present moment. It includes being simply aware of and not responding to internal stimuli, such as thoughts, feelings and emotions, and external stimuli, such as things occurring in the immediate environment. There is an increasing body of knowledge, which supports the notion that mindfulness practices are strongly associated with physical and mental health benefits (Carmody & Baer, 2007; Miller, Fletcher, & Kabat-Zinn, 1995; Reibel, Greeson, & Brainard, 2001). Literature suggests that there are multiple interventions which incorporate mindfulness into the treatment of mental health conditions. Mindfulness-based Cognitive Therapy (MBCT) was used to treat major depression and successfully reduce the symptoms of depression found in a study by Barnhofer, Mindfulness-Based

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Stress Reduction (MBSR) was used in a study by Carmody and Baer, Dialectical Behavior Therapy (DBT) was studied by Linehan, and Acceptance and Commitment Therapy (ACT) was used in a study by Hayes. These interventions have shown improvements in psychological health in multiple populations (as cited in Carmody & Baer, 2007).

The overall practice of mindfulness meditation in general populations has been used to promote mental health and psychological well-being. Mindfulness practices are also used to promote mental health and well-being in clients suffering from mental illness, and are therefore important tools in the role of social work practice. Social work often serves those struggling with mental health concerns, and many new and creative approaches to addressing mental health issues are needed. It is therefore crucial for social work practitioners to acquire and practice the skills and knowledge of mindfulness for the prevention of mental health symptoms and the promotion of mental health. The practice of mindfulness for social work practitioners also pertains to their own well-being and self-care. In order to provide quality services to others they themselves must be in a state of positive mental health, which can be enhanced through their own mindfulness practices (Falkenstrom & Fredrik, 2010; Keng, Smoski, & Robins, 2011; Lykins & Baer, 2009; Orzech, Shapiro, Brown, & McKaya, 2009).

The National Association of Social Workers' (2008) Code of Ethics lists competence as one of social workers' ethical responsibilities as professionals. Competence is defined as critically examining and keeping current with emerging knowledge related to social work, continuously reviewing professional literature, participating in continuing education, and practicing based on empirically based

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knowledge relevant to social work. Since mindfulness practices are now common in many therapeutic interventions, social workers must be knowledgeable about mindfulness practices and how they pertain to therapy and the successful treatment of various mental health concerns. Social workers should also be trained and educated on mindfulness-based approaches as a means to fulfill their ethical standard of competence.

The purpose of this study is to examine the association between mindfulness practices, levels of measured mindfulness, and physical and psychological well-being. More specifically, it attempts to determine if mindfulness practices in the general adult population are associated with an increase in levels of measured mindfulness, and with an increase in levels of physical and psychological well-being. This study looks at these variables by examining a sample of adults who practice various forms of mindfulness, such as sitting meditation, walking meditation, yoga, or qigong.

Literature Review

This study explores if mindfulness practices in the general adult population are associated with levels of measured mindfulness, and if mindfulness practices are associated with physical and psychological well-being. To begin, the meaning of mindfulness is explored from a variety of perspectives as a way to gain a comprehensive understanding of the term. Mindfulness-based interventions are explored along with common outcomes and the populations who have benefited from these interventions. A critique of the literature is provided along with an explanation of how mindfulness is commonly measured. Finally, there is an examination of mindfulness meditation, common outcomes, and how mindfulness pertains to preventive mental health.

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Mindfulness

It is agreed upon that there are many varying definitions of mindfulness. Mindfulness meditation, one particular practice of mindfulness, is defined by Reibel et al., (2001) as the “moment-to-moment awareness that is intentionally non-reactive and non-judgmental. The practitioner attends to the full range of whatever is present in the field of his or her experience in a non-judgmental way” (p. 183). The practitioner in this situation is the individual practicing mindfulness, and in a state of mindfulness they are fully engaged with whatever they are experiencing. Similar to this definition, Miller et al. (1995) states, “mindfulness is synonymous with awareness. Mindfulness meditation can be defined as the effort to intentionally pay attention, non-judgmentally, to present-moment experience and sustain this attention over time. The aim is to cultivate a stable and nonreactive present moment awareness” (p. 193). Miller explains mindfulness as simply the practice of awareness and the effort to pay attention to the present moment in a non-judgmental manner. The majority of studies on this topic fall closely in line with these definitions of mindfulness and agree that they are operational definitions (Brown & Ryan, 2003; Carmody & Baer, 2007; Falkenstrom & Fredrik, 2010; Grossman, Niemann, Schmidt, & Walach, 2004; Keng, et al., 2011). These definitions describe mindfulness basically as an intentional practice of non-judgmental awareness of the present moment. Another perspective describes mindfulness as not only a Buddhist practice but also something which is inherent to human nature.

It is understood throughout the literature that mindfulness originates from Buddhist meditation, but according to Kabat-Zinn (2003) mindfulness is not exclusively a Buddhist practice. He describes it as being universal and inherent to human ability and

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that it is not a philosophy, ideology, or belief but rather a description of how the mind is and how emotions are. He also describes it as the release and liberation of human suffering. He states: “mindfulness includes an affectionate, compassionate quality within the attending, a sense of openhearted, friendly presence and interest” (Kabat-Zinn, 2003, p. 145). He argues that even though mindfulness is originally Buddhist, everyone can practice it and benefit from the practice. The practice of mindfulness in this sense allows for the liberation of human suffering, the promotion of well-being and is accessible to everyone.

Another interpretation of mindfulness is described by Kabat-Zinn (2003), which allows one to understand it in an alternative way; he states: “mindfulness is not about getting anywhere else or fixing anything. Rather, it is an invitation to allow oneself to be where one already is and to know the inner and outer landscape of the direct experience in each moment” (p. 148). In this sense mindfulness is not about the effort to get to a particular state of being but about acceptance of where one is in life and the ability to fully experience each moment. This practice of accepting the present moment creates a sense of satisfaction and appreciation for life, thus enhancing well-being for the individual.

In order to understand what mindfulness actually is, it is important to clarify what a lack of mindfulness looks like. If someone is not practicing mindfulness they may be caught up in past mistakes, and may feel anxious or worried about the future. These states of being pull individuals out of the present moment and out of the state of mindfulness. Lacking mindfulness could also mean being occupied with multiple tasks or simply being preoccupied with a concern, which leads to disengagement with the present moment.

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Likewise the absence of mindfulness can be detected when someone acts defensively or is unable to pay attention to his or her thoughts, motivations or emotions (Brown & Ryan, 2003).

Kabat-Zinn (2003) describes mindfulness as;

waking up to the full spectrum of our experience in the present moment, which, as we engage in mindfulness practice, we rapidly discover is severely edited and often distorted through the routinized, habitual, and unexamined activity of our thoughts and emotions, often involving significant alienation from direct experience of the sensory world and the body. (p. 148)

By explaining the experience of mindfulness, he notes that individuals discover how mindless they really are and that lack of mindfulness is being unaware or unconscious of what is happening in their own lives. This leads them to experience their world and themselves with a dark and obscured lens full of inaccuracies and distortions. By practicing mindfulness, individuals begin to truly see how much they have been missing in life and how disconnected to reality they are. Kabat-Zinn (2003) also intentionally describes what mindfulness is not, to provide an accurate description of what it actually is.

He states:

Mindfulness is not merely a good idea such that, upon hearing about it, one can immediately decide to live in the present moment, with the promise of reduced anxiety and depression and heightened performance and life satisfaction, and then instantly and reliably realize that state of being. (p. 148)

He goes on to say that mindfulness is more like an art form and that with time and discipline it is developed and enhanced through daily practices. Mindfulness is not

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simply an intellectual understanding but something that must be experienced with the heart, mind and body on an ongoing basis.

It is clear there are many varying definitions of mindfulness and none captures the true essence of mindfulness. Mindfulness is impossible to fully describe, one must experience it in order to understand it. It is agreed upon in the literature that mindfulness could be described generally as the intentional practice of non-judgmental awareness of the present moment, which is the definition used for the purpose of this study. (Brown & Ryan, 2003; Carmody & Baer, 2007; Kabat-Zinn, 2003).

Mindfulness-Based Interventions

There are many psychological and medical interventions that incorporate mindfulness practices, including Mindfulness-Based Cognitive Therapy by Barnhofer, Dialectical Behavior Therapy by Linehan, Acceptance and Commitment Therapy by Hayes, and Mindfulness-Based Stress Reduction by Carmody and Baer. Mindfulness practices are the common thread throughout all these therapeutic interventions and have yielded successful results in treating a variety of mental health and physical conditions. The mindfulness practices in these interventions are associated with increased well-being with individuals receiving the treatment (as cited in Carmody & Baer, 2007).

Mindfulness has been incorporated into Western medical practice formally and initially through the creation of Mindfulness-Based Stress Reduction (MBSR), (Carmody & Baer, 2007). According to Reibel et al. (2001) “MBSR is a clinical group intervention that is patient-centered, experiential, and educational. The core of the program involves intensive training in mindfulness meditation and its applications for daily living and coping with stress, pain, and illness” (p. 183). In a similar way Kabat-Zinn, describes

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MBSR as training for medical patients to relieve pain, stress and illness through intensive mindfulness meditation practice such as mindful hatha yoga. In another article by Kabat-Zinn, MBSR is described as a group that strives to create mindfulness through the process of formal meditation such as mindful yoga, sitting meditation and body scans. It stresses the application of these practices into every day life as a means to reduce impairing physical and emotional symptoms (as cited in Carmody & Baer, 2007).

Kabat-Zinn describes that MBSR specifically entails weekly 2 ½-hour sessions over a period of 8 weeks and some all day sessions. These classes entail mindfulness practices and class discussions about difficulties and accomplishments individuals have in their practice. Members are encouraged to participate in informal mindfulness practices at home by doing common activities in a state of mindfulness. This could include doing the laundry, washing the dishes or walking, all while being fully aware of their thoughts, feelings, sensations, and movements (as cited in Carmody & Baer, 2007).

Populations Treated by Mindfulness-Based Interventions

According to Carmody and Baer (2007), when mindfulness is incorporated into therapeutic modalities it has “lead to clinically significant improvements in psychological functioning in a wide range of populations” (p. 1). Individuals suffering from a variety of ailments can greatly benefit from mindfulness therapies, all of which include mindfulness practices. More specifically, Grossman et al. (2004) found that MBSR can create significant benefits for individuals who suffer from fibromyalgia, chronic pain, anxiety, depression, cancer, and with prison populations and medical students. Not only do mindfulness practices improve psychological functioning they can also address serious medical conditions, pain, stress, and can help a variety of populations. Other populations

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that can benefit from MBSR include people struggling with coronary artery disease, obesity, binge eating disorders and other psychiatric disorders. According to Grossman et al. (2004) mindfulness meditation is used to “alleviate suffering associated with physical, psychosomatic and psychiatric disorders” (p. 35).

Similarly there are other studies which support the notion that mindfulness based therapies can help a wide range of populations. Other populations who have benefitted from mindfulness according to Van Doesum, Van Lange, Gymnasium, and Van Lange (2013) include those suffering from depression and anxiety. He states, “mindfulness-based psychotherapy, for instance, has shown to be an effective therapy for depression and anxiety disorders” (p. 86). Furthermore, most of the ailments reported by participants in another study of the effects of MBSR by Reibel et al. (2001) were chronic pain, hypertension, anxiety/panic disorders and depression. In other studies on the effects of MBSR, participants struggled with a wide range of problems such as personal and employment related stress, chronic pain, generalized anxiety, panic disorder, anxiety, and illness-related stress (Carmody & Baer, 2007; Miller et al., 1995). The majority of literature reviewed supports the notion that mindfulness practices incorporated into therapy can be used to treat a wide variety of populations suffering from physical and psychological ailments. The most common ailments treated include stress, anxiety, depression and pain (Carmody & Baer, 2007; Miller et al., 1995; Reibel et al., 2001).

Outcomes of Mindfulness-Based Interventions

There are a wide variety of both physical and psychological outcomes of mindfulness-based interventions. According to Grossman et al. (2004) “mindfulness training might enhance general features of coping with distress and disability in everyday

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life, as well as under more extraordinary conditions of disorder or stress” (p. 39).

