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The Promotion of Successful Aging through Mindfulness Skills Training

Abstract
This dissertation aims to contribute to the social work literature regarding successful aging. Specifically, the purpose of this study is to investigate if Mindfulness Meditation training (MM) is a possible method to promote successful aging.

The first chapter of the proposal is an article, "Mindfulness: The present moment in clinical social work", which has been published in Clinical Social Work Journal (Turner, 2009). Chapter One provides an understanding of the concept of mindfulness as well as the research into the neurological and behavioral benefits of mindfulness skills training. Four specific therapy protocols, which incorporate mindfulness skills including MBSR, are described. Clinical case examples are provided to demonstrate the impact of mindfulness skills training on both clients and on the social work helping relationship.

In Chapter Two, the strengths and challenges for elders in contemporary American society are presented. Specifically, the importance of both skills to cope with loss and of positive self-perception of aging are emphasized as central to successful aging. Mindfulness skills training (MM) is presented as a potential method to promote emotion regulation and positive self-perception in elders.

Chapter Three presents the research conducted for this dissertation. In this dissertation, I studied whether mindfulness skills can be taught to elders, and whether elders can improve their ability to regulate emotion and develop a positive self-perception of aging as a result of mindfulness skills training.

The findings of this study are presented in chapter 4. MM training participants improved in their mindfulness, emotion regulation and self-perception of aging more than the control group. However, due to the small sample size (n=22) none of these findings met the criteria for statistical significance. Quotes from the participants are provided to demonstrate the benefits that each group experienced as a result of their training.

The implications and limitations of this research are examined in chapter 5. Further research into mindfulness to promote successful aging is suggested, utilizing a training tailored to the needs of an older adult population. Further researchers should obtain a greater sample size in order to obtain results that are statistically significant. The connections between mindfulness, spirituality, the reduction of pain and the promotion of healthy sleep are identified as additional variables to be explored. The potential for social workers in promote successful aging through mindfulness skills training is identified as an area for future research.

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The Promotion of Successful Aging through Mindfulness Skills Training

Kielty Turner, DSW Candidate

A DISSERTATION

in

Social Work

Presented to the Faculties of the University of Pennsylvania

In

Partial Fulfillment of the Requirements for the

Degree of Doctor of Social Work

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_____

Ram Cnaan, PhD
Supervisor of Dissertation

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ABSTRACT

THE PROMOTION OF SUCCESSFUL AGING THROUGH MINDFULNESS SKILLS TRAINING

Kielty Turner, DSW Candidate

Dissertation Mentor and Chair, Ram Cnaan, PhD

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Chapter 1 Mindfulness in clinical social work

Introduction

Clinical social work has been described as "a rich interweave of art, craft, bits and pieces of theory and the intersubjectivity of each client-clinician system" (Applegate, 2000, p. 150). In this paper, I explore mindfulness skills training as a tool for clinical social workers to use in that intersubjective weaving process. Specifically, I will identify how a clinician can develop qualities which contribute to the psychotherapeutic relationship through mindfulness skills training. In addition, I will introduce the reader to four specific therapeutic protocols in which clinical social workers teach mindfulness skills to their clients. Throughout the article, I will provide examples of the uses of mindfulness from my own clinical practice. My hope is that the readers will recognize that these seemingly alien concepts are not only similar to but are also compatible with our current theoretical and clinical foundations.

Two general approaches to the application of mindfulness in clinical work have been described as mindful presence in psychotherapy and mindfulness-based psychotherapy (Germer, 2005). Mindful-presence in psychotherapy is the development, through mindfulness skills techniques, of the therapeutic qualities of the clinician. These "common factors" (Bennett & Nelson, 2008) for effective clinical practice have become of increasing interest in clinical social work. Clinicians can use mindfulness skills training as an additional tool to develop the "clinical sensitivity to even low-levels of non-verbal attachment communications" (Schore, & Schore, 2008, p.17) which we know is central to the helping relationship. The four major mindfulness-based psychotherapies

described in this paper explicitly teach the client skills derived from meditative traditions in order to achieve the goals of therapy.

The aim of traditional Buddhist mindfulness training to alleviate human suffering is fundamentally compatible with the aim of social work "to enhance human well-being" (National Association of Social Workers, 1999, p. 1). Through the incorporation of mindfulness skills in clinical work, the vulnerable populations that we, as social workers serve would benefit from 2500-year-old techniques to alleviate suffering. Our clients' distress is often intense, while the resources of time and referral sources are increasingly limited. That suffering can be relieved as both clinicians and clients develop the skills and qualities that result from incorporating mindfulness into their work. Schore and Schore (2008) suggested that the field of neurobiology is a professional discipline with the potential to inform the theory and practice of clinical social work. In this paper, I contend that mindfulness training provides clinical social workers with skills to incorporate current neuroscience and attachment research into our every day clinical practice.

What is Mindfulness?

Mindfulness is the central tenet of Buddhist meditation. It has been described by Kabat-Zinn as "…paying attention in a particular way, on purpose, in the present moment and non-judgmentally" (1994, p.4). My own introduction to mindfulness was at yoga classes about 15 years ago. I immediately noticed the benefits of a heightened awareness of my bodily sensations, thoughts and feelings as a result of these gentle stretches. In *Mechanisms of Mindfulness* (Shapiro, Carlson, Astin & Freedman, 2006), the authors identified three building blocks or "axioms" of mindfulness: intention, attention, and

attitude. “Intention” is described as a personal goal or vision, such as the reduction of hypertension or self-exploration. Focus on the present, internal and external experience is called “attention.” An “attitude” of equanimity and acceptance is the third axiom of mindfulness. The act of being mindful, open, aware and accepting results in “reperceiving” and improved self-regulation (Shapiro et al, 2006, p. 377). Clinical social workers familiar with “mentalization” (Fonagy, 2001) will recognize its similarity to the “attention” axiom of mindfulness. Mindfulness skills training develops that vital capacity to think about one’s own and others’ mental states while maintaining the attitude of equanimity.

In the *Mindful Brain* (2007), Siegel integrated neuroscience with established theory to propose that mindfulness is a form of healthy relationship or attunement with one’s self. Siegel stated:

> In sum, we are proposing that mindfulness involves a form of internal attunement that may harness the social circuits of mirroring and empathy to create a state of neural integration and flexible self-regulation. The sense of safety that is established with internal attunement then initiates receptive awareness in which executive attention is open to whatever arises in the field of ongoing experience. This is the reflective state of awareness that is at the heart of mindfulness (2007, p. 132).

Attention to self and others, self-regulation, attunement and empathy are all therefore interconnected qualities fostered by mindfulness practices.

I have my own mindfulness practice of yoga and meditation and I have taught mindfulness skills to many clients. My work with Tom, a court-mandated client,

abstinent for four weeks from opiate dependence, illustrates the interweave of mindful-presence and mindfulness-based psychotherapies. I had been working with Tom for two weeks in both group (four per week) and individual sessions (two per week). The group sessions provided training and practice in mindfulness as well as psycho-education and mutual support. Motivated by a desire to stay out of prison, Tom was abstinent. He reported a persistent urge to get high but claimed no knowledge of the trigger of that thought. In fact, he shared very little beyond the sarcastic and the superficial and I was increasingly aware of my own frustration during our sessions. I took a few minutes before an individual session, to close my eyes, breath and sit with this frustration and my concern that Tom would relapse. As I accepted these feelings, I was able to let them go and I became aware of my curiosity about his urges.

We started our session that day the typical way, with Tom saying: "All I can think about is getting high." I expressed my curiosity about the urges differently this time. I did not feel the need to fix them, although I was more keenly aware that Tom felt tormented. I was just curious and attuned, in the way that mindfulness fosters. I said: "Every day, you talk about these urges. It must feel like torture. I just wonder what triggers them. I think it would help if we knew how they get started." At first, Tom still claimed that the urges came from nowhere. Silence ensued, through which I did more mindful breathing, feeling the pain of his urge to get high at that moment. Defiantly, Tom stated, "My daughter told me that she hates me." Sensing that he had more to say, I remained quiet, practicing awareness of the sadness and pain due to his daughter's hatred. Tom said with tears in his eyes, "They'd be better off without me. You know, I wish all the time that I could just run away." Aware of Tom's embarrassment, I asked, "How does it feel to tell

me about that?" Tom told me: "I'm just being a big baby." While we explored his self-judgment, Tom said, "I'm just so messed up. I think that it would have been better if I died last time I O.D.ed (overdosed)." By the end of the session that day, Tom's mindfulness, fostered by the prior sessions, brought about his insight that he had been trying to run away (or die) for the past twenty years.

Mindful presence in psychotherapy

Mindful presence in psychotherapy is the result of the mindfulness practice of the clinician rather than of the client. Schore and Schore (2008) identified that the key to psychotherapy is the intersubjective work of "how to be with the patient, especially during affectively stressful moments (right brain focus) (p. 17)". In the previous example, I was able to "be with" Tom is a different way as a result of my own mindfulness practice. Germer (2005) suggested that mindfulness is "a technology for psychotherapists to cultivate personal therapeutic qualities and general well-being" (p.11). According to Germer, "In the coming years, mindfulness practice may prove to be a tangible means for building empirically supported relationship skills" (p. 12). Mackey emphasized the importance of the therapeutic relationship stating, "For clinical social workers, the professional relationship is not just the vehicle of intervention to change behavior(s) but an empathic resource for acceptance, support, validation and understanding of clients, which may be among the most important factors in making therapy therapeutic" (2007, p. 13).

Mindfulness skills training builds the clinician's qualities or skills of attention, affect regulation, attunement and empathy. Lutz, Dunne and Davidson (2007) stated:

> Many of our core mental processes such as awareness and attention and emotion regulation including our very capacity for happiness and compassion, should be best conceptualized as trainable skills. The meditative traditions provide a compelling example of strategies and techniques that have evolved over time to enhance and optimize human potential and well-being. (p.107)

Both clinical social workers and our clients could benefit from mindfulness skills which have been shown to develop these "core mental processes" and which are also the basis of the therapeutic relationship. In the next four sections of this paper I will explore the qualities of attention, affect regulation, attunement and empathy fostered by clinician and client mindfulness skill training.

Attention

According to Brenner "No statement about psychoanalytic technique is more frequently cited than Freud's recommendation that analysts listen to their patients with evenly hovering or suspended attention and depend on their unconscious to do the rest" (2000, p. 545). Horney, a student of Zen Buddhism, asserted that "wholehearted attention" (as cited in Morgan & Morgan, 2005) is a central quality of psychotherapy that might be enhanced through Buddhist mindfulness training. Both Freud and Horney were indicating the importance of attention in the clinical setting. Meditative practices offer techniques to enhance these attentional capacities for clinical social workers.

In his discussion of two clinical illustrations, Ogden (1994) emphasized the importance of a mindful presence in analysis. He asserted the necessity for the analyst to "recognize, understand and verbally symbolize…the apparently self-absorbed ramblings of his mind, the analyst's bodily sensations that seemingly have nothing to do with the

analysand" (p. 94). Rather than ignore or deny these "reveries", Ogden suggested that the analyst bring them to awareness. Thus, the analyst can discover the intersubjective analytic third created in treatment between the analyst and analysand. Ogden's concept of the analytic third demonstrates the connection between the attention of the clinician to intrapsychic and somatic experiences and the ability of the clinician to attune to a client and to the therapeutic relationship. This "clinical sensitivity" (Schore & Schore, 2008, p. 17) to nonverbal communication is the vital therapeutic element fostered by mindfulness practices.

In the Buddhist tradition, attention is cultivated through both concentrative (samatha) meditation and through mindfulness (vipassana) meditation practices. In samatha meditation, the practitioner focuses the mind on a single internal or external object, for example the "mantra". In vipassana meditation, the practitioner notices moment by moment what thought, sensation or emotion comes and then goes. The distraction may be visualized as a fluffy cloud, floating into and out of the practitioner's awareness. Jha, Krompinger and Baime (2007) identified a tendency of Mindfulness-Based Stress Reduction training to result in an improved ability to orient or concentrate attention. Longer-term, mindfulness meditative training appeared to allow the emergence of the receptive attentional skills which allow the person to be "readied in the present moment of experience" (Jha, Krompinger & Baime, 2007, p.110). Clinicians, through mindfulness practices, can therefore increase their ability to concentrate attention as well as to be receptive to the client in a non-judgmental and accepting manner.

