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Kurt A. Brickner
Wright State University

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**THE EFFECTS OF A MINDFULNESS-BASED PROGRAM ON QUALITY OF
LIFE IN AFRICAN-AMERICAN OLDER ADULTS: A FEASIBILITY STUDY**

PROFESSIONAL DISSERTATION

SUBMITTED TO THE FACULTY

OF

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

BY

KURT A. BRICKNER, PSY.M.

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

Dayton, Ohio

September, 2013

COMMITTEE CHAIR: Jeffery B. Allen, Ph.D., ABPP

Committee Member: Julie Williams, Psy.D., ABPP

Committee Member: George Kraus, Ph.D., ABPP

WRIGHT STATE UNIVERSITY
SCHOOL OF PROFESSIONAL PSYCHOLOGY

June 15, 2012

I HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER MY SUPERVISION BY **KURT A. BRICKNER, PSY.M.** ENTITLED **THE EFFECTS OF A MINDFULNESS-BASED PROGRAM ON QUALITY OF LIFE IN AFRICAN-AMERICAN OLDER ADULTS: A FEASIBILITY STUDY** BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PSYCHOLOGY.

Jeffery B. Allen, Ph.D., ABPP
Dissertation Director

LaPearl Logan Winfrey, Ph.D.
Associate Dean

Abstract

The present study examined the effect of a modified Mindfulness-Based Stress Reduction program on overall quality of life and self-reported medical and psychological symptoms among a sample of ten religious community-dwelling adults over age 65. This study served as a feasibility study to determine the efficacy of conducting similar groups over a longer time period. This 10-session group program was for individuals dealing with stress-related problems, illness, anxiety, depression, and chronic pain, and incorporated aspects of religiosity germane to the sample of participants, such as recitation and reflection of scripture passages and the bidirectional relationship between one's religious practices and principles of mindfulness covered during sessions. Participants completed measures of mindfulness (Kentucky Inventory of Mindfulness Skills – KIMS), overall quality of life (World Health Organization Quality of Life Brief Version – WHOQOL-BREF), and medical and psychological symptoms (Outcome Questionnaire 45.2 – OQ45.2, and Geriatric Depression Scale – GDS), at pre- and post-intervention. Quantitative results through the use of the Wilcoxon Signed Rank tests revealed no statistically significant differences between pre and post results for any of the four measures used. A strongly negative correlation between the KIMS pre-intervention survey and the GDS pre-intervention survey was found. Qualitative data were also gathered, and revealed themes which are discussed further. Failure to find significant results may be due to the small sample size. Limitations of this research project along with implications for future research are also discussed.

Chapter I: Problem Statement

It is well-known that the number of older adults (age 65 and up) in this country is increasing rapidly. In fact, it is expected that the largest period of the increase in the number of older adults will take place between 2010 and 2030, when the “baby boomers” will begin turning 65 in 2011. By 2030, it is estimated that nearly 20% of the entire U.S. population will consist of older adults (U.S. Department of Health and Human Services, 2003). The reality is that people are living longer and healthier lives than ever before. As a result, mental health treatment efforts need to be adapted to the unique needs of older adults.

So how are mental health efforts insufficient to meeting the needs of older adults? McBee (2008) posits that care for patients with chronic conditions have been inappropriately modeled on acute care, in which these individuals are administered short-term treatment methods for conditions that require long-term treatment. As a result, this has increased the suffering and distress of patients, caregivers, and their families. This suggests the powerful influence the medical model has had (and still has) on mental health. Compounding the issue is that nursing homes have replaced mental hospitals as sites for care of older people with mental health problems. It is not unusual for more than one-half of residents of nursing homes to have mental health problems, although often these symptoms are unrecognized and untreated (Zarit & Zarit, 2007). Although the medical model is certainly helpful in treating some of the needs of older adults, other models, perspectives, and frames of reference are required. The multitude of issues that

older adults present needs to be addressed with a more multidimensional diagnostic and treatment approach.

The issues that affect older adults will be discussed in greater depth in the next chapter. The difficulty in working with older adults is the comorbidity of problems (physical and psychological) that exist. For example, physical health conditions such as heart disease and stroke must be addressed in addition to possible bereavement from the loss of a loved one compounded by memory impairment. It is not simply one issue that a mental health professional can separate and address; rather they must learn to effectively manage and contend with these multiple issues simultaneously to ensure older adults are receiving effective care. This is just one example of the unique challenges that clinicians face in treating the older adult. Unidimensional psychotherapeutic treatment methods have their limitations. Therefore, this proposal is designed to show how multidimensional treatment approaches are often more effective in treating the needs of older adults.

Chapter II: Review of Literature

Treatment Approaches

Treatment of older adults is often conceptualized under the medical model and/or mental illness domain. The medical model implies identifying health problems and symptoms, and directly addressing these in order to attempt to alleviate the problem. Since the 1960's, mental health professionals have been and still are practicing within the field of applied psychology (Mariner, 1967), which operates under the umbrella of the medical model. In reality, these issues may not lie in the medical/mental illness domain at all, and instead indicate an issue that may be more appropriately addressed in terms of developmental growth issues. The problem with the medical model, some believe is that unfortunately it may be more concerned with power and increasing public demand for mental health services, and less with finding the most effective way to address the real issues (Brown & Long, 1968). Some believe that feelings of older adults are being classified as medical disorders – leading to more of a mechanistic society where people are easier to manage. By reframing feelings into medical disorders, vulnerable populations like older adults can be controlled to fit into the structure of the medical society (Curtis, 2007).

Joseph and Lindley (2006) discuss how Carl Rogers and Abraham Maslow's construction of humanistic and positive psychology was reluctant to fully embrace the medical model. On the one hand, the medical model may help people by directly addressing symptoms, but on the other hand can alienate and damage people in another

way by “medicalizing” and minimizing the value of the human experience. Essentially, working under the medical model often dichotomizes psychopathology into separate, positive and negative interventions. By conceptualizing psychopathology in terms of a continuum, embracing both positive and negative human experiences as normal ends of a developmental spectrum, one may understand psychopathology in a unique way. Within this understanding then, interventions serve a dual role in that when they decrease negative experiences, they also may increase positive ones. Further, the authors assert that relief of suffering and promotion of well-being can be a singular task (Joseph & Lindley, 2006).

The role of psychology in the medical model is not completely inappropriate however. Sarason and Ganzer (1968) offer evidence that a distinction needs to be made between an intellectual and a professional-social issue. From an intellectual viewpoint, sometimes it is warranted to be able to use the medical model as a way to conceptualize maladaptive behavior. From a professional-social viewpoint, the role of the clinical psychologist is to deal with the social issues that constitute maladaptive behavior, and how clinicians can relate to the field of behavioral sciences in general. Essentially, the authors contend that there is an argument over confusing categorization and intervention, when they are distinctly different.

Up until this point, it has been assumed that mental illness exists. The only questions have been: Under what domain mental illness is to be conceptualized (i.e. the medical model or a more psychological/behavioral model)? How do clinical psychologists intervene? These viewpoints, however, do not represent all of the viewpoints when talking about mental illness. For example, Szasz (1970) argues that

mental illness does not exist. Szasz presents an intellectual and philosophical argument which expands how mental illnesses are often organically not that distinct from physical illnesses. Bodily diseases that are manifested as physical symptoms in bodily organs are likened to organic diseases in the brain which manifest as mental problems. Szasz goes on to claim how ascribing a mental illness to an individual requires an assessor to render a subjective judgment upon that individual. Mental illness also implies deviation from a clearly defined norm, to which Szasz claims there is no clear definition of mental health. He believes the term mental illness is being misused as a crutch that people lean on when they want to avoid confronting problems in their lives.