Grossman also found that these improvements were consistent across other mental health measures including coping mechanisms, quality of life, anxiety, and depression. Other benefits found in this study of mindfulness-based interventions included the reduction of pain, physical impairments, and medical symptoms.

Brown and Ryan (2003), in a similar way, found many more psychological benefits of mindfulness-based interventions. The study found that high levels of mindfulness were “inversely related to depression, self-consciousness, and anger hostility and less strongly, though still significantly, to impulsiveness” (p. 829). Furthermore, higher levels of mindfulness in this study were associated with greater levels of well-being, pleasant affect, positive affectivity, life satisfaction, vitality, optimism, autonomy, self-esteem, self-actualization and competence. Similarly higher levels of mindfulness were also related to lower levels of neuroticism, anxiety, negative affectivity and unpleasant affect (Brown & Ryan, 2003). In this study, mindfulness-based interventions and levels of mindfulness were related to enhanced well-being. Another study done by Miller et al. (1995) determined that MBSR created “clinically and statistically significant improvements in subjective and objective symptoms of anxiety and depression” (p. 194). They also reported, based on clinical experiences, that mindfulness can subside the flight or fight reaction in stressful or anxiety producing situations. This is yet another benefit of mindfulness-based interventions and how mindfulness promotes well-being (Miller et al., 1995).

Individuals who participate in MBSR programs can experience a significant enhancement in their quality of life and a significant reduction of physical symptoms and

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psychological distress. Some other common effects of MBSR include decreased body tension, increased mental clarity and well-being, reduced symptoms of depression, anxiety and stress (Hamilton et al., 2006; Reibel et al., 2001). These mindfulness-based therapies all emphasize mindfulness-based practices throughout the treatment. Mindfulness-based therapies appear to be effective in improving physical and psychological well-being.

Critique of the Literature

Common themes in the literature, regarding concerns with mindfulness research, include the need for more long-term studies, control groups, more consistent methods, and difficulties in operationalizing mindfulness (Grossman et al., 2004; Hamilton et al., 2006; Reibel et al., 2001). Grossman et al. (2004) states that much more additional research is needed to confirm the long-term effects of mindfulness practices and that most studies can only confirm the immediate effects of mindfulness. Furthermore, he determined that most studies contain methodological deficiencies and that there was not sufficient information given about participant dropout rate. He goes on to say that mindfulness was not operationalized in most studies and many of them lack descriptions of mindfulness interventions, evaluation of how competent the therapist is who is facilitating the intervention, and therapist adherence to the program. Kabat-Zinn (2003), agrees with Grossman in that studies of mindfulness and MBSR contain a variety of methodological problems and lack definitive examples of effectiveness. He writes that current research needs “more methodologically rigorous investigations of both the clinical efficacy of mindfulness training in various specific disorders and the possible

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mechanisms and pathways through which it might exert characteristic effects with those specific disorders” (p. 145).

In support of Grossmans argument that mindfulness has been difficult to operationalize in studies, Carmody and Baer (2007) state that there is disagreement among researchers on how mindfulness should be operationalized and defined. For example, the number and type of features used in mindfulness instruments varies greatly. Contrary to this, they explain that there is a tool being used to measure mindfulness that combines essential features of all available mindfulness questionnaires called the Five Facet Mindfulness Questionnaire (FFMQ). Carmody and Baer (2007), state that “these five facets of mindfulness have shown good internal consistency and correlations in the expected directions with many variables predicted to be related to mindfulness, such as experiential avoidance, thought suppression, openness to experience, and emotional intelligence” (p. 2).

Hamilton et al. (2006) supports this notion that past studies suffer from methodological deficiencies but the most serious problem is a lack of a control group. Conversely, she goes on to say that “nevertheless, the empirical data do allow the inference that MBSR is more effective than ‘no treatment’ for a variety of physical and psychological problems” (p. 124). She argues that regardless of the deficiencies in studies, mindfulness based interventions still yield positive outcomes.

The literature primarily agrees that there is a lack of control groups as well as other methodological deficiencies in past and current mindfulness studies. Additionally, the literature generally supports the point that there are discrepancies on how to define mindfulness and on how to operationalize mindfulness. However, these limitations are

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slowly being addressed as more and more mindfulness studies occur and meta-analysis continues. Additionally, these limitations do not detract from the efficacy of past mindfulness studies but are important considerations when analyzing the data and for improvements and directions of future research (Carmody & Baer, 2007; Grossman et al., 2004; Hamilton et al., 2006; Kabat-Zinn, 2003; Reibel et al., 2001).

Mindfulness and Preventive Mental Health

There are no current studies in the literature that support the notion that mindfulness therapies can fully prevent the onset of a mental illness (Young, 2011). There are, however, many studies that support the idea that mindfulness-based therapies can prevent the relapse of a mental illness such as depression or anxiety (Miller et al., 1995; Reibel et al., 2001). Additionally, there are many studies that support the long-term effects of mindfulness practices, and one can argue that one of those long-term effects is preventing another depressive episode from occurring. From this point of view, mindfulness-based therapies can be seen as a preventive mental health intervention. Furthermore, the majority of studies support the notion that mindfulness practices for those with a mental health diagnosis lead to a reduction in levels of psychological distress and symptoms, and greater levels of well-being. Mindfulness practices may also assist in the prevention of mental health problems, by lowering levels of stress and negative psychological symptoms, and increasing levels of well-being (Ma & Teasdale, 2004; Majumdar et al., 2002; Miller et al., 1995; Reibel et al., 2001).

In a similar way, a study done by Miller et al. (1995) found that mindfulness practices can be helpful in the prevention of negative mental health symptoms. Miller concluded that there were clinical and statistical improvements in symptoms of

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depression, anxiety, and general psychological distress with participants in a MBSR study 3 years following the initial intervention. In this long-term study, patients demonstrated maintenance of the initial post-treatment improvements at the 3-year follow up in every outcome measure of the original study. These outcomes included Hamilton Rating Scale for Anxiety and Depression, Beck Anxiety and Depression Inventory, measurement of fears, mobility inventory for agoraphobia, Hamilton Panic Score, number of panic attacks, and severity of panic attacks.

Similarly, Reibel et al. (2001) found long-term positive physical and psychological effects of MBSR programs. A 1-year post treatment study was conducted by Reibel on participants in a MBSR program and determined that there was maintenance of initial improvements with individuals suffering from chronic pain and anxiety disorders on multiple outcome measures such as vitality, medical symptoms, psychological distress, anxiety, and depression. However, in this particular study, only 30 percent of the participants responded to the 1-year follow up study, which confounds the long-term health effects of MBSR. Therefore, it is not clear whether the other 70 percent of participants experienced the same long-term effects, which leads one to wonder the value this particular follow-up study.

Another study done by Majumdar et al. (2002) found that after an 8-week mindfulness meditation program, general physical well-being, emotional well-being and psychological distress improved significantly at initial post treatment test and maintained at a 3-month follow up. This suggests there is at least some efficacy in the long-term treatment effects of mindfulness practices.

In another long-term study, evidence was found that MBCT was both cost

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effective and successful in reducing the relapse and recurrence of major depression in participants who had experienced three or more depressive episodes who were recovering from depression. In this study, participants were followed up with every 3 months for a total of 1 year. This treatment reduced the relapse rates of depression by more than half, compared to the control groups. The preventive effects of MBCT are even stronger the more depressive episodes there are; only 38 percent of participants who had four or more past episodes receiving MBCT relapsed compared to a 100 percent relapse rate of the control group (Ma & Teasdale, 2004).

In support of these findings, Teasdale determined that patients with three or more depressive episodes who participated in MBCT only had a 37 percent relapse rate compared to the control group, which had a 77 percent relapse rate. This study demonstrates that MBCT can significantly reduce future relapses of individuals struggling with recurrent major depression (as cited in Ma & Teasdale, 2004).

There are many long-term effects of mindfulness-based interventions for those struggling with depression, anxiety, chronic pain, stress, and psychological distress. There are also studies which support the notion that these interventions can significantly decrease rates of relapse in major depression. Although mindfulness practices have not been proven to prevent mental illness from ever occurring in first place, they have helped in the prevention of major depressive relapses and have had long-term positive psychological effects that can be viewed as preventive (Ma & Teasdale, 2004; Majumdar et al., 2002; Miller et al., 1995; Reibel et al., 2001; Young, 2011).

Meditation and Levels of Mindfulness

Practicing mindfulness meditation leads to higher levels of measured mindfulness.

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A study done by Baer, Smith, Hopkins, Krietemeyer, and Toney on mindfulness and meditation supports the notion that mindfulness meditation increases levels of measured mindfulness. They found that levels of mindfulness were significantly related to well-being and meditation experience. So the greater experience someone has with meditation the higher levels of measured mindfulness they will likely have (as cited in Lykins & Baer, 2009). Furthermore, a study by Lykins and Baer (2009) about the difference between meditators and nonmeditators found that the meditators scored significantly higher on levels of mindfulness than nonmeditators. This finding also supports the thought that the actual practice of mindfulness meditation leads to greater levels of measured mindfulness. Another study found that levels of mindfulness were positively correlated with meditation experience. Those who participated in a meditation retreat had higher levels of mindfulness afterwards. This study also supports the idea that participation in meditation leads to higher levels of measured mindfulness. There are strong correlations among several studies supporting the theory that mindfulness practices lead to higher levels of measured mindfulness; it is also important to assess some of the common outcomes correlated with mindfulness practices (Falkenstrom & Fredrik, 2009; Lykins & Baer, 2009).

Associations of Mindfulness Meditation

There are multiple studies which support the theory that mindfulness meditation is associated with an increase in psychological health and well-being (Brown & Ryan, 2003; Falkenstrom & Fredrik, 2009; Lykins & Baer, 2009; Keng et al., 2011). For example, mindfulness is associated with reduced anxiety and increased levels of internal control. A study done by Hjelle (1974), on the associations of meditation on novice and

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experienced meditators, found that more experienced meditators had significantly lower levels of anxiety and higher levels of internal control compared to novice meditators.

This study supports the theory that those who practice meditation on a regular basis have overall greater levels of psychological health compared to those who have not practiced meditation on a regular basis.

Practicing mindfulness meditation on a long-term basis is also an important consideration when looking at associations of mindfulness practice. In a study done by Lykins and Baer (2009), long-term practice of mindfulness meditation allowed for the ability to be mindful in daily life, and this specifically resulted in the increase of psychological well-being.

There is not only an increase in psychological health in meditators but also a decrease in adverse psychological symptoms. Lykins and Baer (2009) found that meditators scored significantly lower on negative psychological symptoms and higher on levels of psychological well-being than nonmeditators. They also found that meditators held higher scores on characteristics such as self-compassion, well-being and reflection, and lower scores on amount of psychological symptoms, rumination, cognitive failures, and challenges in emotional regulation compared to nonmeditators. Additionally, they found that higher levels of meditation were related to a decrease in fears of emotions and higher levels of behavioral self-regulation. These findings are consistent with the conclusions of Kabat-Zinn, Linehan, Segal, and Shapiro who state that those who “practice mindfulness are more likely to observe their thoughts and feelings nonjudgmentally and nonreactively and therefore less likely to ruminate or to fear their emotions and more likely to function adaptively” (as cited in Lykins & Baer, 2009, p.

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238).

Brown and Ryan (2003) found that higher levels of measured mindfulness in a population of meditators were related to lower rates of anxiety, neuroticism, depression, negative emotions, and unpleasant affect. The study also found that higher levels of measured mindfulness were associated with higher levels of life satisfaction, optimism, self-actualization, pleasant affect, positive emotions, self-esteem, relatedness, competence, autonomy, self-knowledge, behavioral regulation, and vitality. They also found that enhanced mindfulness could predict a decline in stress, mood, and cognitive disturbances, and that measured mindfulness was most strongly and inversely related to self-consciousness, anger, hostility, depression, and significantly related to impulsiveness. Also, those who had higher levels of measured mindfulness had tendencies to be more aware of inner experiences and overt behaviors. They tended to be more in touch with their emotional states and better able to control them; they were also more likely to be able to get their psychological needs satisfied. These same individuals were less likely to ruminate and experience self-consciousness and social anxiety than those who scored low on levels of measured mindfulness. However, they were no more likely to engage in self-scrutiny or be reflective than those who held low mindfulness scores.