James was aware of both the importance of attentional control and of the difficulty in developing it. He wrote "The faculty of voluntarily bringing back a

wandering attention over and over again, is at the root of judgment, character and will…But it is easier to define this ideal than to give practical directions for bringing it about" (1890/1981, p. 401). Mindfulness skills training has been shown to be one such method of directly increasing the ability to sustain attention (Bishop et al., 2004). Morgan and Morgan (2005) suggested that a clinician's mindful presence can be cultivated by both an ongoing meditative practice and by brief (3-5 minute) meditations as a transition between clients.

After I walk my clients out of my office and write some quick notes about the session, I routinely give myself a few minutes to close my eyes and pay attention to my breath. I simply sit in a comfortable position, place my hands on my belly and breathe deeply enough to feel my hands rise and fall. I notice when my mind wanders from my breath to the next client or to what I need to pick up at the store on the way home. Then I gently turn my mind back to my breath again. Mindful breathing helps me to let go of the last client and ground myself before greeting the next client. This kind of mindfulness practice enables the clinician to both focus attention on the present moment of the therapy session and to be receptive to the multitude of awarenesses that arise in each therapy moment. Stern's (2003) "moment of meeting" of psychotherapy in which there is heightened attentiveness and receptivity is facilitated by mindfulness practices.

Brenner and Homonoff (2004) conducted intensive interviews with ten clinical social workers exploring the impact of Zen meditative practice on their social work practice. The respondents reported that their meditative practice resulted in an increased ability to focus on the present moment with the client. Increased awareness then resulted in a greater perception of the connection with the client. Brenner and Homonoff (2004)

theorized that meditative or mindfulness practices influence social workers' levels of awareness, acceptance and responsibility.

Affect Regulation

Clinical social workers meet all day with suffering clients, resulting in a roller coaster of affective experiences for the clinician. Applegate and Bonovitz (1995) wrote, "Responding to clients' projective identifications, social workers find themselves having to contain and integrate powerful ambivalent feelings" (p. 77). In addition to those projections, we clinicians must also manage our countertransference and our affective responses to the client. Unfortunately, social workers are seldom provided with training and supervision on techniques to regulate the affect that arises as a result of our work. Perhaps clinicians are assumed to have adequate, if not superior affect regulation skills in order to do this work. Certainly, we all are aware of the tendency of social workers to burn out from a profession that evokes powerful emotions such as anger, sadness and fear all day long. Mindful presence in psychotherapy is not directly aimed at preventing burn out, although there has been interest in mindfulness skills training as prevention of post-traumatic stress disorder for social workers (Berceli & Napoli, 2006). Mindful presence in psychotherapy fosters therapeutic skills such as affect regulation in order to provide better therapy.

Brown and Ryan (2003) have demonstrated that people who score higher on the Mindfulness Awareness Attention Scale (MAAS) a measure of mindfulness, reported greater self-regulated emotion and behavior. In this way mindfulness practices have been theorized to support the development of healthy psychological and behavioral functioning. Preliminary data, described by Siegel (2007) indicate that mindfulness

harnesses regions of the brain such as the frontal areas of the cortex and subcortical limbic and brainstem into a coherent integrated state. A body scan is a lying down meditation in which each part of the body is noticed in a systematic and non-judgmental manner. In these and similar exercises, the focus shifts away from the linguistic and conceptual to the non-verbal, imagistic and somatic aspects of experience. Siegel (2007) referred to "top-down enslavements" (2007, p. 145)" as automatic reactions such as thoughts, emotions and bodily reactions to each moment of our lives. He suggested that mindful awareness permits the "decoupling of automaticity" (2007, p. 144), leading to a potential "…lasting change in observable traits such as flexibility of affect and cognitive styles and patterns of interaction with others" (Siegel, 2007, p. 158).

Goleman and Schwartz (1976) hypothesized that mindfulness training increases awareness of negative events while also reducing reactivity to those events. Their research supported this hypothesis, finding that meditators are able to quickly return to a state of mental calm after being exposed to images of woodshop accidents. Moreover, the research described in the section of this article on the impact of mindfulness-based psychotherapies, provides validation for the theory that mindfulness skills training does promote healthy affect regulation.

An attitude of acceptance and equanimity which fosters affect regulation is intentionally cultivated through mindfulness practices. Clinical social workers learn "mindful affect tolerance" (Fulton, 2005) because "if we cannot tolerate our own difficult emotions, we may find it difficult to sit with our patients' powerful affects" (p. 60). Brenner and Homonoff (2004) found that the social workers in their study could be "in the midst of suffering and not be overwhelmed by the magnitude of distress" (p. 267).

The mindful clinician develops an attitude of friendly curiosity with her own affective experience in the session in order to tolerate that experience. Specifically, the clinician notices, without judgment, the thoughts, physical experiences and emotions that occur during and related to the therapy sessions with a particular client. In clinical practice, I am often aware of a decreased duration of negative affect due to mindfulness training.

When Rob, a former client called to request to be seen "right away," I was aware of my own anger and reluctance to schedule him. After a year and a half of therapy, he had abruptly ended treatment. Rob had berated me for "criticizing" his recently deceased father. My intent had been to validate his ambivalence regarding a father who had brutally beaten and neglected him. As I anticipated the session, I allowed myself to feel and accept my anger at Rob and my dread of the impending session. I was thinking that he was coming to yell at me some more. My personal preference is to avoid those types of confrontations. As a result of my use of mindfulness meditation, my anger and dread then shifted to curiosity about myself. I wondered why I would dread this interaction. I acknowledged my tendency to think that if only I had said something different, maybe he would not have reacted like that. I was also curious about the client, what did Rob really want from me and from our relationship? My initial feelings were tolerated and they informed our session that day. We were both able to be curious about the interaction, learning from my anger and dread about his patterns of distancing when relationships get too close. As a result of his meditation practice as outlined in the 12 steps of Alcoholics Anonymous, Rob realized that he regretted telling me about the abuse and neglect, feeling comfortable returning to the denial instilled in him throughout his youth. In this

example, both clinician and client were able to be aware of our affective responses and a renewed therapeutic relationship was forged.

Attunement

Currently, we are experiencing an explosion of information on the structure and functioning of the human brain. New technology has increased our understanding of the brain's development as an "open, non-linear dynamic system whose adaptive development and self organization depend on attuned interactions with caregivers" (Applegate & Shapiro, 2005, p. 14). Neural networks are shown to demonstrate plasticity or the capacity for integration through reparative experiences (Siegel, 2007). Neurobiology research is validating the clinical social work emphasis on the importance of the attuned therapeutic relationship in the change process. The neuroscience literature describes the intricate connection between thoughts, feelings and physiological phenomena providing support for cognitive-behavioral theory (Applegate & Shapiro, 2005). Mindfulness can be viewed as fostering what Fonagy termed "mentalization" (2001), enabling us as clinicians to not only examine our own thinking but also to "become more acute in our ability to see their (clients') minds. This makes us better therapists" (Fulton, 2005, p. 67).

Cozolino (2002) identified the important connection between a clinician's ability to regulate affect and the ability of the clinician to be attuned with the client. He stated "As affect is repeatedly brought into the therapeutic relationship and managed through a variety of stabilizing mechanisms, the client gradually internalizes these skills" (p. 33). Therefore, therapist affect regulation and attunement are intertwined and fundamental skills for clinical social work. Bennet & Nelson (2008) also refer to the centrality of

therapist attunement in order to attain the "secure base" of treatment. Stern (2004) described the "now moment" as the moment of therapeutic healing that results from the creative and authentic response to the challenge of the moment in therapy. Mindfulness fosters a "self engagement system" (Siegel, 2007, p. 130) in which the neural circuitry created by a safe, loving relationship is activated. According to Siegel, intrapersonal attunement over time results in changes in interpersonal attunement or affective style. Mindfulness practices facilitate this affect regulation for clinicians resulting in the ability to more attuned to ourselves and to our clients.

Cozolino (2002) emphasized the importance of developing a language in which "cognition is blended with affects so that there can be feelings about thoughts and thoughts about feelings" (p. 37). The development of this heightened awareness, acceptance and curiosity about our own thoughts and feelings enhances our ability to see how clients engage in the same processes. Therefore, mindful attention of the clinician fosters the clinician's own affect regulation, attunement and empathy.

Empathy

Clinical social work has traditionally emphasized the importance of engaging the client with empathy in order to provide the secure-base for change in the helping relationship. In their list of clinical skills, Simpson, Williams & Segall (2007) emphasized the importance of the development of self awareness and empathy for clinical social workers.

Mackey (2007) described research at Harvard Medical School which supported the "centrality of empathic relationships… as a vehicle for amelioration of damage to the self" (p. 5). Clinician empathy is necessary to establish the "holding environment" of the

therapeutic alliance (Applegate & Bonovitz, 1995). Etezady (2007) stated "Empathic capacity can grow with experience, with conscious effort at attunement and through deeper self-understanding" (p. 136). Therapeutic empathy is fostered by the qualities of attention, affect regulation and attunement of mindfulness.

Morgan & Morgan (2005) referred to "a growing corpus of literature on the use of meditation and mindfulness to cultivate empathy" (p. 82). After an attending an eight-week MBSR training, medical students who attended the training were shown to have higher scores on overall empathy levels compared to the scores of the control group (Shapiro, Schwartz & Bonner, 1998). Davidson and colleagues (2003) found that the brain scans of a sample of mindfulness meditators demonstrated an increased activity in the region of the brain associated with compassion. Researchers have begun to explore the potential of mindfulness training in the development of empathy in professionals such as teachers (Tremmel, 1993) and medical doctors (Shapiro et al., 1998) as well as psychotherapists (Germer, 2005).

Buddhist psychology describes mindfulness and empathy as interrelated and essential elements of enlightenment. Specific Buddhist teachings address the development of empathy as arising out of "insight into impermanence, mental suffering and the constructed nature of self" (Morgan & Morgan, 2005, p. 82). Empathy is cultivated intentionally through mindfulness training, through an attitude of "loving-kindness" for all beings.

The following is an example that Morgan & Morgan (2005) gave of a meditation which clinicians might choose to use before a session in order to foster clinician empathy. I have used a similar meditation practice to prepare for sessions with difficult clients.

1. Take a moment and feel the rise and fall of your breath before rising to meet your next patient.

2. As you walk to the door, imagine that on the other side of the door another human being is waiting. The human being is someone who is suffering, who has hopes and dreams, who has tried to be happy and only partially succeeded, and who is coming to you, believing that you can relieve his or her suffering.

3. Now open the door and say "hello". (p. 89)

Mindfulness-based psychotherapies

Clients can benefit from learning mindfulness skills as well as from having a mindful clinician. Clinical social workers of various orientations can tailor mindfulness skills training to their clients. Cognitive-behavioral clinicians have been exploring mindfulness in the four major treatment protocols: Mindfulness-Based Stress Reduction (MBSR) (Kabat-Zinn, 1990), Mindfulness-Based Cognitive Therapy (MBCT) (Segal, Williams & Teasdale, 2002), Dialectical Behavior Therapy (DBT) (Miller, Rathus & Linehan, 2007) and Acceptance and Commitment Therapy (ACT) (Hayes, Strosahl, &Wilson, 1999). In this section, I will provide an introduction to these protocols, their target populations, and empirical research findings. Clinicians with a relational orientation may find that variations of the mindfulness skills presented in these protocols enable clients to access unconscious elements of the dynamics in the therapeutic relationship.