More and more, older adults continue to experience comorbid medical and mental health problems, to which treatment of either independently hasn't always been effective in simultaneously addressing these multiple issues. Due to the fact that older adults present with multiple, unique issues, treatments like the ones described above may not be most effective with older adults. Older adults are in a stage in life where they are likely conducting a life review whereby they look back at the context of their lives and evaluate what they have already done and assess what they might do in the future. This slowing down and attention to detail process is seen as analogous to mindfulness practices of meditation (Yuen & Baime, 2006). While there is room in traditional therapeutic approaches for this process, it is often not emphasized. Complementary and alternative treatment approaches with older adults can provide a language older adults may be able to more accurately understand.

Complementary and Alternative Medicine (CAM)

Western medicine, though unique in approach, treats disorders as separate and unrelated. Conventional medicine and western medicine are very much the same, in that they are specialized treatments. Often prescribed medications are used to treat both physical and mental health issues. Medications have their limitations, but combined with psychotherapy both are seen as more effective than either on their own. While psychotherapy has been shown to be effective in treating mental health issues, it is not designed to address physical health issues concurrently. In theory, the advantage of a CAM approach is that it employs a single intervention which addresses both mental and physical health issues at the same time. This approach works most effectively in acute care, where medical conditions can be treated quickly and efficiently. Complementary and Alternative Medicines (CAM), on the other hand, is a holistic approach, most effective for use with chronic conditions, such as chronic pain, lingering mental health issues, or dementia. It also is derived from Eastern philosophies which emphasize treatment of the whole person and not just the psychiatric or medical symptom.

McBee (2008) identified that the trend in treatment has shifted to more of an Eastern philosophy, where mind, body, and spirit are connected and should be treated concurrently. CAM approaches constitute all healing systems, practices, and products that are not considered to be part of current conventional medicine. The CAM model values palliative care over looking for a cure, quality over quantity of life, patient decision making, holistic methods of treatment which focus on the whole person, a strength-based instead of pathology-based approach, and being resident-centered as opposed to institution-centered (McBee, 2008). The more individuals discover that

distinct approaches to treating the unique needs of people are as effective as hoped, the more people are looking to CAM approaches.

Many people are turning to CAM over medical interventions for a multitude of problems. Eighty-eight percent of adults over 65 years old from a recent study reported using CAM (Ness, Cirillo, Weir, Nisly, & Wallace, 2005). In fact, professionals and hospitals, clinics, and nursing homes have recognized this desire and consequently have increasingly added CAM services. CAM modalities are believed to appeal to diverse populations, due in large part to the fact that they reflect international and cultural traditions, as well as being generally low risk, and low cost (McBee, 2008). This can be particularly important for individuals who lack access to various health care services (i.e., psychotherapy) which can be expensive.

Mindfulness Meditation (MM)

Mindfulness meditation (MM) is a specific type of meditation that integrates psychological and physiological processes to heal the difficulties of these respective faculties. The development of MM in the United States over the past 20-25 years (initiated by Jon Kabat-Zinn in the 1970's and 1980's) has altered the landscape as a potential nonpharmacologic treatment for chronic pain. MM has been defined as “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 1994, p. 4). MM contains many fundamental principles that can be identified and cultivated. Kabat-Zinn (1990) identified seven attitudes of mindfulness practice: non-judgment, patience, having a beginner's mind, trust, non-striving, acceptance, and letting go. These aspects of MM are often incorporated into the content of a mindfulness-based program.

MM may be specific in its ability to reduce distractive and ruminative thoughts and behaviors, and this ability may provide a unique mechanism by which MM is able to reduce distress (Jain, et al., 2007). Additionally, mindfulness-based therapeutic interventions appear to be effective in the treatment of depression, anxiety, psychosis, borderline personality disorder and suicidal/self-harm behavior (Ivanovski & Malhi, 2007). A pilot randomized control trial by Kingston, Chadwick, Merron, & Skinner (2007) revealed that mindfulness training can also reduce one's tolerance to pain.

Meditation and mindfulness support an understanding of the subjective experiences, quality of life, and psychosocial variables that play a central role in health and healing (from Baime & Yuen, 2006). The utility of MM may be salient for elderly populations as they face issues of control and survival, memory loss, and the outgrowing of previous life patterns (Langer, 1989). MM has been shown to support psychological well-being through its facilitation of being in the present moment (Brown & Ryan, 2003).

More recently, mindfulness-based interventions have been raised to new heights as a suggested mode of treatment for the inevitable comorbid mental and physical problems which older adults face (i.e., chronic pain, depression, and memory loss). Mindfulness-based interventions that focus on reconnecting the body and mind hold particular therapeutic value for older adults (Rejeski, 2008). Smith (2004) agrees, noting that the issues addressed by mindfulness are becoming more prevalent with increasing age. MM has been shown to have a positive effect on older adults, evidenced by their own accounts of cognitive, emotional, physiological, and behavioral changes. There are also general benefits that older adults may experience, as well, such as improvements in their quality of life. Examples of quality of life improvements include: 1) many

participants reporting liking themselves better; 2) learning in a group situation was helpful for most participants; and 3) many participants linked changes in other domains of life to mindfulness practice (i.e., improved sleep, weight loss, a decrease in seasonal mood variation) (Smith, 2004).

Alexander, Langer, Newman, Chandler, & Davies (1989) were one of the first to directly examine the effects of meditation and mindfulness on older adults' perceptions of their mental health, and life longevity. Mindfulness is described as a general style or mode of functioning through which the individual actively engages in reconstructing the environment through creating new categories or distinctions, thus directing attention to new contextual cues that may be consciously controlled or manipulated as appropriate (Alexander, et. al, 1989). In their study, the authors compared the effectiveness of mindfulness training (MF), relaxation groups, and no treatment groups with each other. The mindful, guided attention technique involved both a structured word-production task and an unstructured creative mental activity task. The word-production exercise required subjects to think of a word, take its last letter and find a new word beginning with that letter. The creative mental activity task did not specify rules for thinking nor particular target thoughts. Rather, the individual was asked to think about any topic in new and creative ways. Instead of daydreaming, participants were asked to actively direct their thinking during the process. It was found that participants in the MF groups endorsed higher mental health improvement ratings, when compared to relaxation and no treatment groups. Further, nearly 88% of participants were still living upon a three year follow-up test, compared to lower rates for relaxation and no treatment groups (Alexander, et. al, 1989).

Most older adults, especially those who are institutionalized, feel powerless and disengaged from their treatment. Spiritual crises, as well as existential issues, may also be more common in older adults due to loss and profound life issues. MM appears on some level to restore a feeling of control that wanes as people age. Communicating to older adults that we all suffer from pain and stress, that we all hold a tremendous potential for healing within ourselves (a primary aspect of mindfulness), can be an important source of relief for them (McBee, 2008). Older adults in nursing homes who are engaged in mindful learning have been shown to be more active, alert, and happy than those who are not allowed to make as many decisions or who may not be as engaged in their lives. Through MM exercises, a group of nursing home residents were able to improve their memory and attention (Langer, 1989).

In a way, mindfulness practices provide older adults some degree of control in their lives, where it might otherwise be tough to find. MM practice provides an environment that allows older adults to experience fully their physical and mental impermanence, and perhaps to develop a larger view of their lives beyond the fear of loss of control or dying (Yuen & Baime, 2006). When practicing MM with older adults in a group setting, Smith (2006) identifies that several skills are beneficial. Having an ability to manage group dynamics is required in relation to the idea that a MM group leader should be qualified to teach mindfulness but also must be attuned to the needs of the individual within the group, especially to their safety. Participants should be asked to undertake only what is right for their bodies. MM teachers should also be aware of the mental health issues of older adults, the physical aspects of aging, the position of older

people in society, and the manifestation of common forms of cognitive impairment (Smith, 2006).