A study by Keng et al. (2011), regarding mindfulness in non-clinical populations, found that higher levels of mindfulness are associated with improved behavioral regulation, reduced emotional reactivity and psychological symptoms, and increased individual well-being. They also found that mindfulness is positively associated with “higher levels of positive affect, life satisfaction, vitality, and adaptive emotion regulation, and lower levels of negative affect and psychopathological symptoms” (p. 1044).

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Orzech et al. (2009) found that more meditation experience related to higher levels of subjective well-being and self-compassion. Also they found that the expectation of benefits from meditation was a significant predictor of subjective well-being, so those who expected more benefits from meditation received them. Overall they found that intensive mindfulness training in a healthy adult population was associated with a decline in symptoms of depression and anxiety. They also found that these associations continued over time and were replicated over two independent groups. Overall, they determined that intensive mindfulness training is associated with positive changes in mental health.

Similar to these findings but also much broader, A. Sharma, S. Sharma, and M. Sharma (2011) found that meditation can have far reaching physical and psychological effects. Meditation can reduce psychosomatic symptoms, the use of prescription and over the counter medications, and increase levels of self-actualization and interpersonal relationships. Additionally, meditation has been found to be helpful in the prevention and treatment of anxiety, depression, obsession, arthritis, diabetes, heart disease, strokes, migraines, and tension headaches.

Measuring Mindfulness

In order to study mindfulness it must be measured, and there are currently a variety of ways to measure mindfulness. The majority of measures include self-report surveys, which are valid and reliable and are typically easy to administer (Falkenstrom & Fredrik, 2010). Feldman, Hayes, Kumar, Greeson, and Laurenceau (2007) would agree with this view by reporting that in order to measure mindfulness an operational definition must be created and a standardized tool ought to be established.

There are many questionnaires that assess mindfulness as a general tendency to be

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mindful in everyday life. These questionnaires include the Freiburg Mindfulness Inventory by Buchheld, Grossman and Walach, the Southampton Mindfulness Questionnaire by Chadwick, the Toronto Mindfulness Scale-Trait Version by Davis and Laurenceau, the Philadelphia Mindfulness Scale by Cardociotto, the Five Facet Mindfulness Questionnaire by Baer, the Kentucky Inventory of Mindfulness Skills by Baer, and the Cognitive Affective Mindfulness Scale-Revised by Feldman, Hayes, Kumar, Greeson, and Laurenceau (as cited by Keng et al., 2011).

A study done by Brown and Ryan (2003) found that there was evidence supporting the psychometric adequacy and validity of the Mindful Attention Awareness Scale (MAAS). They found that the MAAS was shown to be a valid and reliable instrument for use in studying mindfulness in college and adult populations. Also, they report MAAS was created to be without motivations, attitudes and psychological occurrences that predict well-being or other outcomes related to well-being. It was shown to predict multiple indicators of psychological well-being, but did not predict well-being itself which can be considered a limitation of the MAAS inventory. Brown and Ryan (2003) also found that MAAS “assesses individual differences in the frequency of mindful states over time” (p. 824). The primary focus of MAAS is on the absence or presence of awareness to and attention of what is presently occurring.

According to Feldman et al., (2007) the Cognitive Affective Mindfulness Scale-Revised was designed to measure a broad conception of mindfulness, without questions that used language to specific types of meditation. Similar to this, the MAAS assesses mindfulness with language free of idioms, metaphors, and specializations. Furthermore, Feldman et al. (2007) argues that the MAAS only focuses on the attention and awareness

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and not on acceptance and non-judgment, which are strongly emphasized in clinical mindfulness interventions and therefore would have limited use in clinical research.

It is evident there are a variety of mindfulness measures and not one is considered universal, rather each one is used for a specific population or study. Additionally, each tool measures various factors related to mindfulness and each one seems to have advantages and disadvantages (Brown & Ryan, 2003; Carmody & Baer, 2007; Feldman et al., 2007; Keng et al., 2011).

Conclusion

The practice of mindfulness in clinical interventions and in meditation for multiple populations has been used to promote physical health, mental health, and psychological well-being. The literature has agreed that mindfulness practices are an important tool in the enhancement of mental health and promotion of psychological well-being (Brown & Ryan, 2003; Falkenstrom & Fredrik, 2010; Keng, et al., 2011; Lykins & Baer, 2009; Orzech et al., 2009). Mindfulness is important in the role of social work practice in that it is being used to treat mental illness and promote mental health and well-being.

This study will explore if mindfulness practices in the general adult population are associated with levels of measured mindfulness, and if mindfulness practices are associated with physical and psychological well-being. This study will investigate these variables through the examination of a sample of adults who practice various forms of mindfulness such as sitting meditation, walking meditation, yoga, or qigong.

Conceptual Framework

Mindfulness is rooted in many philosophies, psychologies, traditions, and

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ideologies. According to Brown and Ryan (2007), mindfulness is rooted in Buddhist psychology, ancient Greek philosophy, existentialism, transcendentalism, humanism, and naturalism. Mindfulness is also related to the strengths perspective, in that they both focus on and draw from the good inside of people. Though the literature supports the idea that mindfulness has the strongest roots in Buddhism (Hamilton, Kitzman, & Guyotte, 2006; Kumar, Feldman, & Hayes, 2008; Majumdar, Grossman, Dietz-Waschkowski, Kersig, & Walach, 2002; Pattoni, 2012; Sedlmeier, Eberth, Schwarz, Zimmermann, Haarig, Jaeger, & Kunze, 2012; Young, 2011).

The theory or construct most closely related to mindfulness is Buddhism, which according to McIntosh (1997) is a philosophy focused on human behavior, thought and suffering. Buddhism teaches four noble truths and they are considered to be the foundation of Buddhism. McIntosh (1997) states, “the first noble truth is the observation that human existence is filled with a great deal of suffering” (p.38). This truth allows one to understand that it is likely people will suffer from illness, pain, hunger, death, the fear of death and other unpleasant feelings such as anger and depression.

The second noble truth gives an explanation to the cause of suffering. In this truth suffering is caused not by external events but by people’s minds. People suffer because of their desires and attachments or things they cling to and feel they must have in order to be happy. These attachments could be material but are more likely mental, such as images of self, pleasures, comforts, opinions and beliefs (McIntosh, 1997).

The third noble truth brings one to the realization that it is not possible to avoid all suffering yet at the same time all suffering is not completely predestined. The fourth noble truth provides the ability to see how suffering can be prevented. The freedom from

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suffering can be attained through the removal of attachments or those things which one believes they need in order to be happy. The removal of attachments can be accomplished through fully understanding how their attachments lead to their suffering. When there is a struggle to let go of attachments they only become stronger (McIntosh, 1997).

This last noble truth is essentially advising others to practice mindfulness or to pay attention at all times. By paying attention or being mindful of thoughts, external stimuli and personal behavior, people can see their attachments and how they affect all aspects of their lives. This practice of mindfulness ultimately leads to the freedom from suffering. Since people typically do not pay attention or practice mindfulness in this context, they are clueless as to how and why they are suffering. This lack of mindfulness continues to be the cause of a person's own perpetual suffering (McIntosh, 1997).

Kabat-Zinn (2003) would agree that the precursor and origin of mindfulness is Buddhism. He also shares that mindfulness is core to Buddhist practice and is essentially a refined understanding of how unexamined behavior and thoughts can lead to human suffering. He goes on to say that the practice of mindfulness can transform suffering by calming and clarifying the mind, opening the heart and refining action and attention. In addition to Buddhism, mindfulness is also related to the strengths perspective.

According to Pattoni (2012) the strengths perspective is defined as “a collaborative process between the person supported by services and those supporting them, allowing them to work together to determine an outcome that draws on the person's strengths and assets” (p. 4). This perspective draws from, focuses on, and builds from a person's strengths and qualities they have inside themselves as opposed to focusing on deficits or what is wrong with the person. Mindfulness is similar to this in

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that all people can practice mindfulness, it is something good they have within themselves and the practice of it can reduce suffering and increase well-being.

Mindfulness is a strength and asset that all people have and that all people can utilize.

Methods

The overall purpose of this study is to examine the association between mindfulness practices, levels of measured mindfulness, and physical and psychological well-being. Physical and psychological well-being includes emotional functioning, energy/fatigue, emotional well-being, and social functioning. It examines if mindfulness practices in the general adult population are associated with levels of measured mindfulness, and if mindfulness practices are associated with physical and psychological well-being. This study examined these variables through a sample of adults who practice various forms of mindfulness, such as sitting meditation, walking meditation, yoga, or qigong.

Research Design

This study was a cross-sectional quantitative survey. The survey was designed by the researcher but was also a combination of previously used self-rating scales and forms found in the literature including the MAAS, and components of the Short Form Health Survey (SF-36) (Brown & Ryan, 2003; Reibel et al, 2001). There were a total of 33 questions on the survey which gathered information to better understand the association between mindfulness practices, levels of measured mindfulness, and mental health. The survey consisted of 26 Likert questions, three yes/no questions and four demographic questions. Demographic information gathered was age, gender, and history and frequency

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of mindfulness practices. The independent variables in this study were frequency and history of mindfulness practice. The dependent variables were levels of measured mindfulness and components of health, emotional functioning, energy/fatigue, emotional well-being, and social functioning.

Sample and Recruitment

Participants in this study were adults who were recruited from Buddhist meditation centers in a large Midwestern metropolitan area, and had a mindfulness practice such as sitting meditation, walking meditation, yoga, or qigong. Selection criteria included being at least 18 years of age, and participating in a formal mindfulness practice. Flyers were posted at the centers in common areas and entryways. Emails were sent to staff members at the centers requesting that they make announcements to members of the meditation centers about the surveys and flyers. The researcher met with staff at the meditation centers and explained the intent and purpose of the research and provided a copy of the survey. The researcher also made announcements about the study to members of the meditation centers. The flyers explained that the study was attempting to better understand the association between mindfulness practices, levels of measured mindfulness, and levels of physical and psychological well-being. The flyer also explained who could take the survey, how to complete the survey, what to expect from it, and that it would take about 5 to 10 minutes to complete. The surveys were made available to participants by placing them on tables in common areas or entryways of the meditation centers next to the informational flyers. Pens were provided for participants to fill out the survey and completed surveys were kept in a sealed envelope to protect

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confidentiality. The surveys were made available for 6 weeks and were collected on a weekly basis.

Protection of Human Subjects

This research proposal received approval from the Internal Review Board (IRB) of St. Catherine University. The IRB is a committee of professionals who reviewed this research proposal to ensure that all research participants were treated with dignity, autonomy, and privacy, and had been provided consent. The protection of research participants was shared among advisors, St. Catherine University, and the researcher (St. Catherine University). All participants were informed of the voluntary nature of the study through implied consent and were informed that they may stop the survey at any point. Due to the voluntary nature of the study, risk of coercion was reduced. In addition, there were no known risks or direct benefits to participants. The first page of the survey contained information about the study, and the participant's willingness to complete the survey implied their consent. No identifying information was gathered, which allowed participants to maintain their anonymity. Participants were treated based on the ethical guidelines of the social work profession and the social work code of ethics.

Data Collection

Demographic information. The survey asked a series of questions to gather information about the respondent's demographic variables. Ratio levels of measurement were used for age, frequency of mindfulness practice, and history of mindfulness practice, and were asked using open-ended questions. Age was measured by asking the open-ended question of "What is your age? ____". Gender was determined in the survey and is considered a nominal level of measurement since there are pre-determined categories.

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The question of gender asked; “What is your gender? Female ____ Male ____ Other (please specify)_____”. The question used to determine mindfulness history was: “For how long have you participated in a mindfulness practice? Years ____ Months ____”. The question used to determine mindfulness frequency was; “About how often do you participate in a mindfulness practice on a weekly basis? Hours ____ Minutes_____”.