Mindfulness-Based Stress Reduction (MBSR) was initially developed by Kabat-Zinn (1990) as a pain management program for chronically physically ill patients. More recently, MBSR has been implemented as an effective treatment for a multitude of

medical and psychological problems (Lazar, 2005). The focus of this program is to teach mindfulness skills to patients through meditations and mindful yoga. Experiences of physical or emotional pain experienced during these activities are brought into present moment awareness and accepted. These skills are then also practiced outside of the training sessions. In a "body scan", the patient with chronic pain will practice awareness and acceptance of pain. Through these meditative experiences, the participant will develop the ability to shift or refocus attention to other parts of the body. MBSR training includes eight, weekly 2.5-hour sessions and 40 minutes of daily homework. Control study research has been limited on MBSR as well as on MBCT due to the difficulty of creating a comparative control intervention. However, Baer (2003) found that MBSR "may help to alleviate a variety of mental problems and improve psychological functioning" (p. 139) such as in anxiety, depression, binge eating, chronic pain, fibromyalgia, psoriasis and stress related to cancer as well as non-clinical stress.

Based on a combination of MBSR and cognitive therapy, Mindfulness-Based Cognitive Therapy (MBCT) (Segal, Williams & Teasdale, 2002) was developed as a form of relapse prevention to treat chronically depressed clients. Like MBSR, the format is eight, weekly 2.5 hour sessions with mindfulness practice homework. Depressed patients who are stabilized but at risk for relapse are taught skills to accept and let go of the ruminative thoughts that can lead up to a relapse in the depression. This differs from a more traditional, cognitive-behavioral approach of disputing or stopping these thoughts. This shift in emphasis to the more implicit, unconscious thought awareness is referred to as the "second cognitive revolution" (Germer, 2005, p. 21). Lazar (2005) indicated the need for more controlled studies on the efficacy of mindfulness-based psychotherapies.

Yet, she stated that MBCT for treating depression will be deemed "probably efficacious" (p. 222) after more study. This writer has utilized elements of MBCT in the treatment of clients with a history of multiple depressive episodes. The additional skills of awareness and acceptance of the thoughts contributing to the depression was found to be very helpful. Many clients have reported success in accepting and letting go of ruminating thoughts that had previously contributed to their depression. Some clients further their own mindfulness practice, through attending yoga and meditation classes as well as additional readings or meditation CDs.

Marsha Linehan developed Dialectical Behavior Therapy (DBT) originally to treat female patients with borderline personality disorder and suicidal behavior. Clients are treated each week with an individual session and a 2.5 hour group skills-training session. DBT practitioners espouse a biosocial theory of borderline personality disorder (BPD) in which affect regulation dysfunction is a result of constitutional biological predispositions and the individual's interaction in an "invalidating" environment (Miller, Rathus & Linehan, 2007). The individual does not learn to trust her internal states and therefore fails to develop a coherent sense of self. Mindfulness, focusing on one thing in the moment without judgment, is presented as the "core skill", the basis of all change, in DBT. DBT has been called "arguably the most thoroughly validated and widely used psychotherapeutic treatment for BPD" (Lazar, 2005, p. 229). The original DBT protocol has been modified and is currently considered an effective treatment for a wide variety of mental health and addiction disorders such as depression (Lynch, Morse, Mendelson & Robins, 2003) and eating disorders (Telch, Agras & Linehan, 2001).

I conducted a skills-training series based on mindfulness as taught in Dialectical Behavior Therapy (Linehan, 1993) with clients in early recovery from chemical dependency. Each evening the group members of the Intensive Outpatient Program participated in a short meditation in which they focused on their physical sensations, thoughts and feelings at that moment. One young woman realized during our daily meditation that she had been thinking she should have stayed home with her disabled mother that night. She also became aware that she had felt a strong urge to get high as she drove away from home. She recognized and told the group of her shame about her addiction and her judgment of herself as a "lousy daughter." The mindfulness practice combined with the group, "all-in-the same-boat phenomenon" (Shulman, 1992), helped this client realize that, similar to the other early recovery group members, her habitual thoughts and feelings fueled her addiction.

Acceptance and Commitment Therapy (ACT) arose out of behavioral analysis for clients experiencing stress related disorders and depression. In keeping with Buddhist tradition, the main components of ACT are taught to clients through metaphors (Hayes, Strosahl, & Wilson). "Creative helplessness" for example is taught through the "Chinese Handcuff Metaphor", in which, the more you pull, the tighter the handcuff (or suffering) becomes (Germer, 2005). Clients in ACT learn to reduce their physical or emotional pain by accepting the discomfort. ACT is individualized for each client and can be implemented as either an individual or group therapy (Germer, 2005). Bach & Hayes (2002) found a 50% reduction in rehospitalization (after 4 months) for patients after participating in just four sessions of ACT compared to treatment as usual.

A recent review and evaluation of the psychological and neurophysiological literature finds that mindfulness-based therapeutic interventions appear to be effective in the treatment of depression, anxiety, psychosis, borderline personality disorder and suicidal/self harm behavior as well as in the reduction of substance use and incarceration recidivism (Ivanovski & Malhi, 2007). The vulnerable populations served by clinical social workers struggle with all of these issues. Our clients can benefit from these treatment protocols either as initially developed or adapted to suit the particular population that we serve.

Clients who are motivated and committed to change are most likely to benefit from mindfulness or meditative practices (Germer, 2005). I often introduce mindfulness to new clients as non-judgmental awareness. As clients experience benefits from these techniques, I gradually introduce mindful breathing and brief meditation into the therapy sessions. Beginning practitioners often request additional mindfulness resources. I loan them to CDs (Williams, Teasdale, Segal, & Kabat-Zinn, 2007) or books on meditation (Chodron, 1994). Early mindfulness practice can be a frustrating, rather than relaxing experience. New practitioners can become bored and want to quit. Adverse effects of mindfulness practice range from irritability and hypersensitivity to depression, confusion and severe shaking (Shapiro, 1992). In addition, clients who decompensate when cognitive controls are diminished, such as those with dissociative or post-traumatic stress disorder diagnoses, have the potential to destabilize during mindfulness meditations. This does not mean that mindfulness is contraindicated for these clients (Dimidijian, & Linehan, 2003). It does mean that the introduction needs to be gradual for some people. In all cases, it is helpful for clients to be aware that mindfulness practices can and

probably will bring into awareness some surprising thoughts, feelings and somatic experiences. The emphasis on an attitude of non-judgment and acceptance is therefore central to the practice of mindfulness.

Conclusions

Relational psychotherapy has become increasingly interested in the flow of the moment-to-moment dynamic which results in therapeutic change (Stern, 2004). Writing about mindfulness meditation and social work, Keefe stated, "To use meditation as an adjunct to psychotherapy and social work treatment is to place it within a rational, technological, cultural context. In so doing, we can refine and extend meditation technique and at the same time enrich our own traditions" (1996, p.441). Mindfulness-based psychotherapies provide skills that can improve the lives of our clients. Moreover, a mindfulness practice can help us, as clinical social workers to be more present, accepting and effective in our relationship with our clients.

Those interested in the benefits of mindfulness might wonder where to start to learn about or practice mindfulness. Most of us cannot imagine finding time in our busy lives for a daily mindfulness practice. Social workers can learn about mindfulness through mindfulness-based psychotherapy skills training workshops as well as through a less structured, personal exploration of mindfulness practices. Clinicians practicing MBSR or MBCT are typically required to develop a personal formal mindfulness practice. DBT therapists are not required to have a formal meditation practice but are encouraged to practice mindfulness in the treatment setting (Dimidijian, & Linehan , 2003). A rule of thumb, suggested by Germer is "that we need to have experienced what we teach" (p.115, 2005). In truth, there is no right way for a client or for a clinician to

learn or to practice mindfulness skills. That is the beauty of mindfulness. You can “start where you are” (Chodron, 1994), with acceptance and non-judgment. Mindfulness skills are just that simple and powerful enough to change the present moment in clinical social work.

Chapter 2 Aging Americans

Demographics

In 1990, there were 31.2 million people over the age of 65. (U. S. Census Bureau, 2000). There were 35 million people over 65 in the United States in 2000. This represents a 12 percent increase in only 10 years. The population of people over 65 years of age for 2007 has been estimated as 38 million people. The baby boomers are now entering into the category of 65 and over. The "boomer generation" will continue to swell the proportion of Americans over age 65 from now through the year 2050 at which time the older population will then begin to shrink (Longino & Bradley, 2005).

There is not one image of an elder in the United States. The older population is heterogeneous. There is considerable sociocultural, socioeconomic and demographic diversity in our elders (U. S. Census Bureau, 2000). Persons of minority descent, including Hispanic Whites, accounted for about 16% of the U.S. population in 2000 (Spar, & La Rue, 2002). Hispanic-Americans and Asian-Americans are the fastest growing segment of the minority aging population (Spar, & La Rue). Factors such as age cohort, gender, ethnicity and cultural background, sexual orientation, rural or urban living environment, education, religion and current and historical living situation are all pertinent to the study of elders in the United States.

Successful Aging

Theorists and researchers are exploring the subjective feeling of well-being elders often report despite the life challenges and losses they have experienced. Rowe and Kahn (1987) defined successful aging as including three main components: low probability of disease and disability, high cognitive and physical capacity and active engagement in life.

“Positive spirituality” (Crowther, Parker, Achenbaum, Larimore, & Koening, 2002) has been proposed as a fourth factor for strengthening the existing successful aging model.

Positive aging is a theoretical approach to gerontology that draws from both disease prevention and wellness literatures to emphasize the individual’s attitudes used to enhance longevity and the quality of life (Ellor, 2005). A person who engages in positive aging adjusts his/her attitudes, finding “meaning in everyday existence” (Ellor, p. 150). Ryff and Keyes (1995) proposed a theoretical model of psychological adult well-being that encompasses six distinct dimensions of wellness or successful aging. These dimensions include positive evaluations of oneself and one's past life (Self-Acceptance), a sense of continued growth and development as a person (Personal Growth), the belief that one's life is purposeful and meaningful (Purpose in Life), the possession of quality relations with others (Positive Relations With Others), the capacity to manage effectively one's life and surrounding world (Environmental Mastery), and a sense of self-determination (Autonomy).

Recently research has shifted from emphasizing the criteria of successful aging to the process of successful aging. The Selective Optimization and Compensation model (SOC-model) (Baltes, & Baltes, 1990) is based on a life-span model in which there are many different pathways to successful aging outcomes. According to the SOC-model, people adapt to the changes throughout their life span by selecting and focusing resources on their particular important life domains while compensating for losses in those same domains.

This process of selection, optimization and compensation is theorized to be more important in later aging, as losses become increasingly prevalent. As we age,

compensation becomes an increasingly necessary strategy. Acceptance of losses and disengagement from unrealistic goals have been explored as a part of this compensation process (Schulz, & Heckhausen, 1996). Disengagement has been found to result in an increased ability to regulate negative emotions. Through disengagement, elders remain satisfied with their performance and avoid depression in later life (Rothermund, & Brandstadter, 2003a; Rothermund, & Brandstadter, 2003b). Research into the aging process is finding that self-reported SOC strategies decline in the later years. In particular, the important abilities to optimize and compensate were found to diminish in elders after age 67 (Freund, & Baltes, 2002).

Research into successful aging has been extended to include the viewpoints and perspectives of older people. One quality that elders cited as important for positive functioning is acceptance of change (Ryff, 1989). Similar viewpoints were expressed in focus groups of 60-99 year olds, which explored contributors to successful aging. The participants emphasized the importance of the need for a positive attitude, realistic perspective and adaptability in aging (Reichstadt, Depp, Palinkas, Folsom, & Jeste, 2007).

Challenges of Aging

Elders in the United States are presented with ever-increasing challenges as a result of our swiftly changing social, economic climate in the early 21st century. The scope of this dissertation does not provide an opportunity to comprehensively explore all of the challenges that elders are faced with in our culture. Instead, several of the interrelated challenges elders are often required to cope with in order to continue to age successfully are examined. Specifically, the issues of health, living situation, poverty,

mental health, and ageism are identified as particular stressors in the lives of American elders.