The Case for Mindfulness in Western Societies

MM has been prevalent in Eastern regions of the world, and consequently has gained more popularity and credibility for treating pain and as a form of rehabilitation. MM modalities have not been as common in Western areas of the world, where biological and pharmacological medicine has prevailed. This has been for good reason, as many medications have been effectively developed for a myriad of health conditions. However, MM has become increasingly common in Western settings, with an estimated 10 million practitioners currently in the U.S. (Walsh & Shapiro, 2006). For middle aged adults, the needs for CAM modalities such as MM are not readily apparent. One fact is that mindfulness meditation was developed in response to suffering (a universal human condition) that was understood to have a psychological cause (Fulton & Siegel, 2005). By and large people in Western societies focus on ways to find pain relief and symptom reduction. There are times when pharmacological and Western psychotherapy (i.e., Cognitive-Behavioral Therapy, Psychodynamic Therapy, etc.) fall just short in meeting the complete needs of various individuals, and it is in these occasions that MM may be the medium that allows individuals to find relief and satisfaction.

However, with regard to interventions with older adults, the need for MM becomes more appropriate. As previously discussed, older adults suffer more from chronic pain and physical health concerns. As a result, they are taking more prescribed medications at this time during their life than any other. When older adults who are dealing with cognitive decline, memory difficulties, and a lack of available social support

are prescribed many medications, being compliant with those medications may be difficult. MM may provide older adults a way to access their internal resources to become more aware of their bodily processes, thoughts, and feelings.

In a theoretical sense, the differences between MM and Western psychology are greater than the similarities. Concepts such as self-actualization, and enlightenment are not common goals within Cognitive-Behavioral Therapy (a common evidence-based treatment in psychotherapy); someone who practices MM may however be striving to achieve these goals. Additionally, MM largely focuses on the techniques and strategies which impact both physical and mental health, whereas much of the Western psychotherapeutic realm is focused on mental health. However in a practical sense, they are more similar than they first appear. To be clear, this is not to suggest that MM should or even has the ability to replace Western psychotherapies; it most certainly does not. Much of psychological wisdom in Western society encourages people to pursue goals of being well-adjusted, having a positive sense of self, and being open to new experiences. Many traditional Western therapies also emphasize attaining a greater level of awareness, and working to confront rather than avoid issues. MM addresses exactly these issues by enabling the individual to examine their thoughts, feelings and actions (Fulton & Siegel, 2005).

Mindfulness-Based Stress Reduction (MBSR) Groups

Mindfulness groups offer a unique model targeting issues that frequently impact elders (McBee, 2008). A particular type of mindfulness, known as Mindfulness-Based Stress Reduction (MBSR) (also developed by Kabat-Zinn) originally blended mindfulness, meditation, and yoga and was formatted into a time-limited, experiential,

and psychoeducational program with homework assignments. This format was originally designed to help individuals with chronic, unresolved pain, but has since evolved into classes that help people with a variety of ailments (Kabat-Zinn, 1990).

In Kabat-Zinn's (1990) model of MBSR, the training usually lasts for eight weeks, with meetings once per week for 2.5 hours. Each week, the focus lies on a different aspect of mind-body healing. Themes often include mindful eating, coping with life stressors, performing a body scan, extended sitting or walking meditations, yoga, deep breathing exercises, imagery, and lovingkindness. Adaptations to Kabat-Zinn's (1990) original model of MBSR have been made by others to meet the needs of older adults, such as meeting for shorter sessions, meeting in a common group area, and having less intense exercises (McBee, 2008; Smith, 2006).

Findings from outcome research regarding mindfulness practices have been positive. Mindfulness meditation has been found to decrease stress by reducing overall psychological symptomatology, increase a sense of control in one's life, and increase one's spiritual experiences (Astin, 1997). Findings that reported decreases in stress following an 8-week MBSR group have been prevalent (Carmody & Baer, 2008; Morone, Greco, & Weiner, 2008; Jain, et al., 2007; Chang, et al., 2004). Other positive benefits that have been discovered from research using MBSR groups include, but are not limited to: decreases in self-reported physical and psychological symptoms (Carmody & Baer, 2008) increases in self-efficacy to practice mindfulness and positive states of mind (Chang, et al., 2004; Jain, et al., 2007;), increases in mindfulness practice on one's own (Carmody & Baer, 2008), and improved immune function as well as changes in brain

function (Davidson, et al., 2003). More regular home practice also appeared to enhance the effect of mindfulness (Carmody & Baer, 2008).

Mindfulness-Based Elder Care (MBEC)

McBee (2008) has adapted the MBSR program in her work with older adults into a practice called Mindfulness-Based Elder Care (MBEC). This program retains mindfulness principles and integrates yoga exercises, psychoeducation, and meditation into the program. McBee's (2008) MBEC focuses on strengths and abilities to empower the frailest older adults. Meditation can also be an important skill in the nursing home. McBee notes how meditation often begins with a focus on the breath, which is something available to anyone who is able to follow instructions. Engaging in a sitting meditation can demonstrate many of the fundamental principles of mindfulness described earlier. In accordance with the breathing techniques practiced during meditation, a helpful emphasis should be made to utilize diaphragmatic breathing. Since this type of breathing can be difficult for nursing home patients, they should take the opportunity to explore their limits, and try to reach a little further each day without overexertion. Gentle yoga can also provide an opportunity for nursing home residents to experience physical pleasure and activities, and connects mindfulness with the body. The body scan is a common mindfulness exercise designed to help residents neutralize their negative ageist self-view by encouraging participants to observe their bodies slowly, one part at a time free from judgment or criticism (McBee, 2008).

For older adults in the nursing home, MBEC will typically last from 45 minutes to one hour, and groups usually consist of eight to ten participants who self-identify as struggling with chronic pain, stress, or both. Groups usually begin in a guided, quiet

setting. During this time, participants are encouraged to pay particular attention to their breath, or their bodies, and to refocus their attention whenever their minds wander. This is followed by a check-in period with the residents, and then introduction of a new practice or technique for that day (McBee, 2008).

McBee (2008) provides some adaptations to mindfulness skills that may be helpful with frail elders in a nursing home. In nursing homes, food is an important routine. In a culturally diverse nursing home, food preferences can be quite varied. By eating slowly and savoring the food, it may allow food to taste better, creating a more enjoyable eating experience.

Another helpful mindfulness technique especially for frail elders in a nursing home is lovingkindness meditation. Since lovingkindness, compassion, and forgiveness are key components of mindfulness practice, older adults facing disability, loss, and death, forgiveness and compassion practice can offer resolution and spiritual support. Older adults practicing lovingkindness may also report a connection to their spiritual roots (McBee, 2008).

McBee's (2008) findings from running and observing various MBEC groups in nursing homes have provided some valuable data. For one particular group, McBee examined nursing home residents' cognitive status, depression, pain, and stress level pre- and post- for eight weeks with ten residents. Inclusion criteria were usually minimal – an ability to follow simple instructions and an openness to trying new techniques. Results were inconclusive due to poor completion rate. However, she identified that after the groups, residents would report feeling more relaxed and able to cope. It can be inferred that qualitative feedback from group participants was positive; however, due to the

methodological inconsistencies in McBee's groups, it cannot be determined whether the mindfulness intervention is directly attributable to the positive results. In other words, the social connection between the residents participating in the study could have influenced positive outcomes that were reported.

Mindfulness Meditation in Religious Contexts

MM is largely discussed in the literature as a secular practice, one that does not rely on religion or spirituality in its practice. This idea has made it more appealing as a practice for those without a religious or spiritual affiliation. However, this does not suppose that MM and religion/spirituality are incompatible. In religious traditions such as Buddhism, Hinduism, and Christianity, which often contain a devotional element, meditation has a relational component and is usually viewed as more than a way of seeking personal enlightenment or fulfillment (Nelson, 2009).