Measured mindfulness. Mindfulness was measured through MAAS. MAAS focuses on the absence or presence of awareness of and attention to what is occurring in the present moment; it is a measure of day-to-day mindfulness. It is argued in the literature that these specific components are foundational to mindfulness and are therefore an excellent starting point in measuring mindfulness (Brown & Ryan, 2003). The MAAS is a self-report measure that contains 15 Likert statements about everyday experiences. Respondents were encouraged to share what accurately reflects their experience rather than what they think their experiences should be. After each statement there were six response options provided, responses were 1 (Almost Always), 2 (Very Frequently), 3 (Somewhat Frequently), 4 (Somewhat Infrequently), 5 (Very Infrequently) and 6 (Almost Never). Participants were asked to determine how frequently or infrequently they experience each statement. Some examples of the MAAS statements included; “I forget a person’s name almost as soon as I’ve been told it for the first time.”, “I find myself listening to someone with one ear, doing something else at the same time.”, “I find myself preoccupied with the future or the past.” and “I could be experiencing some emotion and not be conscious of it until some time later.” The MAAS was scored by adding up all numbers associated with circled responses and a composite score was then determined on a range of 15-90. Higher scores reflected higher levels of measured

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mindfulness and lower scores reflected lower levels of measured mindfulness (Brown & Ryan, 2003).

Physical and psychological well-being. According to Reibel et. al., (2001) The Rand 36-Item Health Survey or (SF-36) “reports health related quality of life, including both physical and mental functioning and well-being” (p. 184). In this particular study only four of the eight components of health were measured in an effort to keep the survey shorter in length. The four components of health that were measured included emotional functioning, energy/fatigue, social functioning, and emotional well-being. The health category titled “role limitations due to emotional problems” was changed to emotional functioning by the primary researcher for the purpose of this study (Rand Health, 2010a).

The category of emotional functioning is a health component that was measured with three questions in the survey. Prior to reading and responding to statements, participants read the question: “during the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?” An example of one of the three preceding statements was “accomplished less than you would like” and in response to each statement participants then circled a “1” for a “Yes” or a “2” for a “No” (Rand Health, 2010a).

The category of energy/fatigue is a health component that was measured with four questions in the survey. Prior to responding to the questions, respondents were informed that the questions were about how they felt and how things had been for them during the past four weeks. Some questions in this section included: “did you feel full of pep?” and

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“did you feel tired?” After each question a 6-point Likert scale was provided and ranges from 1 (All the time) to 6 (None of the time), (Rand Health, 2010a).

The category of emotional well-being is a component of health that was measured with five different questions in the survey. Respondents were informed that the questions were about how they felt and how things had been for them during the past 4 weeks. They were also encouraged to provide one answer that most accurately captured how they felt. Some examples of questions in this section included: “have you been a very nervous person?” and “have you felt calm and peaceful?” A 6-point Likert scale was used as a response to the questions and ranged from 1 (All of the time) to 6 (None of the time), (Rand Health, 2010a).

The last category of health is social functioning and was measured with two questions on the survey. The first question was: “During the past 4 weeks, to what extent has your physical health and emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?” As a response a 5-point Likert scale was used ranging from 1 (Not at all) to a 5 (Extremely). The other question asked in this section was: “During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc)?” A 5-point Likert scale was used as a response option ranging from 1 (All the time) to 5 (None of the time) (Rand Health, 2010a).

According to Reibel et al., (2001) the SF-36 questionnaire is an instrument which is widely used to evaluate nontraditional treatments. Health components from this questionnaire were scored into separate categories; there was not a single total health score. The first step in scoring the health components entailed recoding responses using

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an established scoring key. All items were scored so a high score equates to a healthier state. The second step entailed averaging recoded items for each health component. In this study there was a total of four averaged scores, one for each health variable. If an item was left blank it was not taken into account; that score was not calculated. Scoring was percentage based, out of 100. An average score of 0 for a category reflected the lowest level of health and an average score of 100 reflected the highest level of health (Rand Health, 2010b).

Data Analysis

Demographic data. Descriptive statistics were used to analyze demographic information gathered, including age, gender, frequency and history of mindfulness practice, and level of measured mindfulness. This section examined the characteristics of the sample by asking who they are, what their mindfulness experience is, and what their level of measured mindfulness is. The first descriptive statistic measured the age of the respondents. Age is a ratio level of measurement and was asked as an open-ended question. The statistical tool used to analyze age was Measures of Central Tendency and Dispersion. The second descriptive statistic measured the gender of respondents. Gender is a nominal level of measurement and a Frequency Distribution was used to analyze the data. The third descriptive statistic measured the frequency of mindfulness practices of respondents. Frequency of mindfulness practice is a ratio level of measurement since any amount of minutes or hours can be provided. Measures of Central Tendency and Dispersion and Histogram were used to analyze the data. The fourth descriptive statistic measured the history of mindfulness practices of respondents. History of mindfulness practice is a ratio, since any number of months and years can be provided. Measures of

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Central Tendency and Dispersion and Histogram were used to analyze the data. The fifth descriptive statistic measured levels of measured mindfulness for the respondents. Levels of measured mindfulness is an interval level of measurement since it can be rank ordered, and was obtained using standardized measuring instruments. Measures of Central Tendency and Dispersion and Histogram were used to analyze the data.

Mindfulness experience and measured mindfulness. This study has identified ten research questions. This section discusses the first two and how they will be answered. These questions examined the association between mindfulness experience, which entails mindfulness history and frequency and level of measured mindfulness. The first inferential research question was: Is there a relationship between mindfulness frequency and level of measured mindfulness? The independent variable is mindfulness frequency - a ratio level of measurement, and the dependent variable is level of measured mindfulness - an interval level of measurement. The statistical tool used to analyze the data was Correlation and Scatter Plot. It was predicted that an increase in mindfulness experience would be associated with an increase in levels of measured mindfulness. The second inferential research question was: Is there a relationship between mindfulness history and level of measured mindfulness? The independent variable is mindfulness history - a ratio level of measurement, and the dependent variable is level of measured mindfulness - an interval level of measurement. The statistical tool used to analyze the data was Correlation and Scatter Plot. It was predicted that there would be an association between an increase in history of mindfulness practices and an increase of levels of measured mindfulness.

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Mindfulness experience and physical and psychological well-being. The next category of research questions examined the association between mindfulness experience, which includes mindfulness history and frequency, and physical and psychological well-being, which includes the sub-categories of emotional functioning, energy/fatigue, emotional well-being, and social functioning. This section includes eight research questions. Each research question contains both the independent and dependent variables, and both are considered ratio levels of measurement. The statistical tool used to analyze the data for every research question in this section was Correlation and Scatter Plot. The third inferential research question asked: Is there a relationship between mindfulness frequency and emotional functioning? The fourth inferential research question asked: Is there a relationship between mindfulness history and emotional functioning? It was predicted that an increase of mindfulness frequency and history would be associated with an increase in emotional functioning. The fifth inferential research question asked: Is there a relationship between mindfulness frequency and emotional well-being? The sixth inferential research question asked: Is there a relationship between mindfulness history and emotional well-being? It was predicted that an increase of mindfulness frequency and history would be associated with an increase in emotional well-being. The seventh inferential research question asked: Is there a relationship between mindfulness frequency and energy/fatigue? The eighth inferential research question asked: Is there a relationship between mindfulness history and energy/fatigue? It was predicted that an increase of mindfulness frequency and history would be associated with an increase in energy/fatigue. The ninth inferential research question asked: Is there a relationship between mindfulness frequency and social functioning? The last inferential research question asked: Is there a

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relationship between mindfulness history and social functioning? It was predicted that an increase of mindfulness frequency and history would be associated with an increase in social functioning. Data was displayed and measured through Correlation and Scatter plot to determine if there was an association between the independent and dependent variables, if the relationship was positive or negative, and the strength of the relationship.

Results

Descriptive Statistics

Demographics. The 25 adult participants in this study were recruited through two different Buddhist meditation centers in an urban city. Demographic data collected in this study included gender and age of participants. Table 1 shows the frequency distribution of the demographic variable gender. Table 2 shows the measures of central tendency and dispersion of the demographic variable age.

Table 1

Distribution of Gender

Variable	Options	Frequency	Percent
Gender	Male	9	36 %
	Female	16	64 %
	Other	0	0 %
	Total	25	100 %

Table 2

Measures of Central Tendency and Dispersion for Age

Variable	Minimum	Maximum	Mean	Std. Dev.	Skewness
Age	24	72	49.92	14.47	-.428

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Women were more represented in the sample than men. There were a total of 25 respondents and of them 16 (64%) identified as female, 9 (36%) identified as male and 0 (0%) identified as other. The mean age of the respondents was 49.92 years old, and the range was a lowest of 24 years old to a highest of 72 years old. The age was negatively skewed -0.428 , indicating that there were more respondents on the older end of the age range as opposed to the younger end. Standard deviation was 14.47, which reflects how spread out the ages were and how much variance there was from the mean age. Both of these statistics are noteworthy since they indicate that respondents were predominantly female and were on average 50 years old.

Mindfulness. Descriptive information was gathered on mindfulness of the respondents by assessing mindfulness frequency or amount of time spent in a mindfulness practice per week, mindfulness history or number of months spent in a mindfulness practice over a life-time, and level of measured mindfulness or a self-rated score of awareness and attention of daily activities. Table 3 shows the measures of central tendency and dispersion for mindfulness frequency (MFrequency), mindfulness history (MHistory), and level of measured mindfulness (LMM).

Table 3

Measures of Central Tendency and Dispersion for Mindfulness Frequency (MFrequency), Mindfulness History (MHistory), and Level of Measured Mindfulness (LMM)

Variable	Respondents	Minimum	Maximum	Mean	Std. Dev.	Skewness
MFrequency (minutes)	25	105	2,400	381.80	460.33	3.83
MHistory (months)	25	6	480	126	127.80	1.27
LMM	25	38	76	59.40	11.29	-0.402

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Out of the 25 respondents, the mean number of minutes spent practicing mindfulness on a weekly basis was 381.80 minutes, (about 6 hours per week). The minimum amount of time spent in a mindfulness practice per week was 105 minutes and the maximum amount of time was 2,400 minutes, (exactly 40 hours per week). The standard deviation was 460.33 minutes suggesting there was a wide variation in the reported number of minutes respondents spent participating in a mindfulness practice per week. Figure 1 below demonstrates that mindfulness frequency was positively skewed 3.83, with more responses on the left end of the histogram and fewer responses on the right end of the histogram. This indicates that more respondents spent less time in a mindfulness practice and fewer respondents spent more time in a mindfulness practice.

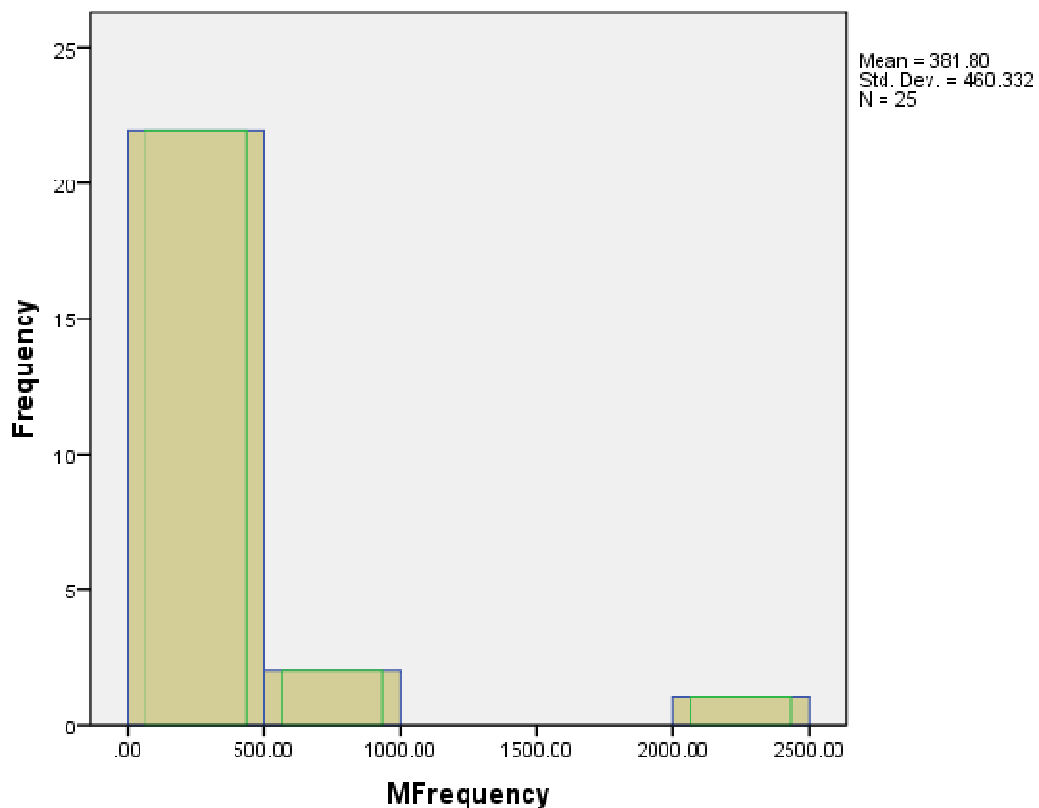


Figure 1. Respondent Mindfulness Frequency

Minimum=105 Min. Maximum=2400 Min.