Health conditions

As life expectancy has been extended in our culture, elders are increasingly concerned with the impact of health conditions on the quality of their later years. "Health expectancy" has been suggested to be an increasingly important issue for aging populations as their "life expectancy" has lengthened. Contemporary elders are increasingly prone to chronic physical and cognitive impairments (McBee, 2008). Most elders have multiple health conditions, which require medication and/or management. Arthritis, hypertension, hearing impairments, heart disease and cataracts are the most common chronic health concerns of elders (National Academy on an Aging Society, 1999). The most frequent causes of death in the United States of people age 65 or older are heart disease (32%), cancer (22%) and stroke (8%) (National Academy on an Aging Society, 2007). Serious cognitive disorders are more common in older populations than in the general adult population. Dementia becomes more prevalent with increasing age, while milder forms of cognitive impairment are even more prevalent (APA, 2004).

Chronic pain is a vital issue for elders, which has only recently begun to receive serious empirical consideration. A significant majority of the elderly experience pain, which may interfere with normal functioning (Mitchell, 2001). Daily pain was reported by approximately 40% of a sample of over 65 community dwelling adults (Landi et al., 2001). Conditions such as back pain, arthritis, osteoporosis and diabetes in elderly people can lead to a marked deterioration in quality of life. Pain management can be difficult due to the existence of multiple medical problems and the increased incidence of side effects

related to treatment (Mitchell). A significant proportion of these afflicted elders do not receive adequate pain management. (Gagliese, & Melzack, 1997).

Living situations

Health conditions often result in elders needing some kind of care in order to continue to reside at home. According to the National Academy on an Aging Society (1999), almost 80 percent of older persons live at home or in a community-based setting. The vast majority of American senior citizens live independently at their own homes (Krout, & Wethington, 2003). Community residing elders usually receive at least some unpaid, non-professional assistance, the majority of which has traditionally come from family members. In the United States, family members are less likely to live near one another today than in the past, resulting in the use of adult day care centers and more extensive home care services.

The more significant change is the smaller proportion of older people living with other relatives. In 1960, 25 percent of elders lived with other relatives. In 2000, only 13 percent of elders lived with other family members. As a result of this shift in caretaking trends in the United States, the proportion of older people living alone increased substantially, from less than 19 percent in 1960 to 30 percent in 2000 (National Academy on an Aging Society).

The proportion of people age 65 and older living with a spouse has increased slightly since 1960. Women are more likely than men to live alone as they get older. The factors that account for this are longer life expectancy for women, and women are more likely to outlive their older husbands and not to remarry (National Academy on an Aging Society, 1999). Due to physical and mental health conditions, community residing seniors

may need to transition to a living situation such as a senior housing facility or nursing home in order to continue functioning.

Approximately 5% of the elderly population resides in a nursing home at any given time. Currently, nearly 19 percent of the population age 85 and older lives in nursing homes (Spar, & La Rue, 2002). Changes in family patterns (such as women working outside of the home, adult children living far from parents and divorce) are expected to increase the need for all types of supportive services as families find it difficult to care for their elder members in the community (Kolb, 2003). By 2020, the number of older people expected to use nursing home care and other supportive services will increase. As the older population continues to grow through the year 2050, the need for nursing home and other supportive services is expected to increase substantially (National Academy on an Aging Society, 1999).

Poverty.

Historically, a large number of older Americans have lived in poverty. In 1999, more than 10% of Americans 6o and older lived below the poverty level with more than 40% of that group reporting incomes below $25,000 (Clark, Burkhauser, Moon, Quinn, & Smeeding, 2004). The high cost of healthcare is not taken into consideration when measuring poverty (Cawthorne, 2008). Elders' medical bills often result in reduced disposable income. Therefore, the number of older Americans who have inadequate economic resources is underreported.

Low-income, elders have been found to be more likely to have the additional challenges of the loss of loved one (or close friend), the burden of caretaking for someone else, social isolation and lower quality housing than do their more affluent peers (Evans,

Wethington, Coleman, Worms, & Frongillo, 2008). Older minority persons have fewer economic resources than their majority peers. It is estimated that a staggering 47% of Black women 65 to 74 years of age live below the poverty level (APA, 2004). Rural elderly have higher rates of poverty than the urban elderly. Additionally, rural areas tend to have a higher percentage of elderly in their total population than their urban counterparts (Cawthorne, 2008).

In 2008, as the first baby boomers reached age 65, we might have expected a huge wave of "boomer" retirees. However, older workers are increasingly putting off retirement resulting in "the graying of the American workforce" (Levitz, 2008). The US Bureau of Labor Statistics (2008) reports that from 1977 to 2007, employment of workers over 65 increased 101%. The number of workers ages of 65 and up is predicted to soar by more than 80 percent. By 2016, workers age 65 and over are expected to account for 6.1 percent of the total labor force, up sharply from their 2006 share of 3.6 percent (Bureau of Labor Statistics). Elders are now working more years and for less money. Average earnings of workers 65 and older have long been below those of all other workers (Bureau of Labor Statistics).

As this dissertation is being written, we are facing an economic crisis that has been often compared to the "great depression." The above stated statistics of poverty and their impact on the health of our elders may soon be looked at as "the good old days. " Levitz (2008) cited several factors impacting the financial security of elders including declines in pensions and employer health care benefits for retirees as well as plummeting property values. Alarmingly, since Levitz' April 2008 article, the outlook for the finances for elders has become even more grave. Elders are experiencing bankruptcy and

foreclosure on their homes as a result of the global financial crisis. “Older Americans are taking a particularly wicked hit” (Herbert, 2008, October 18) as lower and middle income Americans are becoming increasingly “destitute.”

Mental Health Disorders.

The process of aging requires elders to cope with a multitude of losses. McBee (2008) summed up these issues:

> Loss of health may lead to loss of independence. Loss of family and friends may increase isolation, Loss of role and productivity may lead to lower self-esteem. Loss of home and possessions may lead to a loss of identity and even increased confusion. Loss of physical senses such as vision may lead to decrease in previously enjoyed pleasures, such as reading or painting. (p. 48)

This chronic awareness of loss can result in intense mental stress for elders. Not all seniors have the resources to cope with these late life changes, experiencing either a relapse or a first occurrence of mental health problems particularly depression and anxiety.

Despite these losses, the majority of elders do not experience depression (Magai, 2001). Magai’s research found that most older people maintain a positive outlook, morale, and life satisfaction in their current life circumstances. New evidence is indicating that emotional wellbeing may increase with normal aging. Williams and her colleagues (2006) found that emotional wellbeing improves over the human lifespan, resulting in elders demonstrating greater emotional stability and reduced emotional intensity.

The challenges of aging do result in clinical depression for many elders. In the United States, 33 million people over 65 report symptoms of depression. By 2010, 20% of the 40 million Americans are predicted to have had an experience with clinical depression (The John A. Hartford Foundation, n.d.). In the United States, the prevalence of symptoms of depression is estimated at 27.5% of community-dwelling people over 65 (Gellis et al., 2004). Physical illness and disability place elders at an increased risk for developing clinical depression (Wrosch, Schulz, & Hekhausen, 2004). Depression is strongly linked with mortality of older populations. Depressed elders are more likely to die from natural causes as well as from suicide. Suicide rates are higher among elders than in any other age group. White males are reported to have the highest rates of suicide (Conwell, & Duberstein, 2001). In addition to the identification of effective interventions in elderly depression, Reynolds et al. (1998) called for "the development of preventive strategies to reduce the liability to late-life depression" (p. 66).

Bereavement is often associated with depressive symptoms and a decline in positive affect (Spar, & La Rue, 2002). Normal bereavement often resolves itself a year or two after a partner's death. Men and women with limited social connections tend to have greater difficulty coping with the loss of a partner (Spar, & La Rue). Social isolation is a risk factor for elders. Elders report greater life satisfaction and self-efficacy when they are socially involved and depended upon by others for multiple social roles (Spar, & La Rue).

Anxiety disorders are the most common psychiatric condition in the elderly, although they appear to be less prevalent than in younger age groups (Sheikh & Salzman, 1995). Generalized anxiety disorder is the most common anxiety disorder diagnosis in

adult populations over the age of 60 (Nordhus, & Pallesen, 2003). The consequences of anxiety in later life have not been adequately researched (Wetherell, 1998). Anxiety may result in diminished daily functioning or perceived well-being. According to Nordhus, & Pallesen, there may be a tendency to discount anxiety disorders relative to other more salient issues such as health conditions associated with aging. Therefore, anxiety symptoms and disorders in late life often go undetected and untreated (Flint, 1997).

Ageism and self-perception.

A growing number of studies have begun to explore the operation of "implicit ageism" (Levy, 2001). According to Levy, implicit ageism includes the internalized age stereotypes of a given culture. Since most age stereotypes in the United States tend to be negative, implicit ageism in our culture tends to also be mostly negative. A lifetime of exposure to our culture's age stereotypes therefore often results in elders internalizing these age stereotypes.

Palmore (2001) conducted a survey of 84 participants over age 60. The participants reported that the experience of ageism was widespread and frequent. According to Palmore:

> The majority reported several incidents of ageism and over half of the incidents were reported to have occurred "more than once". The most frequent types were persons showing disrespect for older people, followed by persons showing assumptions about ailments or frailty caused by age (p. 572).

Edlestein and Kalish (1999) identified stereotypes of older adults that may lead to negative bias. These stereotypes portray elders as suffering from senility and mental illness (especially depression), as inefficient in the workplace, frail or in ill health,

socially isolated, lacking interest in sex or intimacy and as demonstrating stubborn, inflexible personality characteristics.

Studies regarding aging stereotyping have demonstrated that the thinking, behavior and functioning of elders can be affected by their own aging self-stereotypes. Levy and Langer (1994) found that older Chinese individuals who reported a more positive stereotype of aging performed better on memory tasks than did their same age peers from the United States. In follow up studies cited by Levy (2001), older individuals exposed to negative age stereotypes (as compared to elders exposed to positive age stereotypes) tend to demonstrate worse memory performance, self-efficacy, handwriting and will to live. Additionally, longitudinal research (Levy, Slade, & Kasl, 2002) suggested that more positive self-perceptions of aging correlates with better functional health 18 years later. Even hearing decline over time can be predicted by elders' stereotypes of aging (Levy, Slade, & Gill, 2006). Older individuals' beliefs about their own aging have been shown to predict their engagement in preventative health behaviors (Levy, & Myers, 2004). Elders with more positive self-perceptions of aging when compared with elders with more negative aging self-perceptions, tended to eat a more balanced diet, exercise and take medication as prescribed over the next two decades.

The ultimate primal fear related to aging is the reality of ever approaching death. Self- perception of aging has been demonstrated to be one of the best predictors of mortality. Levy, Slade, Kasl, and Kunkle (2002) found that positive self-perceptions of aging lengthened survival rate. They found after controlling for age, gender, socioeconomic status, loneliness and functional health an increased life span of 7.5 years for participants who reported more positive self-perceptions of aging.

Promoting emotion regulation in elders

The final stage of healthy human development posited by Erikson is integrity as opposed to despair (1963). According to Erikson, elders achieve satisfaction with their lives and come to terms with death in this last stage of healthy development. More recent theorists suggest that a core concept of mental health for elders is the ability to put one's own life into context. The ability to make meaning out of life results in contentment, congruence, self-acceptance, sense of purpose and emotional regulation (Blazer, 2002).

Elders are often exposed to the inevitable challenges identified earlier in this chapter. These issues put elders at risk for less than optimal aging experiences. Aspinwall and Taylor (1997) defined proactive coping as the process of using strategies to prevent future stressors or to minimize the effects of stressors. Their model of proactive coping for elders emphasizes the importance of the regulation of negative emotion through behavioral and/or cognitive methods. Blanchard-Fields, Stein and Watson (2004) stated that in older adults "Effective emotion regulation is equated with positive outcomes, that is, fewer negative emotional experiences or greater positive emotional experiences" (p. 261). Their findings support the theory that older adults engage in more passive emotion-regulation strategies such as acceptance of loss and disengagement from goals than is typical in middle-aged adults.