Types of meditation (such as MM) and religious practices (such as prayer) share other similarities as well. For example, many of the principles of MM (i.e., acceptance, patience, etc.) are not only found in the teachings of Buddhism, but in other religions like Hinduism and Christianity as well (Andresen, 2000). Both prayer and MM are also in some ways seeking a transformation; through prayer by the grace of a higher power, and MM by opening our consciousness to new perceptions of the world (Nelson, 2009). Thomas Merton, a Catholic monk who spent a great deal of his life studying contemplation and self-discovery. Merton emphasized that essential parts of genuine prayer is a confrontation with our "false self" in a journey to discover our "true self." Within MM, we become aware of those aspects of ourselves and our environment that may inhibit us from fulfilling our own potential.

In a 2008 study by Carmody, Reed, Kristeller, & Merriam, participants were recruited to determine whether engaging in a MBSR program was associated with increases in MM and spirituality, as well as to examine relationships between MM and spirituality, among other factors. Results reveal significant improvements in spirituality, state, and trait MM, psychological distress, and reported medical symptoms after participation in the program. There appeared to be an association regarding increases in MM and spirituality. It also appeared that as MM states and spirituality increase, reported psychological and medical symptoms decrease.

It appears that MM and religiosity are not mutually exclusive; that is MM practice can exist and even complement principles of religions in the Western parts of the world, like Christianity. Monroe (2010) proposes that some integrative counseling models might include mindfulness from a purely utilitarian standpoint: it can be described without emphasizing Buddhist foundations. He states that a better process toward developing a MM program within a religious context would be to develop a foundation for consciousness and awareness of one's surroundings using Biblical principles and Christian tradition.

Mindlessness and Mindfulness in the Context of Disability

The mindfulness concept in the context of disability holds a different meaning than what was previously discussed as a practice of MM. Mindfulness for this section simply implies increased awareness of and a more complex understanding of categories and unique qualities. With this consideration in mind, Langer and Chanowitz (1988) discuss how being mindful means to actively, consciously construct categories; in contrast, mindlessness is when an individual processes cues from the environment in a

relatively automatic manner, not drawing distinctions between categories of people. In fairness, psychotherapy, like mindfulness also strives to assist clients in achieving their goals through these processes. The aforementioned authors argue that by nature, people with disabilities are more mindful of distinctions within people, whether they are disabled or not. Since mindlessness is pervasive, people without disabilities are commonly mindless especially as related to attitudes toward people with disabilities. Both increased exposure to people with disabilities and practice in increasing one's mindfulness may ameliorate one's attitudes toward people with disabilities.

Research with older adults suggests that mindfulness may be crucial to one's physical health. Also, results from the same research studies indicate that excessive mindlessness may result in physical disability and premature death (Langer, 1980). When speaking of disabled groups in society like older adults, they may experience the most mindlessness. A good example of this is when older adults withdraw into their familiar world when their cognition declines, to avoid fighting what may seem a difficult environment to negotiate (Langer & Chanowitz, 1988). The vast majority of older adults acquire their disability as they age, and are more likely to be less mindful with respect to their disability and with respect to their environments. As non-disabled persons become disabled, they may see their new, more limited environment as impoverished since many over the course of time have formulated rigid categories that now restrict their perceptions (Langer & Chanowitz, 1988).

When it comes to older adults, chronic physical pain, depression, anxiety, psychosocial changes, and cognitive declines are often considered to indicate that these individuals have some degree of disability. MM has been associated with increased

functioning in each of the domains previously mentioned (McCracken, Gauntlett- Gilbert, & Vowles, 2007). Other findings indicate that people with chronic pain are willing to have undesirable psychological experiences without attempting to control them, they may function better and endure less suffering. These authors conclude that general acceptance may have a unique role to play in the disability and suffering of chronic pain beyond regular processes like acceptance of pain or MM (McCracken & Zhao-O'Brien, 2009).

Limitations of Mindfulness

The limitations of mindfulness are few. Yuen and Baime (2006) identified that mindfulness meditation utilized in the context of a randomized, placebo-controlled double-blind study may not be optimal, since mediation works in the same way as the placebo effect itself as way to enhance the mind's capacity to heal the body with low cost and little risk. The authors point out that it would be difficult to create a suitable placebo with a mediation-based intervention, especially when a research design requires using a blinded control group that cannot be told if it is receiving the active treatment, as well as to design a convincing placebo that is presented as a meditation.

Results appear to be inconclusive as to whether MM and similar programs actually help reduce chronic pain symptoms. For example, MBSR treatment effects on pain, health-related quality of life, and psychological well-being vary as a function of chronic pain condition and compliance with home meditation practice (Rosenzweig, et al., 2010). Even when correlations between symptom reduction and mindfulness practice are present, there is a lack of definitive evidence to suggest that MM was directly responsible for these changes. For example, external events that cannot be controlled

within a research setting may have attributed to symptom reduction due to an increase in one's mood, and/or increased quality of life.

Older adults may also struggle with a few of the activities from a MM program. For example, while yoga exercises can be beneficial they may be too physically strenuous, and exacerbate any existing medical conditions. It is also possible that traumas may be reprised through guided imagery or sensory exercises during MM. MM may also not be effective or even appropriate for individuals with mental retardation, or psychotic disorders.

Common Issues Facing Older Adults

Physical Health and Chronic Pain

During the normal process of aging, physical health problems exacerbate and become especially profound for older adults. Heart disease, cancer, and cerebrovascular diseases such as strokes remain among the leading causes of death among older adults in the U.S. Not only do about 80% of older adults have at least one chronic health condition, but 50% have at least two (U.S. Census Bureau, 2005). When these potentially debilitating health conditions are compounded by mental health issues, memory difficulties and environmental stressors, any of the above can be exacerbated and can be very difficult to treat.

The physiological, psychological, and environmental changes that accompany aging and restrict homeostasis may further exacerbate the consequences of persistent pain. The normal and pathological aging-associated changes in the brain (i.e., dementia, depression, and anxiety) may impair the brain's ability to process the intensity of pain,

impacting how pain treatment procedures are conducted (Karp, Shega, Morone, & Weiner, 2008).

The approach of the medical model would lead one to believe that pain is the same for everyone, can be universally defined, and can be treated in the same manner for a wealth of different individuals. The same intensity of a stimulus may cause pain in one individual but not in another. The reality is that pain is largely a subjective experience. Psychological factors such as distraction, relaxation, fear, depression, cultural and family influences, as well as previous pain experiences can modulate the way pain is experienced (Frischenschlager & Pucher, 2002). For these reasons, pain is difficult to measure, and also because people's reports of pain depend on their ability to communicate their experience of pain.

A pioneer in the area of pain research, Melzack (1961) concluded that pain is a category of complex experiences, rather than just a single sensation produced by a single stimulus. Finding the language to describe experiences of pain can be difficult for anyone. Early psychological evidence supports the view of pain as a perceptual experience whose quality and intensity is influenced by the previous experiences of pain in the individual experiencing it, as well as to the meaning a person attaches to it. These experiences can neurologically influence how the brain interprets one's experience and expression of pain (Melzack, 1961).

There is neurological evidence that the experience of pain is subjective to the individual. Psychophysical evidence utilizing functional magnetic resonance imaging (fMRI) has shown activation in the primary somatosensory cortex which fluctuates when a pain threshold is manipulated or decreased pain (Koyama, McHaffie, Laurienti, &

Coghill, 2005). Fluctuations in brain activity also occur when levels of pain are experienced and interpreted differently by people who are more sensitive to pain than others (Coghill, McHaffie, & Yen, 2003).

Assessing pain in the elderly can be increasingly complex due to the multitude of cognitive, emotional, and physical impairments or ailments that may be present at any one time. Gagliese and Melzack (1997) point out that age can have an effect on each of these dimensions and on how pain is experienced. This means that assessment of pain in the elderly requires a holistic approach with sensitivity to the special concerns of this population.