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The fourth descriptive statistic examines mindfulness history (MHistory). Table 3 shows that the mean number of months spent practicing mindfulness was 126 months (about 10 ½ years). The range spanned from a minimum of 6 months to a maximum of 480 months (exactly 40 years), indicating a large range in mindfulness history of the respondents. The standard deviation was 127.80 months or (about 10 ½ years) indicating a wide variance from the mean in the number of months spent in a mindfulness practice. The histogram in Figure 2 below depicts the distribution of responses for mindfulness history. It demonstrates that mindfulness history is positively skewed 1.27, with more responses on the left end of the histogram and fewer responses on the right end of the histogram. This is important since it indicates that more respondents have had a mindfulness practice for a shorter amount of time, between 6-100 months or about (6 months – 8 years) and that fewer respondents have had a mindfulness practice for a longer amount of time.

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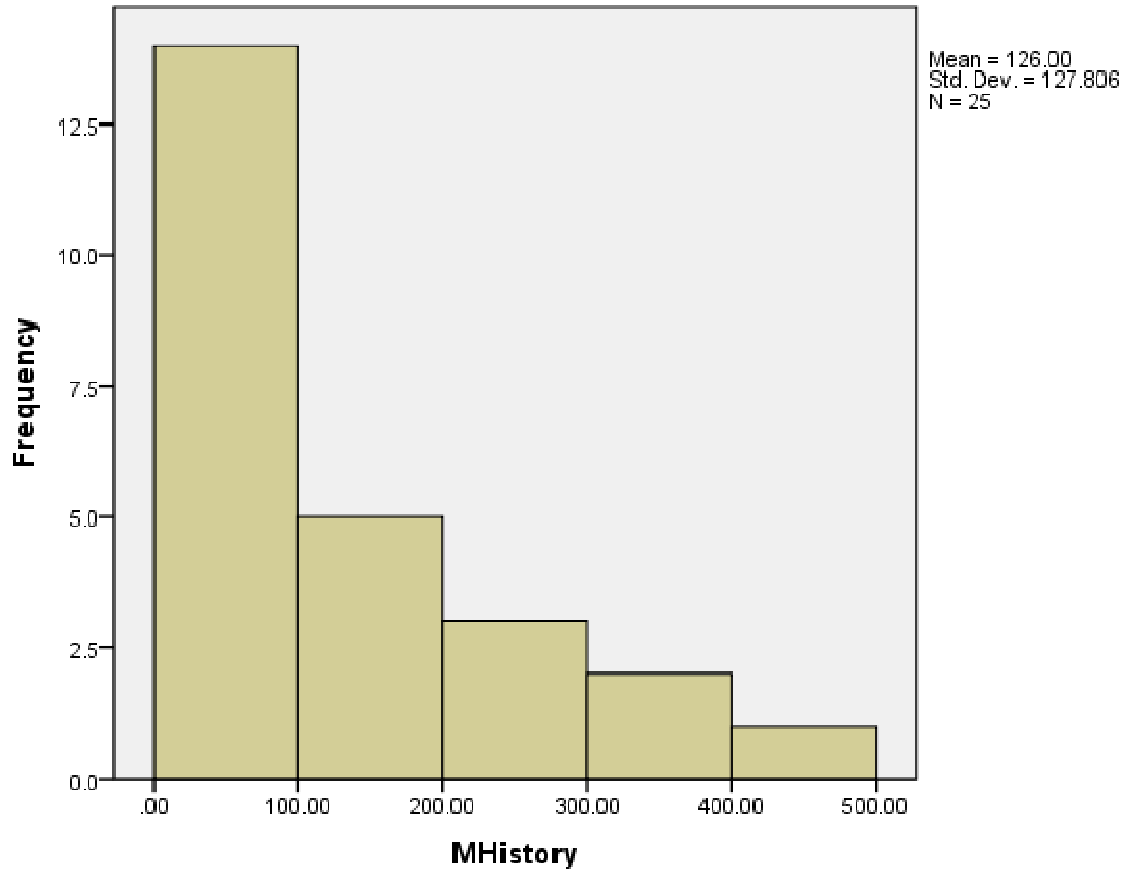


Figure 2. Respondent Mindfulness History
Minimum=6 Months Maximum=480 Months

The fifth descriptive statistic was level of measured mindfulness (LMM). Table 3 shows that the mean score was 59.4, with a minimum score of 38 and a maximum score of 76. The standard deviation was 11.29, indicating a low amount of variance in level of measured mindfulness scores in relationship to the mean. The histogram below in Figure 3 displays the distribution of scores for the level of measured mindfulness. In this case, responses are negatively skewed $-.402$, with more responses on the right side and fewer responses on the left side. This is important since it shows that more respondents have a

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higher level of measured mindfulness, between 60 - 76 and fewer respondents have a lower level of measured mindfulness, between 38 - 59.

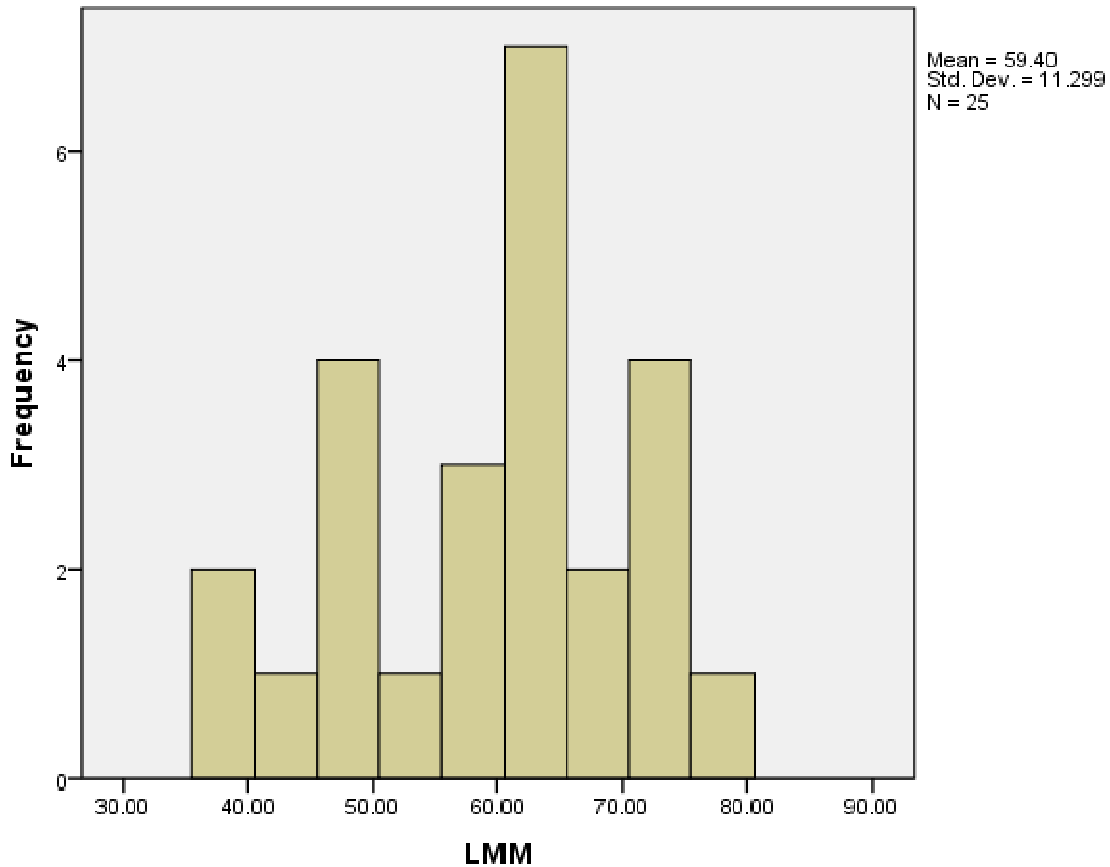


Figure 3. Respondent Level of Measured Mindfulness
Minimum=38 Maximum=76

Inferential Statistics

Mindfulness experience and level of measured mindfulness. This study has identified ten research questions. This section discusses the first two and how they will be answered. These questions examined the relationship between mindfulness experience, which entails mindfulness history and frequency, and the level of measured mindfulness. The first inferential research question was: Is there a relationship between mindfulness frequency and level of measured mindfulness? This study hypothesized that there would

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be a positive relationship between mindfulness frequency and level of measured mindfulness. Table 4 shows the inferential statistics of the relationship between mindfulness frequency (MFrequency) and level of measured mindfulness (LMM). The correlation ($r = .358$, $p = .079$) indicates a positive moderate strength relationship that is not statistically significant, since the p-value is greater than .05. Therefore, according to this study there is not a statistically significant relationship between mindfulness frequency and level of measured mindfulness.

Table 4

Relationship between Mindfulness Frequency (MFrequency) and Level of Measured Mindfulness (LMM)

		Correlations	
		MFrequency	LMM
MFrequency	Pearson Correlation	1	.358
	Sig. (2-tailed)		.079
	N	25	25
LMM	Pearson Correlation	.358	1
	Sig. (2-tailed)	.079	
	N	25	25

The second inferential research question asked: Is there a relationship between mindfulness history and level of measured mindfulness? This study hypothesized that there would be a positive relationship between mindfulness history and level of measured mindfulness. Table 5 shows the inferential statistics of the relationship between mindfulness history (MHistory) and level of measured mindfulness (LMM). The correlation ($r = .309$, $p = .113$) indicates a positive moderate strength relationship that is not statistically significant, since the p-value is not less than .05. Therefore according to this study there is not a statistically significant relationship between mindfulness history and level of measured mindfulness.

Table 5

Relationship between Mindfulness History (MHistory) and Level of Measured Mindfulness (LMM)

		Correlations	
		LMM	MHistory
LMM	Pearson Correlation	1	.309
	Sig. (2-tailed)		.133
	N	25	25
MHistory	Pearson Correlation	.309	1
	Sig. (2-tailed)	.133	
	N	25	25

Mindfulness experience and physical and psychological well-being. The next category of research questions examined the relationship between mindfulness experience and physical and psychological well-being. Mindfulness experience is defined as mindfulness history and frequency. Physical and psychological well-being is defined as emotional functioning, energy/fatigue, emotional well-being, and social functioning. This section includes eight research questions. The third inferential research question asked: Is there a relationship between mindfulness frequency and emotional functioning? This study hypothesized that there would be a positive relationship between mindfulness frequency and emotional functioning. The inferential statistics for these two variables indicate that there is a positive moderate strength relationship that is not statistically significant as indicated by the correlation ($r = .251$, $p = .226$) and since the p-value is not less than .05. Consequently, this study demonstrates there is not a statistically significant relationship between mindfulness frequency and emotional functioning.