Life review and religious coping are frequently referred to as methods for elders to cope with the challenges of aging. Life review therapy facilitates the natural evaluation and re-synthesis of past experiences to resolve conflicts in order to enhance a sense of personal and existential integrity for elders (Blazer, 2002). Religious coping is identified as having the potential to improve both the mental and physical health of aging

populations. According to Blazer, elders can reduce their suffering and find meaning through the cognitive framework provided by religious beliefs.

Regret resolution has been posited to be central to the adjustment of elders to loss especially bereavement. Elders who resolved their regrets were found to report less depressive symptoms, and rumination and a greater sense of well-being after the loss of a partner (Torges, Stewart, & Nolen-Hoeksema, 2008). Their research emphasized the importance of elders accepting their own past behavior in order to resolve regret over the loss.

Blazer (2002) proposed that elders can develop skills to adapt to the challenges of aging, diminishing the potential for depression. Additionally, skills training may promote physical health, cognitive performance, physical functioning, personal control and mastery, social skills and a sense of personal and existential integrity in aging populations (Blazer, 2002). Bode, De Ridder and Bensing (2006) found that 50 to 75 year-olds could learn pro-active coping as a result of a four session skills training called " In anticipation of golden years." Additionally, they found that participants reported this intervention to be both feasible and appealing.

Despite the demonstrated efficacy of mindfulness-based psychotherapies discussed in Chapter One (Baer, 2003; Ivanovski & Malhi, 2007; Lazar, 2005; Lynch, Morse, Mendelson & Robins, 2003) there has been limited research into the uses of mindfulness skills training with older populations. Mindfulness training (MBSR) emphasizes the development of skills for the acceptance of change. These skills may be particularly salient to elders who experience many unavoidable losses and who are more likely to rely on passive emotion regulation strategies (Blanchard-Fields, Stein, &

Watson, 2004). Skills training is one method to provide depression prevention services to older adults who are often "reluctant to seek mental health services due to stigma, denial of problems, access barriers" (Gellis, 2006, p.129). Additionally, Rejeski (2008) stated that "Because older adults often do take a hard look at 'the meaning of life'… mindfulness …deserves empirical study in gerontology" (p. 137). Elders have reported that mindfulness skills (McBee, 2003) facilitate a reconnection to "positive spirituality", which has been proposed as a factor of successful aging (Crowther, Parker, Achenbaum, Larimore, & Koening, 2002).

Blazer (2002) found that a multi-modal intervention that incorporates mind-body training demonstrated reductions of pain, sleep difficulties and mental health symptoms in elders. Smith (2004) conducted a structured review of eight mind-body interventions for chronic non-malignant pain with elders. He concluded that mind-body interventions are both feasible and safe in older adults. These findings are consistent with the research on adult populations, which suggest the usefulness of MBSR as an intervention for a broad range of chronic disorders and problems. Grossman, Niemann, Schmidt, & Walach (2004) stated as a result of their meta-analysis of 20 studies of MBSR, "In fact, the consistent and relatively strong level of effect sizes across very different types of sample indicates that mindfulness training might enhance general features of coping with distress and disability in everyday life, as well as under more extraordinary conditions of serious disorder or stress" (p. 39).

McBee (2008) has been facilitating groups for frail elders based on MBSR. Due to her frail, nursing home population, the training has been adapted to a one-hour format. McBee (2003) found that elders reported a reconnection to their spiritual roots as a result

of meditative exercises. Additionally, the participants identified less sadness and some reduction in self-reported pain. This research identified that there was little maintenance of these gains, as the participants did not continue with meditation after the class ended. McBee's research is preliminary since the design is based on a small, non-randomized sample.

Smith (2004) called for additional research into the effectiveness of mind-body interventions for the reduction of pain in elders. The Rochester Center for Mind and Body Research is currently studying the effects of MBSR on immune responses, as well as on the physical and mental health of people over 65 (University of Rochester Medical College, 2007). Rejeski (2008) has stated the need for more empirical research into the potential of mindfulness skills training for older adults. Specifically, he suggested that research is warranted to explore if MBSR can reduce both rumination and self-criticism in older adults.

Promoting positive self-perception of aging in elders

Research on the impact of self-perception of aging on the health, functioning and survival of our elders indicates the need to address the internalized implicit ageism of aging Americans. Levy, Slade, Kasl, and Kunkle (2002) suggested that one approach to ameliorate the negative stereotype in our elders is to promote awareness of self-stigmatization in aging individuals. Mindfulness skill training, as stated in Chapter One, has been demonstrated to promote self-awareness of thoughts and feelings. Krompinger and Baime (2007) identified a tendency of MBSR training to result in an improved ability to orient or concentrate attention. Mindfulness skills training has been shown to be one such method of directly increasing the ability to sustain attention (Bishop et al., 2004).

Training in mindfulness might enable elders to notice when they are having automatic, societally determined negative thoughts and feelings regarding aging. Elders could then benefit from the skills learned in mindfulness training to gently let go of those preconceptions. Additionally, the meditative traditions balance awareness with the promotion of self-acceptance and non-judgment. Practices that promote acceptance have the potential to reduce the tendency of elders to self-stigmatize.

Conceptual Frame for this Study:

Gerontological social work has emphasized the problems, crises and losses of the older Americans (Kaye, 2005). This focus on the real life struggles of older Americans has resulted in social workers overlooking the "creative and important functions and roles that social workers could more frequently assume as they serve the expanding cohort of the 'new aged' " (Kaye, 2005, p. xi).

Successful or positive aging according to Keyes (1995), Ellor (2005) and Baltes, & Baltes (1990) entails a process of accepting and coping with the inevitable changes and challenges of aging. There has been little done to explore methods to promote successful aging through skills training for elders (Blazer, 2002). This study will examine the promotion of emotion regulation and self-acceptance in older populations through the implementation of Mindfulness-Based Stress Reduction Training. The aim of the study is to identify whether mindfulness skills training can help elders successfully age. If mindfulness skills training programs are found to promote successful aging, these trainings could be facilitated by social workers in community and residential settings.

Chapter 3 Methods

Research Questions:

1. Can mindfulness skills be taught to people as they advance in the aging process?

2. Can elders improve their ability to regulate emotion as a result of mindfulness skills training?

3. Does mindfulness skills training increase self-acceptance of the aging process in older adults?

Hypotheses:

1. Participants who attend Mindfulness Meditation (MM) Training will report a statistically significant increase of level of mindfulness after attending the Training as compared with a control group.

2. Participants who attend Mindfulness Meditation (MM) Training will report a statistically significant increase in ability to regulate emotion than participants in a control group.

3. Participants who attend Mindfulness Meditation (MM) Training will report a statistically significant increase in self-perceptions of aging as compared with participants in a control group.

Healthy Aging Study

The research for this dissertation was part of a study examining the impact of Mindfulness Meditation (MM) on cognitive and neural functioning of the attention system at the Center for Cognitive Neuroscience (Jha Lab), University of Pennsylvania. This “Healthy Aging Study” was funded through the National Institutes of Health and was approved by the University of Pennsylvania Institutional Review Board (IRB).

Procedures

In this study, we compared the group who completed the MM training (14 participants) with a nutrition education group (13 participants). The trainings were matched on course design (8 weeks of 2 ½ hour sessions) homework (45 minutes per day) and screening, pre and post testing requirements. All participants were recruited to participate in a "Healthy Living/Healthy Aging Course" and were randomly assigned to either the MM or the nutrition education (NE) course. Dr. Baime, the director of University of Pennsylvania's Mindfulness Based Stress Management Program, was directly responsible for overseeing the Mindfulness Meditation (MM) intervention. The MM training was a didactic and experiential training about mindfulness practices. MM participants were taught meditation, yoga postures and breathing exercises. Randy Silverman, a registered dietician taught the Nutrition Education (NE) course based on *Nutrition for Life* (Hark and Deen, 2005). In this control intervention, the participants were provided with nutritional education and instruction.

Study Participants inclusion and exclusion criteria

The participants in this study were healthy, English-speaking volunteers, men and women (all races and ethnicities) ranging in age from 46-70 years of age. Subjects were verbally screened for a history of visual, neurological or psychiatric disorders, or any diagnosed learning disorders when they respond to advertisement for the study. Subjects with diagnosed neurological, psychiatric or medical disorders that would impair their ability to participate in a rigorous, eight-week training course or behavioral testing were excluded from the study. Potential participants were screened approximately two weeks prior to the start of the training. This screening consisted of an interview

conducted by this investigator as well as several self-report measures. The mini-mental screening (Folstein, Folstein, & McHugh, 1975) and the WAIS-M (Wechsler, 1987) were used to screen for neurological impairment, the Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977) was used for screening Depressive disorders, the State-Trait Anxiety Inventory (STAI-S/T) (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1977) was used to screen for Anxiety Disorders**.** A total of seven prospective participants were excluded from the study as a result of pre-existing neurological or psychological conditions.

Training Condition Assignment

Participants were randomly assigned to either the MM or the nutrition education (NE group) course. Microsoft Excel was used to generate a list of random numbers for all participants. The first half of numbers/participants was assigned to one condition, and the rest to the other condition. Groups were analyzed for age and ethnic diversity of the members resulting in an adjustment of the groups in order to study two similar groups.

Sample size and Research Design

In this experimental design, participants were assigned randomly to either the MM or the Nutritional Education group. At Time 1 the study had 33 participants. Several of these people dropped out of the study before attending any of the trainings. Throughout the 3 months of the study, participants dropped out of both groups due to changes in their work, health or family status. At Time 2, there were 22 participants remaining in the study (11 from the MM group and 11 from the Nutrition group). There were 13 self-identified women and 9 self-identified men. The mean age of the participants who completed the study is 56.5 years of age. They had a mean education

level of high school plus four years of college. They attended an average of 6.5 of the 8 training sessions.

Consent Process

Recruitment was by advertisement as required by the University of Pennsylvania IRB. Each participant signed an informed consent that was approved by the IRB. The Principal investigator or trained research assistants were responsible for obtaining informed consent prior to participation.

Compensation

All subjects were compensated at the completion of the larger study (t-2) which includes behavioral testing at a rate of $10/hour for all screening and testing. In total, most participants were paid approximately $70-$100 for being in the study.

Data Management

Confidential data and paper response forms were collected by trained and authorized personnel. The data have been stored in a room safeguarded against public access. Collected data have been stored by a code rather than subject name. The master for the code and name is kept separately.

Recruitment

All participants were recruited to participate in an eight-week "Healthy-Living/Healthy-Aging Course" which was presented as a way to learn techniques to improve health, mood, and well-being as well as techniques to reduce stress. Advertising was posted on fliers in the Philadelphia area and in local newspapers. Advertisements offered monetary compensation. The Advertising read: "Having too many senior moments? Memory lapses, aches and pains, and occasional fogginess are normal parts of

healthy aging. Yet, it may be possible to minimize these "normal" annoyances through life style changes. We are recruiting older adults (45-75) to participate in a research study on life-style training to protect against age-related mind-body decline. You will receive compensation for your participation."

Data collection

The first time point was within 1-3 weeks prior to the beginning of the 8-week course (T1). The second time point was within 1-3 weeks after the course has ended (T2). At the first and second time point, participants completed the Aging Perception Questionnaire (APQ, Barker, O'Hanlon, McGee, Hickey, & Conroy, 2007), the 5 Factor Mindfulness Questionnaire (5FMQ, Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006) the Positive and Negative Affect Scale Week(PANAS, Watson, Clark, Lee & Tellegen, 1988) and the General Emotion Dysregulation Measure (GEDM, Newhill, Mulvey, & Pilkonis, 2004). At weekly phone check-ins, the participants were asked the questions on the PANAS (Watson, Clark, Lee & Tellegen, 1988) and the GEDM (Newhill, Mulvey, & Pilkonis, 2004) on alternate weeks. Both the PANAS and the GEDM were used in order to prevent participants from being overexposed to any one measure and to balance a newer measure (GEDM) with a more established measure (PANAS).