Psychosocial Stressors

There are many environmental issues that older adults also have to deal with in their lives. Though not unique to older adults, the stressors they face tend to occur more commonly than for adults in general. One significant stressor is bereavement resulting from the loss of a loved one. Losses in general can characterize the experiences of environmental stressors for older adults. As one gets older, one's losses increase exponentially. Loss of one's health can lead to loss of independence. The loss of family and friends may increase isolation. Loss of productivity, or a feeling of contributing to society, can diminish one's self-esteem. The loss of home and possessions can lead to a loss of identity or may increase role confusion. The losses may compound each other and may cause an older adult to relive previous losses, and the more losses older adults endure, the more chronically aware they become of their situation (McBee, 2008). Other stressors can include an inability to engage in once enjoyable activities (possibly due to

physical or cognitive limitations), loss of independence, and relatively recent -- slow adaptation to advances in technology.

Psychosocial stressors can also lead to health problems among older adults. Karp, et al, (2008), in their work with geriatric and mental health treatment settings have encountered patients with worsening pain conditions such as chronic lower back pain, osteoarthritis pain, and fibromyalgia consequent to the loss of a spouse, worsening frailty and fears about independence, and exacerbation of other medical problems such as cardiac and pulmonary disease.

Mental Health Issues and Cognitive Decline

Certain mental health issues as well as cognitive decline or impairment also manifest in older adults as a by-product of physical health problems, chronic pain, and psychosocial stressors, previously described. Diagnoses such as depression and anxiety are common in older adults, and as it pertains to them, attention to comorbid social, medical, and cognitive losses is crucial in an effort to optimize pain management (Karp, et. al, 2008). Diagnosis is complicated by the fact that depression and medical illnesses can present with similar symptoms, such as poor sleep and appetite, fatigue, and muscle or skeletal pain. Because the etiology of somatic complaints is difficult to identify for older adults, clinicians must always keep in mind the possibility of comorbidity (Zarit & Zarit, 2007).

Zarit and Zarit (2007) note that rates of anxiety disorders for adults are as high as or higher than the rates of depression for adults. People who are often anxious often display comorbidity with other mental health symptoms, particularly depression. Older adults with anxiety disorders have perfected rituals and routines that keep their anxiety at

a manageable level so they can function adequately in their daily lives. The challenge facing clinicians is to identify whether anxiety symptoms are due primarily to medical or to psychological causes or to an interaction of the two (Zarit and Zarit, 2007).

Adjustment disorders are one of the most frequent diagnoses for older adults seen in private practice and other outpatient settings, and those diagnosed with an adjustment disorder most often express symptoms brought on by specific life events, like chronic illnesses, retirement, or taking care of a disabled spouse (Zarit and Zarit, 2007). Related to adjustment are feelings of grief or bereavement due to loss of a loved one. The likelihood of losing a loved one increases in later life. Interventions are warranted here when grief reactions are usually pronounced or disabling in the period immediately following a loss or when symptoms of anxiety and depression persist or worsen rather than diminish over time (Zarit and Zarit, 2007).

The rate of suicide among older adults is especially concerning. In fact, older adults commit suicide at a much higher rate than any other age group. There is also a significant gender difference, as men in this category have increasing rates of completing suicide as they age, while for women, the completed suicide rates decline after age 50 (Zarit & Zarit, 2007). Suicide rates also vary by race and ethnicity, as they increase with age for Caucasian, Hispanic, and Asian men in the U.S. Other factors associated with increased risk include alcoholism, recent losses, and the anticipation of being placed in a nursing home (Zarit & Zarit, 2007).

Alcohol and substance abuse are quietly overlooked, despite severe health and social consequences. One significant barrier to recognition is that symptoms of alcohol or substance use are sometimes ascribed to aging or senility. Since alcohol use is

common and socially accepted, rates of abuse are high, even in later life. The author also notes that the possibility of alcoholism among residents of nursing homes and other congregate living should not be overlooked (Zarit & Zarit, 2007). Due to the health problems older adults endure, they are likely taking a multitude of medications, so limiting the use of alcohol becomes important. Medications can increase the impact of even small amounts of alcohol, and alcohol in turn may block the effects of certain medications. Even worse, the combination may produce significant adverse effects (Zarit & Zarit, 2007).

Despite the mental health diagnoses that may appear as a result of the unique circumstances that accompany old age, there are those that are exclusive to older adults. These are related, and include mainly mild cognitive impairment (MCI), and types of dementias. MCI are often the subtle, cognitive changes that may be the first symptoms of dementia and diversion from normal functioning. Recent attention has turned to identifying people with preclinical symptoms of dementia. MCI describes people with cognitive problems that do not meet the diagnostic criteria for dementia Three percent to twenty percent of older adults have MCI, which is similar to what is considered mild dementia (Zarit & Zarit, 2007). Dementia is considered by many to be the most devastating problem due to its debilitating nature. Zarit and Zarit (2007) point out that “dementia” refers to a syndrome (which can be caused by many different illnesses) of progressive decline in memory and other intellectual abilities.

Quality of Life (QOL)

Quality of Life (QOL) is a difficult term to commonly define, mainly because it is subjective to the individual. Huebner, Allen, Hanlon Inman, Gust, & Turpin (1998)

define QOL as an individual's own subjective evaluation of his or her human condition in multiple domains. This appears to provide an appropriate good working definition that is consistent with having participants define for themselves what QOL is. Despite the difficulty in defining QOL, researchers become more aware of the issues involved in assessing QOL, and as a result, there has been convergence on the topic.

Overall the concept of QOL subsumes both physical and mental well-being within a person. However, because QOL is individual and changeable (McBee, 2008), it is difficult to measure, though not impossible. Older adults broadly define QOL, and may describe domains that measure QOL in terms of well-being, meaning, and value (Sarvimaki & Stenbock-Hult, 2000). One's QOL can be viewed as subjective or objective to the individual, however it is most easily measured in objective domains.

External influences are important to the impact on an individual's QOL. Specifically, the overlapping domains of interpersonal interactions and the impact of the social environment on an individual (Callahan, 1992) are critical. With regard to older adults, QOL is determined by and large upon whether others will value, stimulate, pay attention to, and care for them with dignity and respect (Callahan, 1992). However, external influences are often not primary motivators for older adults and the need for more internally motivated procedures that effect QOL may have a greater impact as their level of autonomy wanes.

Internally motivated means of attempting to improve QOL (e.g., yoga, mindfulness) have also demonstrated efficacy in their ability to impact QOL for older adults. In one study, yoga intervention in a number of QOL measures related to sense of well-being, energy, and fatigue compared to a control group (Oken, et. al., 2006).

Among nursing home populations, mindfulness can have positive effects on QOL. In regards to health-related QOL, a 10-week Mindfulness Meditation group with a heterogeneous population in a nursing home setting improved participants vitality, role limitations caused by physical health, and decreased bodily pain, and psychological distress (e.g. reports of depression and anxiety) (Reibel, Greeson, Brainard, & Rosenzweig, 2001). Gathering an extensive history of a client (including but not limited to physical health, diet, exercise, sleep, social/occupational functioning, relationships) is highly recommended for assessment of quality of life (Roemer & Orsillo, 2009).

The World Health Organization published a measure to assess QOL for health-related concerns called the World Health Organization Quality of Life – Brief Form (WHOQOL-BREF) (WHO, 1998). The WHOQOL-BREF is a 26-item version of the original WHOQOL-100 assessment that is self-administered, and contains items on a Likert scale. Normative data gathered from the field trial included a socio-economic cross-section of healthy as well as hospitalized patients from rehabilitation and primary settings, and patients with physical and mental disorders in an attempt to provide an assessment tool that is cross-culturally representative. Results of data analysis revealed good performance on item-response distribution, internal consistency reliability, discriminant validity, and construct validity (Skevington, 2004). The WHOQOL-BREF assesses quality of life in four domains: physical health, psychological health, social relationships, and one's environment.