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The fourth inferential research question asked: Is there a relationship between mindfulness history and emotional functioning? This study hypothesized that there would be a positive relationship between mindfulness history and emotional functioning. Table 6 shows the inferential statistics of the relationship between mindfulness history (MHistory) and emotional functioning (EFunctioning). The correlation ($r = .405$, $p = .044$) indicates a positive moderate strength relationship that is statistically significant, since the p-value ($p < .044$) is less than .05. Therefore this study shows that there is a statistically significant relationship between mindfulness history and emotional functioning. The scatter plot graph in Figure 4 shows that there is a positive correlation between the variables, so as mindfulness history increases, so does emotional functioning. This suggests that the longer a respondent has had mindfulness practice the healthier they are in terms of emotional functioning.

Table 6

Relationship between Mindfulness History (MHistory) and Emotional Functioning (EFunctioning)

Correlations

		MHistory	EFunction
MHistory	Pearson Correlation	1	.405*
	Sig. (2-tailed)		.044
	N	25	25
EFunction	Pearson Correlation	.405*	1
	Sig. (2-tailed)	.044	
	N	25	25

*Correlation is significant at the 0.05 level (2-tailed)

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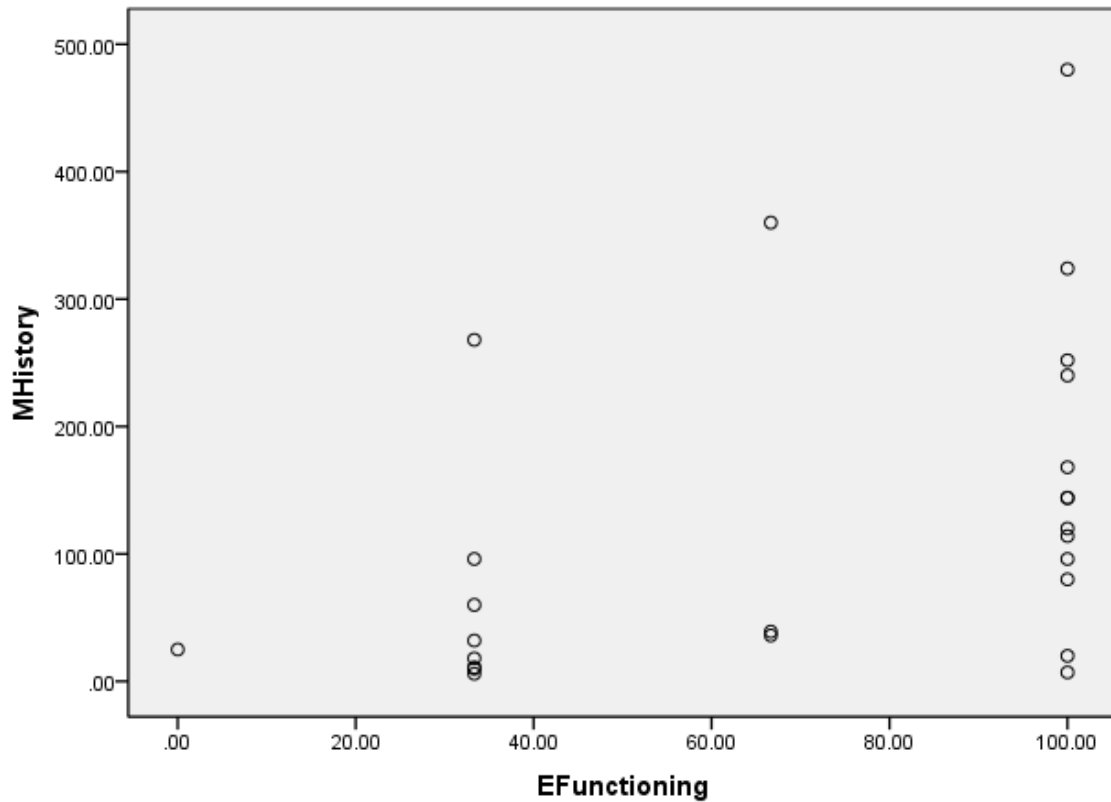


Figure 4. Relationship Between Mindfulness History and Emotional Functioning
 r-value=.405, p-value=.044

The fifth inferential research question asked: Is there a relationship between mindfulness frequency and emotional well-being? This study hypothesized that there would be a positive relationship between mindfulness frequency and emotional well-being. The inferential statistics for these two variables demonstrate that there is a positive weak relationship between mindfulness frequency and emotional well-being that is not statistically significant ($r = .219$, $p = .303$), since the p-value is not less than .05. Consequently, based on this study, there is not a statistically significant relationship between mindfulness frequency and emotional well-being.

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The sixth inferential research question asked: Is there a relationship between mindfulness history and emotional well-being? This study hypothesized there would be a positive relationship between mindfulness history and emotional well-being. Table 7 shows the inferential statistics of the relationship between mindfulness history (MHistory) and emotional well-being (WellBeing). The correlation ($r = .448$, $p = .028$) indicates a positive moderate strength relationship that is statistically significant, since the p-value ($p < .028$) is less than .05. As a result, this study indicates there is a statistically significant relationship between mindfulness history and emotional well-being. The scatter plot graph in Figure 5 displays a positive correlation between these two variables. This suggests that the longer a respondent has had a practice of mindfulness the healthier they are in terms of emotional well-being.

Table 7

Relationship between Mindfulness History (MHistory) and Emotional Well-Being (WellBeing)

		Correlations	
		MHistory	WellBeing
MHistory	Pearson Correlation	1	.448*
	Sig. (2-tailed)		.028
	N	25	24
WellBeing	Pearson Correlation	.448*	1
	Sig. (2-tailed)	.028	
	N	24	24

*Correlation is significant at the 0.05 level (2-tailed)

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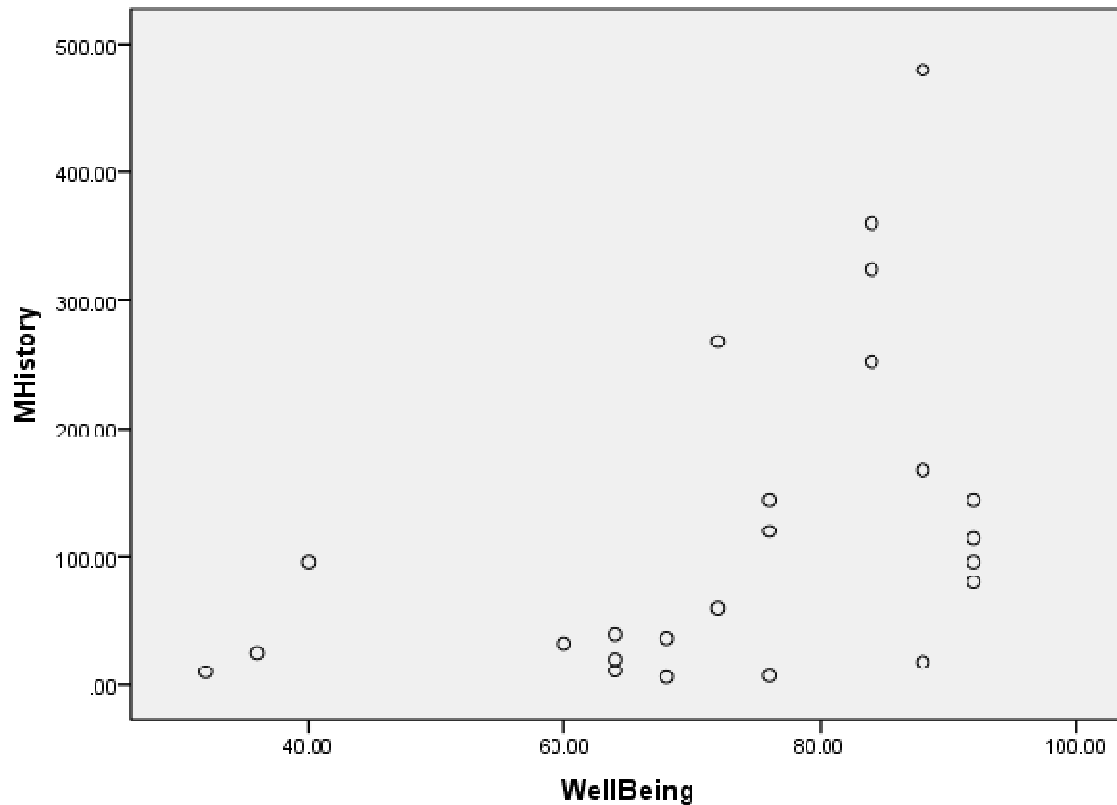


Figure 5. Relationship Between Mindfulness History and Emotional Well-Being
 r -value= .448, p -value= .028

The seventh inferential research question asked: Is there a relationship between mindfulness frequency and energy/fatigue? This study hypothesized that there would be a positive relationship between mindfulness frequency and energy/fatigue. The inferential statistics of the relationship between mindfulness frequency and energy/fatigue indicates a positive weak relationship that is not statistically significant ($r = .116$, $p = .580$), since the p -value is not less than .05. Therefore based on this study there is not a statistically significant relationship between mindfulness frequency and energy/fatigue.

The eighth inferential research question asked: Is there a relationship between mindfulness history and energy/fatigue? This study hypothesized that there would be a positive relationship between mindfulness history and energy/fatigue. The inferential

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statistics of the relationship between mindfulness history and energy/fatigue indicates a positive weak relationship that is not statistically significant ($r = .224$, $p = .240$), since the p-value is not less than .05. Therefore according to this study, there is not a statistically significant relationship between mindfulness history and energy/fatigue.

The ninth inferential research question asked: Is there a relationship between mindfulness frequency and social functioning? This study hypothesized that there would be a positive relationship between mindfulness frequency and social functioning. The inferential statistics of the relationship between mindfulness frequency and social functioning indicates a positive weak relationship that is not statistically significant ($r = .044$, $p = .835$), since the p-value is not less than .05. Consequently, based on this study there is not a statistically significant relationship between mindfulness frequency and social functioning.

The last inferential research question asked: Is there a relationship between mindfulness history and social functioning? This study hypothesized that there would be a positive relationship between mindfulness history and social functioning. The inferential statistics of the relationship between mindfulness history and social functioning indicates a positive weak relationship that is not statistically significant ($r = .250$, $p = .229$), since the p-value is not less than .05. Therefore, according to this study there is not a statistically significant relationship between mindfulness history and social functioning.

Discussion

Discussion of Findings

Mindfulness practices have been incorporated into a variety of therapies that treat mental illness and medical conditions. There is a strong body of knowledge that supports the idea that mindfulness practices are strongly associated with physical and mental health benefits. Mindfulness interventions are considered an evidence-based practice and are therefore relevant to clinical social work practice. (Carmody & Baer, 2007; Miller et al., 1995; Reibel et al., 2001). For these reasons it is essential for social work practice to incorporate mindfulness practices, not only as a treatment option for those struggling with mental illness but also as a way to promote mental health and well-being. This research study examined the association between mindfulness experience and levels of measured mindfulness and it also examined the association between mindfulness experience and physical and psychological well-being. It did this through the investigation of 25 adults who practiced mindfulness in some form, such as sitting meditation, walking mediation, qigong, and yoga. Specifically this research study asked: Is there a relationship between mindfulness experience and levels of measured mindfulness? Is also asked: Is there a relationship between mindfulness experience and levels of physical and psychological well-being?

Mindfulness experience and levels of measured mindfulness. The results of the first inferential research question show that current frequency of mindfulness practice of the respondents did not significantly correlate with the level of measured mindfulness. Furthermore the results of the second inferential research question show that a history of mindfulness practice of the respondents also did not significantly correlate with the level

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of measured mindfulness. As a result, mindfulness experience, as defined by mindfulness frequency, or the amount of time one spends on a weekly basis practicing mindfulness, and mindfulness history, or the number of months one has spent in a mindfulness practice over their life-time, did not have a significant relationship with levels of measured mindfulness. This finding is surprising since previous literature supports the use of the Mindful Attention Awareness Scale (MAAS) and considers it a valid and reliable instrument for use in studying mindfulness in college and adult populations (Brown & Ryan, 2003). Additionally, previous research supports the theory that the more mindfulness experience one has the greater the level of measured mindfulness (Falkenstrom & Fredrik, 2009; Lykins & Baer, 2009). These results were not consistent with the findings of this study, which shows no relationship between mindfulness experience and level of measured mindfulness. This discrepancy between past literature and this research could suggest that there were not enough respondents in this study to make the relationship between these variables significant. The relationships were both positive and moderate in strength, meaning these variables change in the same direction, so as mindfulness frequency and history increased so did the level of measured mindfulness. Had the relationship been statistically significant, the results would have confirmed past research findings that the greater the mindfulness experience the greater the level of measured mindfulness.