The participants were also asked the following questions at each check-in. The participant responses were recorded to these questions.

"Next, can you please tell me about any ways that the training or related activities might be influencing how you have been feeling this week?"

"How many days in the past week would you say that you have done

All Some None

of the daily assignments?"

"Are there any other factors in your life that might also be contributing to the way that you are feeling this week? If yes, what are these factors?"

Measures

***5-Factor Mindfulness Questionnaire* (See Appendix A).**

The Five Factor Mindfulness Questionnaire (FFMQ) is a synthesis of a number of self-report mindfulness questionnaires that have appeared in the literature in recent years. Baer and colleagues (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006) examined the psychometric properties of five recently developed mindfulness questionnaires, including the Mindful Attention Awareness Scale, the Freiburg Mindfulness Inventory, the Kentucky Inventory of Mindfulness Skills, the Cognitive and Affective Mindfulness Scale, and the Mindfulness Questionnaire. The FFMQ is consequently the collective understanding among scholars of what mindfulness is and how it might be operationalized. The FFMQ measures five factors of mindfulness: *observing* (noticing or attending to a variety of stimuli), *describing* (applying words to observed phenomena), *acting with awareness* (engaging attention fully on the current activity), *nonjudging* (refraining from evaluative labels about various observed phenomena), and *nonreacting* (noticing phenomena without having a reaction to it). The five factors form a total mindfulness score, which reflects a global measure of mindfulness. The FFMQ uses a 5-point Likert-type scale (1 = never or very rarely true, 5 = very often or always true). Sample questions include "When I'm walking, I deliberately notice the sensations of my body moving" and "In difficult situations, I can pause without immediately reacting." The estimated time to complete the instrument is 5-10 minutes.

The 39 item instrument was administered to a sample of 268 undergraduate students. In addition, the psychometric qualities of the FFMQ have been investigated in administrations with populations including cancer patients, individuals with a diagnosis of borderline personality disorder, and experienced meditators. Researchers indicated that the FFMQ is measuring distinct aspects of mindfulness and that the factors have strong internal consistency. The following alpha coefficients were obtained: *observing* = 0.83, describing = 0.91, *acting with awareness* = 0.87, *nonjudging* = 0.87, and *nonreacting* = 0.75 (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). The composite estimate of reliability was 0.96. Inter-factor correlations ranged from 0.15 to 0.34, providing evidence that each factor is distinct from the other.

***Ageing Perceptions Questionnaire* (See Appendix B).**

The Aging Perceptions Questionnaire (part A))(APQ, Barker, O'Hanlon, McGee, Hickey, & Conroy, 2007) is a 32 –item, 5 point Likert-like scale, ranging from strongly disagree to strongly agree reflecting views and experiences of aging. Sample questions include "I am conscious of getting older all the time" and "I feel my age in everything I do". The five dimensions of aging perception identified in this measure are: identity, timeline, consequences, control and emotional representations. The APQ demonstrates good internal consistencies of subscales and subscale interrelationship. The APQ subscales have been demonstrated to be consistent with other physical and psychological indices of health. The APQ has shown modest association with other measures of individual aging-related dimensions. This newer measure was chosen for this research project as the APQ was designed to specifically target the measurement of participant's belief systems related to aging.

***General Emotion Dysregulation Measure* (See Appendix C).**

The General Emotional Dysregulation Measure (GEDM) (Newhill, Mulvey, & Pilkonis, 2004) is a 13-item, 5 point Likert-like scale ranging from strongly disagree to strongly agree, reflecting general emotional arousal and dysregulation of negative affect. Emotion dysregulation is comprised of low threshold or high sensitivity to emotional stimuli, high amplitude of emotional response and a slow return to emotional baseline. Sample questions include: "In general, I have a hard time handling my emotions" and "I often feel overwhelmed by my emotions". The GEDM demonstrates good reliability and validity and correlates significantly with other established measures of affect. This measure is seen as potentially useful in clinical social work practice as a method to monitor changes in emotion regulation skills.

***Positive and Negative Affect Scale* (See Appendix D).**

The Positive and Negative Affect Schedule (PANAS) was created to measure the structure of positive and negative affect (Watson, Clark, Lee & Tellegen, 1988). It is a 10-item mood scale that asks to what extent you are feeling the following with 1 meaning very slightly/not at all, 3 meaning somewhat and 5 meaning extremely during the past week. Examples of the feelings are "interested" and "distressed". The PANAS has been demonstrated to have evidence of convergent and discriminant validity and has been shown to be highly internally consistent. Since the GEDM is a relatively new measure of emotion dysregulation, the PANAS is also being administered in order to measure affect regulation with a more established measure.

Data Analysis

Demographic variables for the experimental and control group participants are compared for the results of this study. The differential effects of training from baseline to post treatment (FFMQ, APQ, PANAS and GEDM) are analyzed. Also, the differential effects of training during the 6 weeks of the phone check ins (PANAS and GEDM) are also analyzed. Due to the small sample size (n=22) completing T1 and T2 measures trends rather than statistically significant results are expected. Changes in the individual participants are analyzed in order to provide suggestions for future research.

During the weekly check-in the participants were asked; “Next, can you please tell me about any ways that the training or related activities might be influencing how you have been feeling this week?”. Select participant replies to this question from both the MM training and control group training are inserted into the results in order to provide the felt experience of the participants in the study.

Chapter 4 Results

Hypothesis 1

Regarding the first hypothesis that participants who attend Mindfulness-Based Stress Reduction (MBSR) Training will demonstrate an increased level of mindfulness after attending the Training as compared with a control group, I compared the scores on the FFMQ of the experimental group before treatment and after treatment. Contrary to this hypothesis, the results of the paired-t test revealed insignificant results ($t=-.1.269$, $df=9$, $p>.05$). However, as expected, I found an increase in mindfulness as measured by the FFMQ of 7.1 when comparing the before and after means of the experimental group. Comparing this change of the mean for the experimental group to the change in the mean of the control group of 3.61 suggests that the experimental group reported a greater increase in mindfulness after the intervention, albeit statistically not significant.

Another interesting issue regarding the impact of MBSR on mindfulness in an aging population is whether the experimental group scored higher on the FFMQ as compared to the control group after the interventions. Contrary to my expectation, there was not a significant difference between the groups after intervention. The mean for the control group was 140.45 while the mean for the experimental group was 139.3. However, the control group scored higher (136.85) on the FFMQ before intervention, while the experimental group scored lower (129.71). This implies that the experimental group reported lower levels of mindfulness prior to the intervention as compared to the control group and that after the trainings the groups had similar mean levels of mindfulness. The T2 means on the FFMQ of the two groups demonstrate insignificant ($t=-.164$, $df=19$, $p>.05$) results. Additionally, comparing the magnitude of change in

reported mindfulness in the two groups T1 and T2, finding that although the experimental group had a mean of 7.1 versus 2.8 for the control group the difference was not statistically significant (t=-.78, df=19, p>.05).

Participants in both groups reported increased awareness. In the NE group, the awareness was of food and exercise as seen in the following quotes "I'm Keeping track of food and eating better. I notice how food affects me" and "Regular exercise has helped me feel better. I am more aware of food". In the MM group the members reported awareness of emotion; " I'm a little more observant of life. In the moment." and "I used stop, breathe and be to stop rushing between tasks. I feel less anxious and less worried before I go to sleep".

To sum up the findings regarding mindfulness, improvements were detected in mindfulness in the experimental group; however, due to small sample size the statistical analyses did not produce significant results. Also noteworthy is the fact that individual participants in the experimental group reported substantial increases in mindfulness, with one participant scoring 78 on the FFMQ pre-test and 131 on the post-test.

Hypothesis 2

Regarding the second hypothesis, that predicted that people who participate in the experimental condition will report improved emotional regulation, the GEDM of the experimental group was compared before treatment and after treatment. As discussed in the methods section, higher scores on the GEDM indicate less regulated affect. Contrary to hypothesis two, the results of the paired-t test revealed insignificant results (t=-.49, df=10, p>.05). However, as expected, a decrease was detected in mean GEDM of -1.64 when comparing the before and after of the experimental group.

Another interesting issue regarding the impact of mindfulness training on emotion regulation is whether the experimental group scored lower on the GEDM as compared to the control group after the interventions. Contrary to expectation, there was not a significant difference between the groups. However, the experimental group scored higher on the GEDM (34.73) as compared to the control group (28.45) at Time 2.

It is also possible that the experimental group started a priori with higher scores on the GEDM. Comparing the two groups on the GEDM at Time 1, the experimental group had the higher GEDM score (36.36) as compared to the control group (28.31). We can see from these numbers that the distance between the two groups was higher before intervention than after the intervention. The control group mean GEDM before intervention was 28.31 and after intervention it changed slight to 28.45. This is practically no change. However, the experimental group's initial GEDM mean was 36.36 and after intervention it slightly decreased to 34.73. While those means are not statistically significant as compared with each other, they indicate that within the control group no change took place while in the experimental group a marginal decrease was reported. It is clear that if the number of subjects in each group had been larger, the decrease in GEDM within the experimental group would perhaps have been significant.

Emotion regulation can also be measured by the PANAS. The PANAS is divided into two scales: one for positive and one for negative affect measurement. Hypothesis two can be tested using the negative scale of the PANAS. When the scores of the PANAS-N and the GEDM were compared, I found them to be insignificantly correlated ($r=.18$, $p>.05$). As such, it is clear that the PANAS-N measures another subdomain of affect regulation.

As discussed in the methods section, the negative scale of the PANAS measures experiences of negative affect during the past week. A higher score reflects the experience of more negative affect. As expected, there was a decrease in the negative PANAS within the experimental group from before intervention (14.82) to post intervention (13.73). However this difference was statistically insignificant ($t=.64$, $df=10$, $p>.05$).

When comparing the experimental group to the control group after intervention on the PANAS-N, we found insignificant differences ($t=.63$, $df=20$, $p>.05$). Contrary to expectation, the experimental group reported a higher PANAS-N score (13.73) as compared with the control group (12.73) after intervention. However, before the intervention, a greater distance was found on the means of the PANAS-N score for the experimental group (15.29) as compared to the control group with a mean of 14.0. Eyeballing those numbers clearly show that the experimental group PANAS-N mean went down between T1 and T2 while the control group PANAS-N mean score also dropped.

During the weekly check-in the NE group participants often reported that the training had no influence over how they felt such as “I don’t see any connections” and “They (trainings) do not have any bearing on how I feel”. When the NE group did report some impact participants often said things like; “Exercise is of benefit though” and “Keeping a food diary makes a difference”.

For the MM group, most participants had something to say each week about the ways that the training had influenced how they felt. Often the replies were “I’ve got a better sense of balance. I’m holding negative emotions at bay” and “ I slept better this

week than I have in a long time. I'm calmer, more relaxed". The MM group also reported stress due to the training and homework schedule; "I felt bad that I didn't do some of the activities/homework", "It (training/homework) takes up more time than I expected", and "I'm trying to do everything, feeling stressed and frustrated".

To sum up these findings on the GEDM and the PANAS-N, the experimental group reported modest improvement in emotion regulation and reduction of negative affect. However due to small sample size, all statistical analyses yielded insignificant findings. The control group demonstrated no improvement as measured by the GEDM and a slight improvement in the PANAS-N.

Hypothesis 3

Hypothesis three focuses on the improvement of self-perception of aging as a result of mindfulness skills training. As indicated in the methods section, a lower score on the APQ reflects greater acceptance of aging in participants. Before and after scores were compared on the APQ for the experimental group. As expected, there was a slight decrease in the APQ means from before (101.55) to after (99.09). However the paired-t test yielded insignificant results ($t=1.02$, $df=10$, $p>.05$).

The APQ scores post intervention for both groups were compared, finding that they had identical mean APQ scores (both at 99.09). However, the APQ scores before intervention reveal that the experimental group was higher (102.93) while the control group was lower (97.18). This implies that among the experimental group an improved perception of aging was detected while among the control group a very small decrease in self-perception of aging was detected. Comparing the amount of change on the APQ from before to post intervention, reveals that the results are again insignificant ($t=1.56$, $df=23$, $p>.05$).