Chapter III: Aim and Purpose of Present Study

The aim of this study is to assess overall quality of life and reported symptomatic functioning among older adults who will participate in a 10-week MM group. What makes this study unique is the initial assessment process, which would allow participants to choose the topics for each week. Participants were provided with a list of potential MM topics, were provided a basic explanation of the nature of each topic, and were instructed to rank their top choices according to preference. This method is similar to goal attainment scaling (GAS; Kiresuk, Smith, & Cardillo, 1994; Kiresuk & Sherman, 1968). The content of the group would be based on the feedback and specified needs of that particular group, while not compromising the basic integrity of MM. This notion of involving elders in the decision making and planning of a program for learning and practicing meditative experiences is supported by the findings of Lindberg (2005), who reviewed research on meditation from the past 25 years. The current study differs in its specific use of mindfulness meditation techniques. Prior to beginning the group, participants' attitudes and experiences regarding mindfulness and meditative practice were assessed using the Kentucky Inventory of Mindfulness Skills (KIMS) (Baer et al., 2004). The KIMS is a multifaceted measure of mindfulness which assesses a general tendency to be mindful in daily life and does not require experience with meditation. The facets of mindfulness measured include: observing, describing, acting with awareness, and accepting without judgment. Items are rated on a 5-point Likert scale. Internal

consistency correlations range from .76 to .91 (Hansen, Lundh, Homman, & Wångby-Lundh, 2009).

The most effective way to utilize quality of life is to have participants define for themselves what it means, in accordance with its subjective nature. In order to establish a baseline for quality of life, and subsequently be able to track changes, participants will indicate their level of quality of life on the WHOQOL-BREF (WHO, 1998) at the beginning of the group and upon completion of the group. Participants will also be assessed on their perceived physical and emotional symptomatology. This domain will be assessed using the Outcome Questionnaire 45.2 (OQ45.2) (Lambert, et al., 1996), coupled with the Geriatric Depression Scale (GDS) (Yesavage, et al., 1983) and participants will complete these measures both prior to and upon completion of the group. The OQ45.2 was designed for multiple purposes: 1) to measure current levels of distress, 2) as an outcome measure to be administered prior to and following treatment interventions, or to monitor ongoing treatment response, and 3) to accompany computerized decision support tools to improve the quality of patient care. The OQ45.2 strives to monitor the following aspects of a person's life: subjective discomfort, interpersonal relationships, and social role performance. There is no inverse correlation between the WHOQOL-BREF and the OQ45.2. The GDS was developed to assess depression among older adults. This provided the researcher with a way to quantitatively track changes from the beginning of the group, until its completion. All quantitative data will be processed and reported at the group level. Qualitative data was also gathered from participants upon completion of the group to discover those aspects of MM which may have been particularly helpful, or made a meaningful impact on one's life.

Research Questions/Hypothesis

1) What effect does the mindfulness group have on quality of life over the ten week duration of the mindfulness group? It is hypothesized by the researcher that participants will report an increase in their overall quality of life from the beginning of the group until the completion of the group. 2) What effect does the mindfulness group have on reported symptoms (i.e., feelings of depression, anxiety) over the ten week duration of the group? It is hypothesized that participants will report an overall decrease of their negative symptom report after completion of the group. 3) Will participants' level of mindfulness increase after completion of the group? 4) Was there a relationship in the hypothesized direction between level of mindfulness skills and reported depression? 5) What, if any additional benefits or challenges did participants report that rose out of engagement in this group?

Methodology

The present study involved having one group of African-American adults 65 years and older from a local church take part in the mindfulness group for twelve weeks. The first and the last sessions used for participant report on quality of life and symptoms as dependent variables. The ten sessions in between were the mindfulness meditation sessions, or the independent variable. This project served as a feasibility study to determine if this mindfulness group may work with geriatric, religious, community-dwelling individuals. The study was approved by Wright State University's Institutional Review Board for research with human subjects. Participants ranged in age from 65 to 79 years with an average of 69.9 years. Eighty percent of the participants were female, and twenty percent were male. Forty percent of the participants were separated or

divorced, thirty percent were married, twenty percent were widowed, and ten percent were never married. A majority of the participants were retired from the workforce (80 percent). The group of participants had an average of 12.5 years of education. For their participation in the research study, each participant received a \$10 gift card during the pre-intervention session, and a \$40 gift card during the post-intervention, for a total of \$50 in gift cards as compensation for the study.

This mindfulness group incorporated many of the fundamental principles of mindfulness meditation, a structure and content similar to MBSR groups, and scripture based meditations as well. The introduction session was an information session in which the participants were briefed about the procedure of the research study, provided their informed consent to participate, and completed demographic information, the KIMS, the WHOQOL-BREF, the OQ45.2, and the GDS. Participants were then presented with a list of 14 possible mindfulness topics to address, were provided a description of what each topic was about, and were instructed to rank their top ten topic choices which were used over the ten weeks. The overall goal was to assess overall quality of life and reported physical and emotional symptomatology among older adults. The results obtained prior to beginning the group was compared to the results obtained after completion of the group, to examine if the mindfulness group helped to improve participants' overall quality of life, and to reduce negative symptoms.

Participants engaged in MM in the ten weeks following. After each meditation session, time was left at the end to process the experiences with the participants. During the first session, participants listened to 20 minutes of a sitting meditation from Kabat-Zinn's Guided Mindfulness Meditation, Series 1, CD 3. For the second session,

participants listened to a body scan meditation from Kabat-Zinn's Guided Mindfulness Meditation, Series 1, CD 2. In session three, the group leader read a relaxation script, which lasted about 25 minutes and focused on addressing chronic pain issues. For the fourth session, participants listened to a Mindscape from Kabat-Zinn's Guided Mindfulness Meditation, Series 3, CD 2. During session five, participants were asked to bring their favorite or meaningful bible passages to share and discuss with the group. Participants shared the passages with the group, and were asked to answer the following questions: 1) How does this reading relate to any of the principles of MM that have been discussed (i.e., acceptance, non-judgment, patience, awareness, healing, etc.) if at all? 2) How can mindfulness practice enhance your religious activities (i.e., worship, prayer) if at all? In session six, participants listened to the mountain meditation from Kabat-Zinn's Guided Mindfulness Meditation, Series 2, CD 3. For the seventh session, the group leader read a relaxation script which was focused on increasing the participants' self-esteem. During the eighth session, participants took part in a walking meditation, which lasted approximately 20 minutes. Instructions for this walking meditation were provided from Kabat-Zinn's Guided Mindfulness Meditation, Series 3, CD 3. For session number nine, participants listened to a lovingkindness meditation from Kabat-Zinn's Guided Mindfulness Meditation, Series 3, CD 4. For the tenth session, the group leader read a script to participants regarding which focused on the topic of finding one's authentic self through fulfilling one's potential.

The final session included post-intervention reports on the KIMS, the WHOQOL-BREF, the OQ45.2, and the GDS, as previously mentioned. In addition, participants were asked to provide their honest answers to a series of open-ended questions designed

to provide qualitative feedback to the researcher on suggestions for future groups, as well as to provide a forum for participants to express their thoughts about their own experiences and the group process as a whole, and to attempt to provide potential further explanations regarding inconsistent quantitative data (i.e., why a participant may have reported a higher overall quality of life score on the WHOQOL-BREF, but an increase in their level of depression from the GDS). A list of these questions is provided in Figure 1.

Design

This feasibility study is a one group pretest-posttest pre-experimental design (Campbell & Stanley, 1963). The sample of participants was African-American community-dwelling adults, age 65 and older, who were recruited from a local church. Due to the nature of this type of pre-experimental design, there are concerns over threats to internal validity which may influence the results. A few of these include the following, but are not limited to these. The first is history, in that any event that occurs between measurements. Next, participant maturation means that people change over time, and thereby may benefit from learning effects. Additionally, simply taking the pre-test may influence the participants' behavior and reporting. Instrument decay could occur in which the accuracy of the measurement may change with use or participant motivation. Another factor relevant to this study is experimental mortality, or loss of participants from groups (Campbell & Stanley, 1963). Although a study may not be internally valid, and therefore results should not be published, it could still be determined to be feasible if the benefits of conducting the study outweigh the costs.