Mindfulness experience and physical and psychological well-being. The results of the third inferential research question show that there is not a statistically significant relationship between mindfulness frequency and emotional functioning. This result is in contrast with what previous research supports, which is that mindfulness

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experience is related to a reduction in emotional difficulties (Lykins & Baer, 2009). It is unclear as to why mindfulness frequency was not associated with emotional functioning but it could possibly suggest there were not enough respondents in this study. Had the relationship been statistically significant between these two variables it would have confirmed past research. The relationship between these two variables was a positive moderate strength relationship, meaning that as mindfulness frequency increased so did emotional functioning.

Conversely, the results of the fourth inferential research question shows that there is a positive moderate strength relationship between mindfulness history and emotional functioning that is statistically significant. This result confirms findings in previous research, which shows that increased mindfulness experience is related to increased emotional functioning (Lykins & Baer, 2009). The results of this research question are important since the greater the number of months a respondent has spent in a mindfulness practice over their life-time the greater their emotional functioning. Emotional functioning is defined as the extent to which emotional problems affect amount and quality of work, amount and quality of other activities, and by how much one has accomplished with in the past 4 weeks.

The results of the fifth inferential research question show that there is not a statistically significant relationship between mindfulness frequency and emotional well-being. This is in contrast with previous research, which supports the theory that mindfulness practices are associated with an increase in psychological health and well-being (Brown & Ryan, 2003; Falkenstrom & Fredrik, 2009; Lykins & Baer, 2009; Keng et al., 2011). This contrast is surprising and may suggest that the frequency of

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mindfulness practice may not be a factor in emotional well-being. It may also suggest there was not a substantial number of respondents to make the relationship statistically significant. Had the relationship been statistically significant, it would have confirmed previous research. The relationship that does exist between mindfulness frequency and emotional well-being was positive, so as mindfulness frequency increased so did emotional well-being, defined as how much time someone has experienced nervousness, cheerfulness, calmness, peace, sadness, and happiness.

The results of the sixth inferential research question is in support of past research which confirms the notion that mindfulness practices are associated with psychological health (Brown & Ryan, 2003; Falkenstrom & Fredrik, 2009; Lykins & Baer, 2009; Keng et al., 2011). This result is notable since it demonstrates a positive and significant relationship between mindfulness history and emotional well-being. So as mindfulness history increased in the respondents so did emotional well-being, defined as how much time someone feels nervousness, cheerfulness, calmness, peace, sadness, and happiness with in the past 4 weeks.

The results of the seventh and eighth inferential research questions show that there is not a statistically significant relationship between mindfulness experience as defined by mindfulness frequency and history with energy/fatigue. This is in contrast with previous studies, which shows that mindfulness experience is associated with increased vitality (Brown & Ryan, 2003). Had the relationship between mindfulness experience and energy/fatigue been statistically significant it would have confirmed past research findings, since the relationship between mindfulness experience and

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energy/fatigue was positive. As mindfulness experience increased in respondents so did their health in regards to energy and fatigue.

The results of the ninth and tenth research questions show that there is not a statistically significant relationship between mindfulness experience as defined by mindfulness frequency and history with social functioning. This result is in contrast with past research which supports the idea that mindfulness experience is associated with an increase in social functioning as defined by the ability to cope with distress (Grossman et al., 2004). This discrepancy between past research findings and this research finding could suggest there was not a sufficient number of respondents to make the relationship statistically significant. Interestingly, had relationship been statistically significant it would have confirmed past research since the relationship between mindfulness experience and social functioning was positive. This indicates that as mindfulness experience increased in respondents, so did social functioning. Social functioning is defined as the extent to which physical health and emotional problems interfered with normal social activities, such as with friends, family, neighbors or groups within the past 4 weeks.

The overall results of this study suggest that a person's mindfulness history or number of months they have spent in a mindfulness practice as defined by walking meditation, sitting meditation, qigong and yoga has a positive relationship with emotional functioning. This is worth mentioning since the greater the number of months a respondent has spent in a mindfulness practice over their life-time the greater their emotional functioning. Emotional functioning is defined as the extent to which emotional problems affect the amount and quality of work, the amount and quality of other

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activities and how much one has accomplished within the past 4 weeks. The results of this study also suggest that a person's mindfulness history or number of months they have spent in a mindfulness practice as defined by walking meditation, sitting meditation, qigong and yoga has a positive relationship with emotional well-being. This is also a noteworthy finding since it indicates that the greater number of months a respondent has spent in a mindfulness practice over their life-time the greater their emotional well-being, with emotional well-being defined as how much time someone has felt nervousness, cheerfulness, calmness, peace, sadness and happiness within the past 4 weeks. When considering the demographics of this sample, these findings would be generally true for a population that is predominantly female, is on average 50 years old, has an average weekly mindfulness practice of 6 hours, and has practiced mindfulness on an average of 10 ½ years.

Strengths and Limitations

This research design is limited in many ways primarily due to a short time frame. It is not a longitudinal study, nor were a pre- and post-test used. There was a short amount of time to prepare the proposal and gather data from research participants, so a brief survey needed to be designed and an easily accessible population needed to be found. The survey only gathered 33 pieces of information, which created a narrow amount of data to be explored and could have potentially limited the results of the study. Another drawback is that the population was not going through a mindfulness based treatment program where pre- and post-tests could have been administered. Furthermore, the respondents were not identified as having any kind of mental illness or physical condition, they were a non-clinical group of adults who attend meditation centers, and

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this prevents the ability to generalize findings to a clinical population. This would have been an advantage since it is more related to clinical social work in terms of populations served and treatment interventions used. For this reason one could question the relevance this study has regarding social work practice. Another limitation is the self-report measures; the measures rely solely on the memory and perspective of the respondent and not on an objective measure. Furthermore, each health component only asks two to five questions, which is a limited amount of information to fully capture someone's level of physical and psychological well-being.

Another major limitation was the undersized number of respondents. There were only 25 participants who responded to this study making results difficult to show significance. Additionally, the population was mainly women in their 50s and 60s who have on average 6 hours of mindfulness practice per week and on average 10 ½ years of mindfulness history. This homogeneous and specific population makes any significant results difficult to generalize to a common adult population.

One strength of this research project was the use of a comprehensive survey, which used a wide variety of topics, questions and measurement tools, and resulted in the collection of diverse data. This wide amount of data created a well-rounded survey, which covered a lot of ground. Another strength was the simplicity and practicality of the survey. The survey was simple in that it only gathered two pieces of relevant demographic information, information on mindfulness experience, information on levels of measured mindfulness, and information on four different health components. This simplicity was advantageous in that it may have increased the likelihood of potential participants taking and completing the survey. This in turn could have increased the size

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of the sample thus increasing the likelihood of the results being more significant. Another strength of the study was that it contained frequently and previously used scales and questionnaires including the MAAS and The Rand 36-Item Health Survey, thus increasing the validity and reliability of the survey. Finally, an important strength of this research project was the comprehensive background information provided on the definition of mindfulness, how mindfulness is incorporated into therapies for mental and physical health problems, how effective those therapies are, how mindfulness pertains to preventive health, and how mindfulness practices are associated with greater physical and psychological health. This background information emphasized the importance and relevance of mindfulness practices in regards to clinical social work practice.

Implications

Implications of this research study suggest that increased mindfulness history is associated with increased emotional functioning and emotional well-being. Specifically, it suggests that the longer someone has had a mindfulness practice, the healthier they are in terms of emotional functioning, as previously defined. Additionally it suggests that the longer someone has had a mindfulness practice, the healthier they are in terms of emotional well-being, as previously defined. This suggests that mindfulness practices are relevant to clinical social work practice since social work serves populations that struggle with psychological problems and social and occupational functioning. It also suggests that it would be advantageous for clinical social workers to encourage, teach, and use mindfulness practices as a way to improve the health of the clients they work with and as a way to improve their own health, hopefully improving the quality of mental health services they provide.

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This study also suggests multiple implications for future social work research. Since this research failed to prove that there was a statistically significant relationship between mindfulness experience and level of measured mindfulness, it would be interesting to study what variables are associated with an increase in level of measured mindfulness such as physical exercise, other spiritual practices, or time spent in nature. Additionally, since this research failed to prove that there was a statistically significant relationship between mindfulness experience and energy/fatigue and social functioning, it would be interesting to determine if there was a statistically significant relationship between the level of measured mindfulness and energy/fatigue and social functioning.

It is essential for future social work research, in regards to mindfulness, to focus on more clinical populations, specifically those struggling with mental health concerns, since social work most often serves these populations. This will result in findings being more relevant to clinical social work practice and to populations served by social work. Additionally, future social work research, in regards to mindfulness, should focus on the prevention of mental illness through the promotion of well-being, not just the treatment of mental illness. Unfortunately, much more emphasis is being placed on the testing, diagnosing, and treatment of mental illness rather than on the promotion of mental health for those who are already healthy (Center for Disease Control, 2011). In response, further research should focus on how mindfulness can aid in the prevention of mental and physical health concerns since there are so few studies which demonstrate how mindfulness practices can be a preventive factor in mental and physical health problems.

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Conclusion

This study showed that mindfulness history significantly correlated with emotional functioning and emotional well-being. This tells me that a duration of a mindfulness practice over a life time, in whatever form that may be, is more important than the number of hours one spends in a weekly practice. It also tells me with time and experience one can truly begin to learn what mindfulness really is about and can begin to yield some benefits from it. Furthermore, it informs me that with a longer history of mindfulness practice someone will likely have greater quality of work and other daily activities in their life, will have accomplished more, will more likely experience happiness, calmness, and peace, and will be less likely to experience nervousness, sadness and hopelessness. This is not to say these things are guaranteed if someone has a long history of mindfulness but rather that they are associated with individuals who have a longer history of mindfulness practice.

I was also disappointed and surprised by the results. I put a lot of time and work into this research and I am discouraged at how much effort it took to find any significant associations between the variables. One explanation of this could be the respondents' extensive mindfulness experience. Keeping this in mind, it is possible the respondents were more honest about their emotions and physical well-being because they know these aspects of themselves so well and therefore reported lower levels of psychological and physical well-being. They may also have had a deeper understanding of mindfulness and what mindfulness really means and may perceive that mindfulness is a limitless spectrum that is unattainable. It is possible they were more likely to report lower levels on the self-reported mindfulness score because they know how far they are from complete

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mindfulness. I also think the age of the respondents had an impact on the results, especially for the category of energy/fatigue. The majority of respondents were in their 50s and 60s, and generally with age comes a lower level of energy. Likewise, it is possible the weather could have factored in the lower levels of physical and psychological well-being of respondents. The surveys were made available in January and February during the middle of a historically brutal Minnesota winter. One of the respondents even wrote a comment on the survey, in response to a question about energy and fatigue, about how anyone could possibly have high or normal levels of energy with this awful weather. It is possible that all these factors played a role in many of the results not being statistically significant.

I also find the lack of significant results to be somewhat comforting. I say this because it tells me that it is possible that one cannot fully measure the subject matter of mindfulness in an empirical and quantitative manner. Measuring mindfulness in this manner is essentially taking a very subjective, experience based matter and trying to extract some objectivity from it, and by doing so possibly taking out the meaning, value, or significance it once had. I think that when someone tries to examine a subject matter like this, trying to further define it and label it within the confines of scientific measures and rules, they lose the true meaning and the essence of what it really is. I have found that the more I study mindfulness by reading what other people have written about it or by doing my own research trying to conceptualize how others have experienced mindfulness, the less I know what it really is and the further away from it I get. Conversely, the more I experience it on a personal level the more I know in my heart what it is and the deeper understanding I have of it. Ultimately, these results tell me that one has to experience

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mindfulness for themselves in order understand it and see for themselves how it adds to the richness of their life or how it changes them.