The weekly check-in did not have a question which asked about self-perception of aging. In reply to the question about the training influencing how they felt, some of the MM participants indicated that the training helped them with pain; “I’ve started to remember to use the 20 breaths for physical pain. I am aware of the movement of the pain in my body”. Others indicated the benefits they were experiencing from the spiritual dimension of mindfulness; “20 breaths helps me shift gears, it’s a life preserver” and “It has added to my curiosity and interest in spiritual, mental states”.

To sum up these findings, I was able to detect small improvements in perception of aging in the experimental group; however, due to small sample size the statistical analysis did not produce significant results. Also noteworthy is the fact that among the experimental group the before and after effect was positive while for the control group, there was a small deterioration in the participants’ self-perception of aging.

Analysis of control variables

In this study, information was gathered about the gender, ethnicity, age, education, and medical status of the participants as well as the number of training sessions each attended and how much of the daily assignments they reported to have completed. However, due to the small sample size, it was meaningless to add additional levels of variables in order to compare the interaction of experimental condition and these variables. Consequently, the impact of these variables on the dependent variables without regard to the experimental condition was analyzed. In all possible analyses, the relationship between the sociodemographic variables and the dependent variables (mindfulness, emotion regulation and self-perception of aging) were found to be insignificant.

Chapter 5 Discussion

Despite the demonstrated efficacy of mindfulness-based psychotherapies (Baer, 2003; Ivanovski & Malhi, 2007; Lazar, 2005; Lynch, Morse, Mendelson & Robins, 2003) there has been limited research into mindfulness skills training with aging populations. This study aims to investigate if Mindfulness Meditation (MM) is a method to promote successful aging. More specifically, MM is examined as a way to increase the mindfulness, improve emotion regulation and the self-perception of aging in older participants. The study provides some tentative support for the potential of MM to train older adults to develop mindfulness skills, emotion regulation and self-acceptance of the aging process.

Overview of the study

In this study, participants of a MM training (11 participants) were compared with participants of a NE training (11 participants). The trainings were matched on course design and requirements. All participants were randomly assigned to either the MM or the NE group course. The participants were volunteers, men and women of all races and ethnicities ranging in age from 46-70 years of age. After random assignment to a training condition, the groups were adjusted to establish similarity of age and ethnicity.

Measures of mindfulness (FFMQ) and self-perception of aging (APQ) were administered to both groups before and after the 6-week trainings. The ability to regulate emotion was measured during a weekly check-in with the PANAS and GEDM scales administered on alternate weeks. Additionally, verbatim records were kept of participant descriptions of any influence the training might be having on how they were feeling that week.

Discussion of the results

Hypothesis 1

The participants who attended the MM training demonstrated some improvements in self-reported mindfulness. Their scores on the FFMQ indicated that the MM group was increasingly able to attend to a variety of stimuli, apply words to observed phenomena, engage attention fully on the current activity, refrain from evaluative labeling, and notice phenomena without having a reaction. The statements of the participants additionally support these tentative findings. The participants in the NE group reported increased mindfulness regarding consumption of food and the impact of exercise. In contrast, the MM participants reported a deeper awareness of emotion, and of their choices of how to handle emotion. These changes reported by the MM group participants are indicative of the "decoupling of automaticity" (Siegel, 2007, p. 144) which Siegel has theorized is be connected to "…lasting change in observable traits such as flexibility of affect and cognitive styles and patterns of interaction with others" (2007, p. 158).

Hypothesis 2

The connection between mindfulness and emotion regulation has been supported in research by Brown and Ryan (2003). The current study used two instruments (GEDM and PANAS-N) to identify improvement in emotion regulation in the participants from the MM and NE groups. On both measures, the MM participants reported an increased ability to regulate emotion although this improvement was not statistically significant. The NE group participants demonstrated negligible improvement in their ability to regulate emotion.

Each week, some participants in the MM group stated that the training had a powerful influence on how they felt. MM participants said that the training helped them to cope with their feelings in new ways, to slow down rather than react in their habitual ways. A few said that they were sleeping better as a result of the training. In contrast, the NE group members often stated that the training had no influence on how they were feeling.

However, the training and homework seemed to be too demanding for some of the MM group members. These participants had difficulty integrating the time for class and homework into their daily lives, experiencing increased stress in the effort to get it all done. This stress generated by the training might have contributed to the lack of significance of the statistical findings regarding improved emotion regulation in the MM group. The NE group participants had what appears to be similar training and homework assignments. Yet, these participants did not share that these requirements were burdensome. Perhaps, the concepts and activities for the NE group such as exercise and diet were more similar to ideas that the participants had previously engaged in. Whereas, the concepts and activities of the MM training might have been new and therefore stressful to the MM group participants. Specifically, meditation practice might feel more difficult for the participants to do when compared to going for a brisk 20-minute walk.

Hypothesis 3

Due to negative age stereotypes in the United States, older Americans often have internalized negative age stereotypes (Palmore, 2001). This study utilized the APQ to assess changes of self-perception of aging in participants of the MM and NE training conditions. Participants of the MM training demonstrated improved self-perception of

aging while the NE group had a slight decline. However, these findings were not statistically significant and the weekly check-in did not provide additional information regarding the changes of self-perception of aging of the experimental and control groups.

The NE (control group) demonstrated higher levels of mindfulness, emotion regulation and more positive self-perception of aging prior to the training experience. This would indicate that the experimental group as a whole began the training reporting that they were less oriented to mindfulness, less able to regulate negative emotion and more ageist in their thinking about growing older. These differences were accommodated for in the statistical analysis of the data. However, perhaps the lack of significance in the findings reflects a more global difference in the level of emotional health between the two groups.

Limitations

Recruitment of older participants for intervention research studies is reputed to be difficult (Cassidy, Baird, & Shiikh, 2001). Indeed, the primary limitation of this study is the small sample size. The initial sample goal was 40 participants for this research. Many of the respondents to the study advertisements were looking for work and were not able to follow through with the commitments of the testing and training schedules. The initial start dates for MM and NE training sessions were delayed in an effort to obtain the goal sample size. However, during this delay, few additional participants were volunteering. Meanwhile, the prospective participants who had signed up for the study were at risk of dropping out of the study. The study commenced with 33 participants, several of whom dropped out before they attended any training sessions. Additionally, participants dropped out throughout the study as a result of changes in employment, health and family

status. The sample size of this study reduced the chances of finding statistically significant results in this study.

Some of the most interesting findings in this study are the MM participants' descriptions of the changes they were experiencing due to the training. Unfortunately, the study did not ask the participants any open ended questions about their self-perception of aging. Useful information might have been obtained if the participants were asked each week "How, if at all, have the training and related activities influenced how you feel about being your current age?".

Additional limitations of this study are connected to the testing and training requirements. Many of the prospective participants had recently lost their jobs or retirement incomes and were looking to make some extra money. Participants were paid for the testing and screening time. However, they were not paid for the additional hours of attending the training and doing the homework. During the planning of this study, the trainings were considered to be a form of compensation since similar trainings in the area where the participants live cost about $500. However, to the prospective participant, the study entailed 8 weeks of training and homework with no monetary compensation for these hours. As a result, the recruitment and retention of participants was negatively impacted by the compensation arrangement.

The MM training which was implemented was not designed specifically for an aging population. It is possible that aging populations would benefit from more weeks of training, perhaps shortening the class time or having class more than one time per week. McBee (2008) conducts her Mindfulness-Based Elder Care (MBEC) groups for 45 minutes to an hour with people in nursing homes. Some participants in the present study

also reported that the homework was also a stress. McBee (2008) provides participants in MBEC groups with additional assistance to complete the homework such as recorded meditations. Additionally, the MM training was not adapted to the special needs and concerns of an aging population. An emphasis on successful aging concepts such as finding meaning and selective optimization and compensation into the existing MM training protocol would perhaps make the training more applicable to aging populations.

Implications

This study provides preliminary support for the potential of MM training as an effective method to increase mindfulness, emotion regulation and self-perception of aging in older Americans. Due to the previously stated limitations of the sample size, none of the analyses yielded statistical significance. However, the participants in the MM group reported in the weekly check-ins what they experienced to be substantial benefits due to their MM training experiences. This study adds to the growing body of mindfulness theory and research. Additionally, it provides an indication that mindfulness training protocols might result in greater benefit if they were tailored to the needs of an older population. Therefore, this study indicates the need for continued research into mindfulness skills training as a method to promote successful aging in older Americans.

Participants in the MM group of this study reported an increased mindfulness: the ability to focus their attention in the present moment. Due to the small sample size, the statistics did not demonstrate significance. However, the statements of the MM participants did indicate increased mindfulness. They reported that they had more connection to the present moment and less of a tendency to ruminate over the past. The reduction of the tendency to ruminate over the past reported by some MM participants is

of particular interest, as rumination has been liked to anxiety and depressive disorders (Nolen-Hoeksema, 2000). The implications of these findings are that mindfulness skills training might be a method to prevent the anxiety and depression, which affect a significant minority of aging Americans. The tentative findings in this study indicate that a mindfulness skills training designed specifically for an aging population with shorter, more frequent sessions and homework support might produce more significant improvement in emotion regulation.

Baltes and Baltes (1990) asserted in their selective optimization and compensation model of successful aging that people adapt to the changes throughout their life span by selecting and focusing resources on their particular important life domains while compensating for losses in those same domains. As we age, disengagement from unrealistic goals has been found to result in an increased ability to regulate negative emotions (Schulz & Heckhausen, 1996). Disengagement from unrealistic goals in older life can also be conceptualized as an acceptance of the realities of aging. In this study, the MM participants reported modest improvement in emotion regulation and modest reduction of negative affect. The self-reports of MM participants in this study support the assertion that training in mindfulness can enable older Americans to disengage from unrealistic expectations accepting the change and loss that are part of the aging process. This study provides some support for Blazer's (2002) suggestion that elders can be taught skills to adapt to the challenges of aging. Additionally, as older adults learn these new skills through mindfulness training, they are engaging in the selective optimization and compensation process of succesful aging. They are learning new skills to improve their ability to regulate negative emotions.

Older Americans are at risk for developing late-life depression and yet are reluctant to seek treatment due to the stigma (Gellis, 2006). Reynolds et al. (1998) called for "the development of preventive strategies to reduce the liability to late-life depression" (p. 66). This study adds to the limited research into skills training as a depression prevention service for older adults. An implication of this study is that trainings for older adults should be informed by the successful aging literature and tailored to the needs and concerns of an older population. Specifically, this study suggests that the MM training protocol for an aging population should directly address how participants can use acceptance skills to cope with the limitations and losses which they are experiencing as a result of the aging process.

Older adults, who have internalized ageist stereotypes tend to judge themselves harshly, act as they believe old people are supposed to act and even die earlier. This study sought to explore if learning and practicing mindfulness reduces this tendency of older adults to be ageist in their own thinking. The APQ detected a small improvement in the self-perception of aging in the experimental group after the MM training. Again, one of the implications of this study is the importance of tailoring the MM training to the needs of older participants. It is possible that the training would be more effective in reducing ageist self-stigmatization if participants are encouraged to notice when they are having automatic, societally determined negative thoughts and feelings regarding aging. Further, the skills learned in the mindfulness training of gently letting go of preconceptions and judgments could then be applied to these ageist self-perceptions of aging.

This study has implications for social work practice with aging populations in independent and residential living situations. Mindfulness skills trainings are being

offerred in many urban communities. Social workers could provide MM trainings in senior-centers and other community settings tailored to the specific needs of an older population. Additionally, social workers could conduct MM training in nursing homes with adaptations for residents with dementia or physical limitations. These would be open, ongoing groups, as formulated by McBee (2008) rather than the traditional 8 week training class. In this way, the social worker will be providing preventative group services to the residents, as well as fostering shared experiences and connection between the participants.