Chapter IV: Results

Descriptive statistics along with p values are presented in Appendix A. All analyses were conducted using SPSS version 19. Descriptive statistics were tabulated to assess pre and post ratings on quality of life, reported symptoms, patient reported outcomes, and ability of mindfulness for the sample of participants. A table listing the variables, both at time 1 and time 2 shows differences in the means and standard deviations. Both paired t-tests and Wilcoxon Signed Rank tests were conducted in order to assess any differences between the pre and post intervention across time intervals. Eleven participants were originally recruited and participated in the group. During the duration of the group, one participant became ill and had to drop out of the study. Therefore, the final sample size for data collected is ten participants ($n=10$). There was relative consistency in self-reports of the participants as exhibited in the following table.

Quantitative findings

Quantitative methods were used to answer the research questions for the present study. The descriptive statistics provided insight into which variables were most influenced by the intervention. Model assumptions required for paired t-tests were not well-satisfied by any of the data, so Wilcoxon Signed Rank tests were also conducted. The results did not differ between the two methods, but because the paired t-test results might not be valid, only the nonparametric results are being reported. Significance for each of the four measures was tested at an alpha level of .05, which was used to minimize the probability of committing a Type I error to 5%. Since none of the following analyses

were statistically significant, post-hoc testing was not needed. The answers for the research questions are as follows:

Research question 1. What is the effect of the group intervention on quality of life, as measured by the WHOQOL-BREF? This measure assesses quality of life in four domains: physical, psychological, social, and environmental. Results revealed no significant differences between pre and post testing, as indicated by scores from the WHOQOL-BREF. Between pre and post testing, no significant results were obtained in the physical domain ($p = 0.136$), in the psychological domain ($p = 0.514$), in the social domain ($p = 0.577$), and in the environmental domain ($p = 0.439$). Regarding reported quality of life for each of the ten participants between pre and post testing, in the physical domain seven reported an increase in quality of life, two reported no change, and one participant reported a decrease. In the psychological domain, six participants reported an increase in quality of life, three reported a decrease, and one reported no change. In the social domain, six reported no change in their quality of life, three participants reported a decrease, and one reported an increase. Finally, in the environmental domain, five participants reported an increase in quality of life, three reported a decrease, and two reported no change.

Research question 2. What is the effect of the group intervention on reported symptoms, as measured by the OQ45.2 and GDS? No significant differences were found between pre and post testing for the OQ45.2 for the paired data ($p = 0.552$). With respect to reported level of symptomatic outcome for each of the ten participants between pre and post testing, five participants reported a positive outcome following the intervention, four reported a less favorable outcome, and one reported no change. Additionally, no

significant differences were found in the GDS for the paired data ($p = 0.673$). Regarding reported level of depression for each of the ten participants between pre and post testing, five reported a decrease in level of depression, three reported an increase, and two participants reported no change.

Research question 3. What is the effect of the group intervention on mindfulness skills, as measured by the KIMS? No significant differences were found on the KIMS for the paired data ($p = 0.765$). Regarding reported level of mindfulness skills for each of the ten participants between pre and post testing, six participants reported a decrease in mindfulness skills following the intervention, three reported an increase, and one of the participants reported no change.

Research question 4. Is there a negative relationship between level of mindfulness skills as measured by the KIMS, and reported depression as measured by the GDS? Correlations were generated by explore the association between the KIMS and GDS surveys. Since this is nonparametric data, only the Spearman's rho correlation was reported, and not the Pearson correlation. The strength of the relationship is strongly negative for the pre-intervention measures ($p = 0.044$), however it cannot be sufficiently concluded that the relationship is significantly different from zero for the post-intervention measures ($p = 0.153$).

Additional Quantitative Results

An analysis of power was also conducted for each of the paired tests to estimate the probability of a statistical significant test will reject the null hypothesis, when the null hypothesis is false (or not committing a Type II error). Power analysis for this study was also conducted to calculate the minimum sample size required so that one may

reasonably detect the size of a given effect. Values for each of the paired tests ranged from 11% power up to 19% power, all except for the physical domain of the WHOQOL-BREF survey, which reached a level of 60% power in the test. Power analysis for this study needed to meet or exceed 80% for any measure or domain to reasonably detect if an effect did exist. Power analysis also revealed that a minimum of 197 participants are needed in this study to have sufficient power to detect the effect of a given size.

Qualitative Findings

The last research question (What benefits or challenges resulted in participation in this study?) was examined using open-ended questionnaires that would be coded for themes and compared. This data was only gathered post-testing to reveal findings that surfaced after completion of the mindfulness group, which may be used to inform construction of future groups for individuals with minimal to no experience with mindfulness. Participants in this group reported either no experience with mindfulness or very little (between 0-6 months) prior to taking part in this study. The following themes emerged from the participants' answers to the open-ended questions: incorporation of mindfulness practice into one's faith practices; increased self-esteem and self-worth; increased confidence in communication and interpersonal relationships; increased emotional self-awareness (which can be negative or positive); increased gratitude toward self and others; increased ability for introspection; increased ability for open-mindedness; increased ability for observation, vigilance, and patience; increased focus and attention on a current activity. Of particular interest is the finding that nearly all of the participants reported that the session that focused on meditative interpretation of selected biblical passages was the most meaningful to them. In all, it is difficult to make any predictive

generalizations with these themes, as they are preliminary findings gathered from a small group of participants.

Chapter V: Discussion

The purpose of this research project was to evaluate the feasibility, overall quality of life, and level of symptom reduction of a mindfulness group for African-American community-dwelling, religious, older adults. Participants in the group were interested in the content and process of the group, and participated fully in the intervention.

Recruitment of these veterans was ameliorated by the fact that the author was familiar with this population of participants, and that most were retired and could attend group sessions during daytime hours. Retention was extremely high, and there are many possible reasons for this. One possible explanation is that participants found the intervention favorable and meaningful. It is also possible that members had a lot of time on their hands, or may even have been bored or lonely at home. There may even have been social incentives for participants to attend group (i.e., seeing friends and being able to socialize with them). One particular advantage of a small sample such as this is that it affords the researcher the opportunity to examine individual participant data in a time-efficient manner if necessary. A significant drawback however, is that a small sample of participants may inhibit the researcher from obtaining statistical significance.

Overall, the quantitative data indicated mixed results. The failure to find any significant results may be largely due to the small sample size of the study. Even if there were effect sizes that existed within the data, there was too little power to find it with the small sample size. Also, although a majority of the participants reported a decrease in mindfulness skills, the overall ratings indicated that level of mindfulness awareness

increased after the intervention as evidenced by a higher overall post-intervention mean for the entire sample. However, this may be slightly misleading to the reader since more participants actually reported a decrease in their mindfulness skills compared to those that reported an increase. Those participants who reported a decrease in their mindfulness skills appeared to experience only a small decline in mindfulness skills. In fact, these participants reported an average of 7.5 points lower on the KIMS. In contrast, the participants who reported an increase in their overall mindfulness skills reported a much larger increase, indicating a more perceived impact. These participants reported an average of 17 points higher on the KIMS from pre to post intervention. It is possible that as participants had a chance to practice their mindfulness skills over the course of the group, they became aware of many aspects of their own life of which they were not previously aware. In other words, where they may have rated an item favorably prior to beginning the group, as they practiced their mindfulness skills and became more aware of the number of things of which they were unknowingly ignorant, upon post-intervention came to the realization (with more data available to them) that they were more aware of a situation and could rate the item more accurately.

Participants' ratings of quality of life revealed improvement in the physical, psychological, and environmental domains, yet there was a decline in the social relationships domain. One possibility for this finding is that practicing mindfulness skills can increase one's ability for introspection, at least initially, therefore since they may be attending to their own faculties they may be focusing less on their interactions with others in the short-term. Again, it is also possible that for the three participants who reported a decrease in the social domain, an external event took place that led to a decreased rating.