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Appendix A**Agency Approval Letters**

December 16, 2013

To whom it may concern,

Shawn Englund-Helmeke has approval by the XXXXXXXX to post flyers and surveys at the center to make available to members to take. This is regarding his research project on Mindfulness and Well-being.

If you need further information, please feel free to contact me.

Thank you,

XXXXX XXXXX

Administrative Director

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Appendix A

Hi Shawn,

It's okay to ask community members at XXXXXXXXX if they are interested in participating in your survey. The best way to do that is to put a flyer up on the downstairs bulletin board where people can find more information about your project as well as your contact info. Also feel free to make announcements at the programs you attend at XXXXXXXXX about the nature of your research and the best way to get involved if people are interested. Will these suggestions meet your needs? Please keep me posted about your intentions. It's good for me to know which programs you think you'll be at and when you'll begin making announcements. Good luck.

Peace,

XXXXXX

Office Manager

On Tue, Sep 24, 2013 at 11:20 AM

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Appendix B**Letter of Consent,
University of St. Thomas and St. Catherine University**

Dear Participant,

I am conducting a study regarding the associations between mindfulness practices, levels of measured mindfulness and well-being and I invite you to participate in this research. You were selected as a potential research participant because of your participation in a mindfulness practice such as sitting meditation, walking meditation, mindful yoga or qigong and because you are at least 18 years of age or older. Please take a moment to read this letter of consent before you participate in the study.

This study is being conducted by: Shawn Englund-Helmeke, and advised by Sarah Ferguson, Ph.D. through the School of Social Work at University of St. Thomas and St. Catherine University.

Background Information:

There is a growing body of knowledge in current literature suggesting that mindfulness practices are associated with the reduction of mental health symptoms and the enhancement of well-being. This study hopes to add to that body of knowledge.

The purpose of this research project is to gain a better understanding of the relationship between mindfulness practices, levels of measured mindfulness and physical and psychological well-being. This study is part of my masters of clinical social work program.

Procedures:

If you agree to participate in this study I will ask you to take a self-report survey which asks a variety of questions regarding the history and frequency of your mindfulness practice, demographic information, your level of measured mindfulness and about your physical and psychological well-being. The survey contains 33 short questions with a variety of scaled responses. The survey should take about five to ten minutes to complete.

Risks and Benefits of Being in the Study:

There are questions on the survey that pertain to physical and psychological well-being, since these questions gather personal or sensitive information, there is the possible risk they may trigger some physical or psychological concerns you may have. A potential benefit you could gain is a greater awareness and understanding of your level of mindfulness and level of physical and psychological well-being.

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Anonymity:

I will maintain anonymity by not asking any identifying information about you such as names, dates of birth, addresses, etc. Any results published or presented will not include identifying information; your information is anonymous. The data collected from the surveys will be entered into a data analysis program at the University of St. Thomas and data will be stored on a secure password protected server, accessible only by the researcher. Final data analysis will be stored on a flashdrive only accessible to the researcher, Shawn Englund-Helmeke. Only group data will be used to write a research article and present a public presentation at the University of St. Thomas. Raw data will be accessed only by Shawn Englund-Helmeke the researcher and will be locked in a file cabinet at the home of the researcher. Electronic data will be erased and hard copy surveys will be shredded on May 30th, 2014.

Voluntary Nature of the Study:

Your participation in this study is completely voluntary and your decision to participate will have no affect on your current or future relations with the University of St. Thomas or St. Catherine University. You can stop the survey at any point if you decide not to participate in the study, also you can leave questions blank without exceptions. After you complete and submit the survey, it will not be possible to withdraw from the study since it is impossible to determine which survey you completed. This is due to the anonymity of the survey since no identifying information will be obtained.

Statement of Consent:

Your consent will be indicated by completing and submitting the survey. You may keep this consent form and the list of resources attached to the survey.

Thank you for taking the time to participate in this study if you have any questions please contact;

Shawn Englund-Helmeke
Primary Researcher
Masters of Social Work Student
helm5021@stthomas.edu

Sarah Ferguson, Ph.D.
Research Advisor
smferguson@stkate.edu

John Schmitt
St. Catherine IRB Chair
651-690-7739

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Appendix C

Mindfulness and Well-Being Survey

Mindfulness practice in the context of this study is defined as sitting meditation, walking meditation, yoga and qigong.

- 1.) What is your age? _____
- 2.) What is your gender? Female _____ Male _____ Other _____
(please specify)
- 3.) For how long have you participated in a mindfulness practice?
Years _____ Months _____
- 4.) About how often do you participate in a mindfulness practice on a weekly basis?
Hours _____ Minutes _____

Measured Mindfulness of Day-to-Day Experiences

Instructions: Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item.

1 Almost Always	2 Very Frequently	3 Somewhat Frequently	4 Somewhat Infrequently	5 Very Infrequently	6 Almost Never
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5.) I could be experiencing some emotion and not be conscious of it until some time later.	1	2	3	4	5	6
6.) I break or spill things because of carelessness, not paying attention, or thinking of something else.	1	2	3	4	5	6
7.) I find it difficult to stay focused on what's happening in the present.	1	2	3	4	5	6
8.) I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	1	2	3	4	5	6
9.) I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	1	2	3	4	5	6

MINDFULNESS AND WELL-BEING

10.) I forget a person's name almost as soon as I've been told it for the first time.	1	2	3	4	5	6
11.) It seems I am "running on automatic," without much awareness of what I'm doing.	1	2	3	4	5	6
12.) I rush through activities without being really attentive to them.	1	2	3	4	5	6
13.) I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there.	1	2	3	4	5	6
14.) I do jobs or tasks automatically, without being aware of what I'm doing.	1	2	3	4	5	6
15.) I find myself listening to someone with one ear, doing something else at the same time.	1	2	3	4	5	6
16.) I drive places on 'automatic pilot' and then wonder why I went there.	1	2	3	4	5	6
17.) I find myself preoccupied with the future or the past.	1	2	3	4	5	6
18.) I find myself doing things without paying attention.	1	2	3	4	5	6
19.) I snack without being aware that I'm eating.	1	2	3	4	5	6

Physical and Psychological Well-Being

During the **past 4 weeks**, have you had any of the following problems with your work or other regular daily activities **as a result of any emotional problems** (such as feeling depressed or anxious)?

Circle One Number on Each Line	Yes	No
20.) Cut down the amount of time you spent on work or other activities	1	2
21.) Accomplished less than you would like	1	2
22.) Didn't do work or other activities as carefully as usual	1	2

MINDFULNESS AND WELL-BEING

23.) During the **past 4 weeks**, to what extent has your **physical health or emotional problems** interfered with your social activities with family, friends, neighbors, or groups?

(Circle One Number)

Not at all 1

Slightly 2

Moderately 3

Quite a bit 4

Extremely 5

24.) During the **past 4 weeks**, how much of the time has your **physical health or emotional problems** interfered with your social activities (like visiting with friends, relatives, etc.)?

(Circle One Number)

All of the time 1

Most of the time 2

Some of the time 3

A little of the time 4

None of the time 5

MINDFULNESS AND WELL-BEING

These questions are about how you feel and how things have been with you **during the past 4 weeks**. For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the past 4 weeks . . .
(Circle One Number on Each Line)

	All of the Time	Most of the Time	A Good Bit of the Time	Some of the Time	A Little of the Time	None of the Time
25.) Did you feel full of pep?	1	2	3	4	5	6
26.) Did you have a lot of energy?	1	2	3	4	5	6
27.) Did you feel worn out?	1	2	3	4	5	6
28.) Did you feel tired?	1	2	3	4	5	6
29.) Have you been a very nervous person?	1	2	3	4	5	6
30.) Have you felt so down in the dumps that nothing could cheer you up?	1	2	3	4	5	6
31.) Have you felt calm and peaceful?	1	2	3	4	5	6
32.) Have you felt downhearted and blue?	1	2	3	4	5	6
33.) Have you been a happy person?	1	2	3	4	5	6

Thank you for taking the time to complete this survey. Your participation in this study is greatly appreciated. Please place your completed survey in an envelope, seal the envelope and place it in the box titled Mindfulness and Well-Being Surveys.

References:

Rand Health. (2010). Medical outcomes study: 36-item short form survey instrument.

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being.

MINDFULNESS AND WELL-BEING

If you feel you are in need of extra support regarding mental health concerns, below you will find some mental health resources which are free or sliding scale fee.

Hennepin County Outpatient Mental Health Clinics

Phone number: (612) 596-9438 South Minneapolis (adults & children) at 1801 Nicollet Ave. S., Minneapolis

North Point Health and Wellness Center

Phone number: (612) 543-2566 North Minneapolis at 1313 Penn Ave. N., Minneapolis

Community University Health Care Center

Phone number: (612) 638-0670 South Minneapolis at 2001 Bloomington Ave., Minneapolis

The Family Partnership

Phone number: (612) 728-2061 South Minneapolis at 4123 E. Lake St., Minneapolis; and North area at 6900 78th Ave. N., Brooklyn Park; and Western area at Loffler Bldg., Suite 318, 1101 E. 78th St., Bloomington; and Downtown Minneapolis at 414 S. 8th St., Minneapolis

CLUES (Spanish speaking)

South Minneapolis at 720 East Lake St. (763) 746-3500; and St. Paul at 797 East 7th St. (651) 379-4200

Headway Emotional Health Services (Storefront/ Pyramid)

Phone number: (612) 861-16785 or (763) 746-2400 Minneapolis at 6425 Nicollet Ave. S., Richfield; and Golden Valley at 701 Decatur Ave. N., Suite 109, Golden Valley

Walk-In Counseling Center

Phone number: (612) 870-0565 South Minneapolis at 2421 Chicago Ave. South

Appendix D

Permission to Use Short Form Health Survey

Terms and Conditions for Using the 36-Item Short Form Health Survey

RAND hereby grants permission to use "RAND 36-Item Short Form Health Survey" in accordance with the following conditions, which shall be assumed by all to have been agreed to as a consequence of accepting and using this document:

1. Changes to the Health Survey may be made without the written permission of RAND. However, all such changes shall be clearly identified as having been made by the recipient.
2. The user of this Health Survey accepts full responsibility, and agrees to indemnify and hold RAND harmless, for the accuracy of any translations of the Health Survey into another language and for any errors, omissions, misinterpretations, or consequences thereof.
3. The user of this Health Survey accepts full responsibility, and agrees to indemnify and hold RAND harmless, for any consequences resulting from the use of the Health Survey.
4. The user of the 36-Item Health Survey will provide a credit line when printing and distributing this document acknowledging that it was developed at RAND as part of the Medical Outcomes Study.
5. No further written permission is needed for use of this Health Survey.

http://www.rand.org/health/surveys_tools/mos/mos_core_36item_terms.html

Appendix E**Permission to use MAAS****Monroe Campus
Department of
Psychology**

White House
806 West Franklin Street
P.O. Box 842018
Richmond, Virginia 23284-2018
804 828-6754
Fax: 804 828-2237
TDD: 1-800-828-1120

Dear Colleague,

The trait Mindful Attention Awareness Scale (MAAS) is in the public domain and special permission is not required to use it for research or clinical purposes. The trait MAAS has been validated for use with college student and community adults (Brown & Ryan, 2003), and for individuals with cancer (Carlson & Brown, 2005). A detailed description of the trait MAAS, along with normative score information, is found below, as is the scale and its scoring. A validated state version of the MAAS is also available in Brown and Ryan (2003) or upon request. Feel free to e-mail me with any questions about the use or interpretation of the MAAS. I would appreciate hearing about any clinical or research results you obtain using the scale.

Yours,

Kirk Warren Brown, PhD
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806 West Franklin St.
Richmond, VA 23284-2018
e-mail kwbrown@vcu.edu

kirkwarrenbrown.vcu.edu/wp-content/scales/MAAS%20trait%20research-ready%20+%20intro.pdf