Future Research

Two major suggestions for future research have already been identified in this paper. A need for the development of an MM training designed specifically for an older population has been identified as one area for future research. Additionally, the incorporation of a question about the effect of MM training on "how you feel about being your current age" would provide greater understanding of the connection between mindfulness training and self-perception of aging.

Crowther, Parker, Achenbaum, Larimore, & Koening (2002) proposed "positive spirituality" as a fourth factor for strengthening the existing successful aging model. The current study did not aim to explore spirituality as a contributor to the promotion of successful aging through mindfulness skills training. Future researchers might investigate the potential of MM training to assist older people to find meaning as they approach their later years. McBee asserted that meditation "offers solace and a pathway to spiritual roots" (2008, p. 52) for the members of her Mindfulness-Based Elder Care groups. More

research is needed into the connection between mindfulness training and spiritual connectedness in older people.

During the weekly check-in, some MM group participants suggested a connection between training in mindfulness and coping with pain and sleep problems. Several of the MM participants reported that the body scan activity was particularly helpful in releasing physical pain. Other participants reported that they were able to use the 20 breaths technique to relax when they were awake during the night and to improve their sleep patterns by being more relaxed and less anxious when they fell asleep. Since pain (Landi et al., 2001) and problems with sleep are associated with aging, the potential for mindfulness training to alleviate these discomforts of aging is worth investigating.

Conclusions

In this study, participants were randomly assigned either to a MM training (11 participants) or to a NE training (11 participants). Measures of mindfulness (FFMQ) and self-perception of aging (APQ) were administered to both groups before and after the trainings. Emotion regulation was measured using the PANAS and GEDM scales. Additionally, participant descriptions of any influence the training might be having on how they were feeling that week were recorded.

The data from the four measures were analyzed utilizing correlations and t-tests. Due to the small study sample size, none of the findings met the criteria for statistical significance. However, the results provided tentative support for the hypotheses that older participants in mindfulness training (MM) increase in their mindfulness and ability to regulate emotion and improve their self-perception of aging.

This study implies that mindfulness skills training is worth investigating as a method to promote successful aging in older adult populations. The participants in the MM group were able to verbalize the influence of the training on their lives. Additional work to tailor the MM training to older adults is suggested. More qualitative investigation is necessary in order to explore the connection of mindfulness and ageist self-perceptions. The interplay between mindfulness training, spirituality and mindfulness and coping with pain/sleep problems is also an area for further investigation.

Mindfulness skills training for older populations is worthy of continued attention of social workers. As the population over age 65 in the United States continues to grow, methods to improve the quality of life for this segment of the population become of greater concern to social workers. In addition to providing services and treatment to older adults, social workers can be in the forefront of promoting successful aging. This study shows that mindfulness skills training is an approach that is worthy of the attention of social workers. Social workers engaged in work with older people could provide mindfulness skills, a “life preserver”, for the ever-increasing cohort of older Americans.

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Appendix A. 5-Factor Mindfulness Questionnaire (5FMQ, Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006).

5-FACTOR MINDFULNESS QUESTIONNAIRE

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes <u>your own opinion</u> of what is <u>generally true for you</u>.

1	2	3	4	5
never or very rarely true	**rarely true**	**sometimes true**	**often true**	**very often or always true**

_____ 1. When I'm walking, I deliberately notice the sensations of my body moving.

_____ 2. I'm good at finding words to describe my feelings.

_____ 3. I criticize myself for having irrational or inappropriate emotions.

_____ 4. I perceive my feelings and emotions without having to react to them.

_____ 5. When I do things, my mind wanders off and I'm easily distracted.

_____ 6. When I take a shower or bath, I stay alert to the sensations of water on my body.

_____ 7. I can easily put my beliefs, opinions, and expectations into words.

_____ 8. I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.

_____ 9. I watch my feelings without getting lost in them.

_____ 10. I tell myself I shouldn't be feeling the way I'm feeling.

_____ 11. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.

_____ 12. It's hard for me to find the words to describe what I'm thinking.

_____ 13. I am easily distracted.

_____ 14. I believe some of my thoughts are abnormal or bad and I shouldn't think that way.

_____ 15. I pay attention to sensations, such as the wind in my hair or sun on my face.

_____ 16. I have trouble thinking of the right words to express how I feel about things

_____ 17. I make judgments about whether my thoughts are good or bad.

_____ 18. I find it difficult to stay focused on what's happening in the present.

_____ 19. When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it.

_____ 20. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.

_____ 21. In difficult situations, I can pause without immediately reacting.

_____ 22. When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.

_____ 23. It seems I am "running on automatic" without much awareness of what I'm doing.

_____24. When I have distressing thoughts or images, I feel calm soon after.

_____ 25. I tell myself that I shouldn't be thinking the way I'm thinking.

_____ 26. I notice the smells and aromas of things.

_____ 27. Even when I'm feeling terribly upset, I can find a way to put it into words.

_____ 28. I rush through activities without being really attentive to them.

_____ 29. When I have distressing thoughts or images I am able just to notice them without reacting.

_____ 30. I think some of my emotions are bad or inappropriate and I shouldn't feel them.

_____ 31. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of

light and shadow.

_____ 32. My natural tendency is to put my experiences into words.

_____ 33. When I have distressing thoughts or images, I just notice them and let them go.

_____ 34. I do jobs or tasks automatically without being aware of what I'm doing.

_____ 35. When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought/image is about.

_____ 36. I pay attention to how my emotions affect my thoughts and behavior.

_____ 37. I can usually describe how I feel at the moment in considerable detail.

_____ 38. I find myself doing things without paying attention.

_____ 39. I disapprove of myself when I have irrational ideas.

Appendix B. Ageing Perceptions Questionnaire (APQ, Barker, O'Hanlon, McGee, Hickey, & Conroy, 2007).

These questions assess your views and experiences of getting older. Since everyone is getting older, these questions can be answered by anyone of any age. There are no right or wrong answers – just your experiences and views. Even if the statement relates to something you do not often think about in relation to yourself, please try to give an indication of your views by answering every question.

A) VIEWS ABOUT AGEING

We are interested in your own personal views and experiences about getting older. Please indicate your views on the following statements (strongly disagree, disagree, neither agree nor disagree, agree, or strongly agree). Circle the response that best describes your view for each statement.

	Strongly Disagree	Disagree	*Neither Agree Nor Disagree*	*Agree*	*Strongly* Agree
1. I am conscious of getting older all of the time	☐1	☐2	☐3	☐4	☐5
2. I am always aware of my age	☐1	☐2	☐3	☐4	☐5
3. I always classify myself as old	☐1	☐2	☐3	☐4	☐5
4. I am always aware of the fact that I am getting older	☐1	☐2	☐3	☐4	☐5
5. I feel my age in everything that I do	☐1	☐2	☐3	☐4	☐5
6. As I get older I get wiser	☐1	☐2	☐3	☐4	☐5
7. As I get older I continue to grow as a person	☐1	☐2	☐3	☐4	☐5
8. As I get older I appreciate things more	☐1	☐2	☐3	☐4	☐5
9. I get depressed when I think about how ageing might affect the things that I can do	☐1	☐2	☐3	☐4	☐5
10. The quality of my social life in later years depends on me	☐1	☐2	☐3	☐4	☐5

11. The quality of my relationships with others in later life depends on me	☐1	☐2	☐3	☐4	☐5
12. Whether I continue living life to the full depends on me	☐1	☐2	☐3	☐4	☐5
13. I get depressed when I think about the effect that getting older might have on my social life	☐1	☐2	☐3	☐4	☐5
14. As I get older there is much I can do to maintain my independence	☐1	☐2	☐3	☐4	☐5
15. Whether getting older has positive sides to it depends on me	☐1	☐2	☐3	☐4	☐5
16. Getting older restricts the things that I can do	☐1	☐2	☐3	☐4	☐5
17. Getting older makes me less independent	☐1	☐2	☐3	☐4	☐5
18. Getting older makes everything a lot harder for me	☐1	☐2	☐3	☐4	☐5
19. As I get older I can take part in fewer activities	☐1	☐2	☐3	☐4	☐5
20. As I get older I do not cope as well with problems that arise	☐1	☐2	☐3	☐4	☐5
21. Slowing down with age is not something I can control	☐1	☐2	☐3	☐4	☐5
22. How mobile I am in later life is not up to me	☐1	☐2	☐3	☐4	☐5
23. I have no control over whether I lose vitality or zest for life as I age	☐1	☐2	☐3	☐4	☐5
24. I have no control over the effects which getting older has on my social life	☐1	☐2	☐3	☐4	☐5
25. I get depressed when I think about getting older	☐1	☐2	☐3	☐4	☐5
26. I worry about the effects that getting older may have on my relationships with others	☐1	☐2	☐3	☐4	☐5
27. I go through cycles in which my experience of ageing gets better and worse	☐1	☐2	☐3	☐4	☐5
28. My awareness of getting older comes and goes in cycles	☐1	☐2	☐3	☐4	☐5
29. I feel angry when I think about getting older	☐1	☐2	☐3	☐4	☐5

30. I go through phases of feeling old	☐1	☐2	☐3	☐4	☐5
31. My awareness of getting older changes a great deal from day to day	☐1	☐2	☐3	☐4	☐5
32. I go through phases of viewing myself as being old	☐1	☐2	☐3	☐4	☐5

The Ageing Perceptions Questionnaire (APQ)

SCORING KEY

A) Views about getting older

For these seven subscales, items are rated on a 5-point scale ranging from 'strongly disagree', 'disagree' (2), 'neither agree nor disagree' 3), 'agree' (4). (1) to 'strongly agree' (5). With the exception of control negative, subscales items are scored from 1 to 5. The mean score for each subscale is calculated. Higher scores are indicative of greater endorsement of a specific perception.

- Timeline acute/chronic: Mean of items 1, 2, 3, 4, and 5
- Timeline cyclical: Mean of items 27, 28, 30, 31, 32
- Emotional Representations: Mean of items 9, 13, 25, 26, 29
- Control positive: Mean of items 10, 11, 12, 14, 15
- Control negative: Mean of items 21, 22, 23, 24 (items are reverse-scored)
- Consequences positive: Mean of items 6, 7, and 8
- Consequences negative: Mean of items 16, 17, 18, 19, 20

Appendix C. General Emotion Dysregulation Measure (Newhill, Mulvey, & Pilkonis, 2004).

We are trying to find out how different people see themselves. The following questions ask for ratings about how you handle your emotions. "Emotions are defined as feelings, both positive and negative, like love, anger, sadness, fear, joy and so forth. There are no right or wrong answers about this topic, since everyone handles emotions differently.

1	2	3	4	5
Strongly Disagree	**Moderately disagree**	**Neither agree/disagree**	**Moderately agree**	**Strongly agree**

1. In general, I have a hard time handling my emotions.

2. I often feel overwhelmed by my emotions.

3. I see myself as more sensitive to emotions than other people.

4. When I get emotional, it's a long time before I feel normal again.

5. My feelings tend to be stronger than other people's.

6. Other people tell me I'm "too sensitive" or that I "overreact" to emotional issues.

7. Being sad can stick with me much longer than with other people.

8. When I feel happy, it is more intense than the way that other people seem to feel.

9. Feeling sad can overwhelm me.

10. Small things that might not bother others often make me feel bad.

11. My emotional responses to events in my life tend to be high.

12. When I get emotional about something, I have a hard time settling down.

13. When I feel an emotion, my feelings tend to be strong.

Appendix D. Positive and Negative Affect Scale (PANAS, Watson, Clark, Lee, & Tellegen, 1988).

PANAS_Week

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you felt this way this week, that is how you feel on average. Use the 1 to 5 scale explained below.

1	2	3	4	5
very slightly		somewhat		extremely
not at all				

1	Interested	
2	Distressed	
3	Excited	
4	Upset	
5	Strong	
6	Guilty	
7	Scared	
8	Hostile	

9	Enthusiastic	
10	Proud	
11	Irritable	
12	Alert	
13	Ashamed	
14	Inspired	
15	Nervous	
16	Determined	
17	Attentive	
18	Jittery	
19	Active	
20	Afraid	