It is also possible that these participants witnessed more noticeable changes in other domains, and did not perceive any change in the social domain, since these three participants did not report a decrease in any other domain. In looking at the reports of individual participants, only one person reported a decrease in three domains, while two other participants reported decreases in two domains. In contrast, seven of the participants reported increases in quality of life in multiple domains. It would be naïve of this researcher not to entertain the possibility that the Hawthorne effect is at play here, in which participants may have reported improved functioning simply on the basis that they know they are being evaluated, and not due to the effect of the intervention. Overall, there were nineteen reports of an increase in reported quality of life between pre to post intervention, compared to nine reports of decreased quality of life. Once again, though these were not significant increases (or decreases), it can still be said that a majority of participants noticed improvement in several areas of their life. Since it takes time to develop and cultivate mindfulness skills, one is able to surmise that quality of life reports would continue to increase if participants were assessed over a longer duration, perhaps across several years.

Quantitative data also revealed a reduction in mental and physical health symptoms was noted following the intervention. This was evidenced by an overall decrease in the average depression score from the GDS, and more positive outcomes from the OQ45. This researcher had expected the reported depression scores to be significantly lower following the intervention. However, it makes sense that as one adopts and develops their self-reflective skills, that they become more aware of physical sensations, emotional states, changes in their environment, etc. which may alleviate

depression in some areas, while also opening new areas for evaluation (which may appear as initial depression). Perhaps individuals who have had at least six months or one year of mindfulness exposure may buffer the impact of discovery of self-awareness on one's mood, perceptions, and social interactions.

Qualitative feedback via open-ended questions was perhaps the most valuable data from this project. Participants offered their impressions of the group, and how it could be curtailed in the future to meet the needs of this population. This is especially important since this is a feasibility study to see if customized mindfulness based groups would work with this particular population of individuals, and/or could be expanded to include more individual variables. Existential Psychotherapy, Choice Theory, and Reality Therapy approach a consensus on how they view choice in that giving group members a choice in treatment serves to empower them. The more a person feels they have a choice (i.e., in their own treatment) the more likely they are to feel they have ownership to directly influence the course of their treatment.

Within Existential Psychotherapy, to make a decision or choice means to commit oneself to a course of action, and if no action is taken, this represents a type of failed resolve (Yalom, 1980). William James in describing his principles of psychology as related to how decisions are made, posited that a drifting decision is one in which there may be no paramount reason for either course of action. Ultimately a decision is made as a result of letting oneself "drift" in a direction seemingly accidentally determined from without (James, 1963). Glasser (2000) in presenting his expertise in the overlapping concepts of Choice Theory and Reality Therapy, asserts that a person can choose their behaviors and their particular states of mind in the present moment.

It was not surprising to this researcher to discover that participants particularly enjoyed the session which focused on bible meditation, considering the faith of the sample under study. This might be explained by the fact that this researcher incorporated aspects germane to the religious faith of the sample into the intervention, and group members felt comfortable engaging with and discussing the material. Despite the majority of positive findings from this study, there are limitations as well. For example, the discrepancy between the overwhelming positive qualitative feedback and the mostly neutral quantitative data may indicate the presence of favorable bias toward the facilitator. Whereas the questions for quantitative data protocols focused mostly on the participants' own improvement, materials for each participant were coded with a number, in a small group such as this one, total anonymity may not have been assumed by the participants, which may have accounted for the wealth of positive qualitative feedback and the lack of negative feedback. Participants were aware that this researcher prepared for, and facilitated each group agenda for twelve consecutive weeks, and grew fond of this researcher's style, and this may have biased their responses as a result. In other words, it is possible that the participants may have felt the need to report increased mindfulness skills, improved quality of life, and symptom reduction to communicate to the researcher that the interventions had a more favorable impact than was really the case.

Limitations of Current Study

One major limitation of this study is that potential confounding factors were not appropriately ruled out. For example, this researcher did not account for group influential effects during data collection since all members were in the same room when completing both pre and post-intervention measures. This researcher could have guarded

against this impact by having each member complete the measures individually, apart from other group members. Another limitation is that a lack of a control group meant that the results of this study could be attributed to a placebo effect that is undetected by this researcher. Had this researcher collected demographic and self-report data from each participant individually, group influence factors would have been controlled for.

Implications for Future Research

There are many suggestions for amendments to this study which should inform future directions. Baer suggests use of the Five Facet Model Questionnaire (FFMQ) (Baer, Smith, Hopkins, et al., 2006) as a more appropriate measure of mindfulness experience and ability compared to the KIMS. A main reason for this is that the FFMQ assesses five factors of mindfulness instead of four with the KIMS. Additionally, one limitation of the WHOQOL-BREF is that it is not normed with older adults, so a different measure of quality of life that is normed with older adults should be used. Further research should also be conducted that investigates the acquisition of mindfulness skills, changes in quality of life, and reported depression in those who possess more experience with mindfulness training. Beginning a new activity that requires patience and self-discipline (i.e., mindfulness training) has its rewards and setbacks. Learning about the practice of mindfulness may have been the stressor itself which manifested as lower reports of quality of life and higher ratings of depression.

In answering the question: Is conducting a mindfulness group for older adults feasible? The answer is yes. Results from this study indicate that although quantitative changes in reported scores between pre and post intervention were not statistically significant, there was a movement in the positive direction for each of the dependent

variables in this project. So while the overall results are promising, much would need to be done to shape this intervention into an ideal program for older adults. Further research is warranted for a pilot study, or a larger randomized trial, and results from the current study cannot be generalized until the scope of this study is expanded to a larger scale. As stated in the results section, nearly 200 participants are needed in this type of study to have the statistical power enough to determine the size of a given effect. That translates to about 18-20 different mindfulness groups containing 10-12 members each, meaning a lot of time and money is needed for this type of project. Perhaps conducting a group for individuals with little to no mindfulness experience should last about six months. Another alternative might be to have multiple groups running simultaneously, consisting of varying duration (e.g., six weeks, 12 weeks, 24 weeks, etc.) and differing levels of mindfulness exposure (e.g., those with no experience, those with one year of experience, those with at least five years, etc.). One of the reasons overwhelmingly positive qualitative feedback was found in this study was, in this researcher's opinion, due to the incorporation of bible meditation since it was meaningful to the sample under study. Future research that examines the effect of a mindfulness group with a particular shared subculture (i.e., faith in this study) would do well to incorporate an aspect of that subculture into the program, if possible. Stemming from studies such as the present one, additional research with mindfulness uses with older adults that incorporate religious themes into a program should be further investigated.

Appendix A

Table 1

Descriptive Statistics of Pre and Post-intervention scores

Measure	Mean Pre	Mean Post	SD Pre	SD post	p value
KIMS	124.1	127.0	15.66	17.80	0.765
WHOQOL-BREF					
Physical	58.7	63.3	11.28	6.34	0.136
Psychological	63.8	67.6	14.42	10.04	0.514
Social	61.8	59.4	17.42	20.66	0.577
Environmental	70.1	73.9	14.29	9.53	0.439
OQ45.2	40.4	38.0	18.84	13.30	0.552
GDS	5.3	4.4	4.24	2.91	0.673

Note. p was tested at .05 significance.

Appendix B

1. Did you find yourself practicing mindfulness in your own time between group sessions? If so, what did you do?
 2. What were the best parts of this group, if any?
 3. What were the most challenging parts of this group?
 4. What things would you change about the group that would make it better?
 5. Is there anything you will take away from this group that you think may incorporate in your life? If so, what are these things?
 6. To what activities in your life do you think you can apply the mindfulness principles and techniques to, if any?
 7. Do you feel that your life has been enhanced in any way by being part of this group?
How?
-

Figure 1. Open-ended questions presented to participants post-intervention.

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