

2006

The role of meditation in psychosocial occupational therapy

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THE ROLE OF MEDITATION IN PSYCHOSOCIAL OCCUPATIONAL THERAPY

**A Masters Thesis presented to the Faculty of the
Graduate Program in Occupational Therapy
Ithaca College**

**In partial fulfillment of the requirements for the degree
Master of Science**

**by
Bianca Agata Palombizio
December/2006**

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CERTIFICATE OF APPROVAL

This is to certify that the Thesis of

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Submitted in partial fulfillment of the requirements for the degree of
Master of Science in the Department of Occupational Therapy, School of Health Sciences
and Human Performance at Ithaca College has been approved.

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Date: April 30, 2007

Abstract

Problem

There is evidence that meditation is an effective intervention in several areas of promoting health (Walloch, 1998; World Health Organization, 2006). However, there is little literature discussing meditation as an intervention under occupational therapy to address those with mental health issues.

Purpose

This study targets occupational therapists currently treating those with chronic schizophrenia in order to determine their opinion on the use of meditation in their practice.

Research Questions

Are there occupational therapy clinicians who believe that in clients with schizophrenia, there is a lack of self-awareness which impacts occupational performance? If yes, do they believe that meditation can influence this deficit? Are occupational therapy clinicians using meditation as an intervention? If not, what are some of their perceived barriers? Do occupational therapy clinicians believe meditation is an accepted intervention within the profession of occupational therapy?

Method

This study was completed through an electronically formatted survey and sent to current clinicians internationally via 4 listservs.

Results

The study found a majority of the sample clinicians to believe that a lack of self-awareness is a deficit in those with schizophrenia which impacts occupational performance and can be influenced by meditation. 75.5% of the entire sample use meditation in treatment.

The majority of the clinicians who use meditation believe the technique to fit within the realm of occupational therapy. Barriers to using the technique were identified.

Summary

There is very little research that exists suggesting meditation as an occupational therapy intervention for individuals with chronic schizophrenia. However, according to the results of this study, there are clinicians who are incorporating meditation into treatment with a psychiatric population and believe meditation to fall within the occupational therapy scope of practice.

Acknowledgements

I would like to thank my parents for their constant support and perpetual faith,
my friends and classmates for encouragement and assistance,
the Ithaca College occupational therapy faculty for their cooperation and collaboration,
and Marilyn Kane for her incredible dedication, the late evenings and M&Ms.

Dedication

To Heather Marie

For keeping me in line and reminding me what this study is all about

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Running head: THE ROLE OF MEDITATION

The Role of Meditation in Psychosocial Occupational Therapy

Bianca Palombizio

Ithaca College

The Role of Meditation in Psychosocial Occupational Therapy

Chapter 1: Introduction

Meditation

Historically, meditation has had many uses as an alternative form of medicine. As early as 1976 it was discussed as a way to calm the body and mind and increase awareness of the mind (Shapiro & Zifferblatt, 1976). It is also often used as a mechanism to teach coping strategies for many conditions. It has been observed to decrease heart rate, increase muscle relaxation, and decrease generalized fear (Walloch, 1998). While general meditation as an alternative form of medicine has existed for years, it has only recently been explored as a possible supplement to modern medical treatment. The majority of studies regarding meditation have focused on the physiological effects. There is, however, very little literature on meditation and its influence on individuals with schizophrenia or related diagnoses.

Cognition

Cognition involves memory, attention, self-awareness and problem solving among many other components often described as executive functioning. Impairments in cognition are often common among individuals who have sustained a traumatic brain injury, a stroke, or those with schizophrenia. The cognitive impairments in these conditions may be treated using approaches that are commonly used by occupational therapists. Schizophrenia is a disorder with symptoms involving impaired cognitive functioning. Cognitive-behavioral therapy is often used by occupational therapists as a successful method of treatment for chronic schizophrenia. It teaches social skills in groups, and coping strategies, (Goisman, 1997) and attentional control training (Valentine

& Sweet, 1999) among many other skills.

Occupational Therapy

Occupational therapy models of practice such as the Model of Human Occupation (MOHO) and the Multicontextual Approach (MCA) are models that are considered to treat individuals as a whole, addressing all factors which impact their occupational performance. MOHO focuses on the interaction between the client and their environment (Stein & Cutler, 2002). Under MCA, the individual's awareness and ability to learn are evaluated. Treatment involves training of compensatory and remedial techniques. This training will allow the client the opportunity to practice these techniques in their specific context, while gradually increasing the difficulty of the tasks to, in the end, allow the client means to generalize their skills (Josman, 2005). Occupational therapists also use Dialectical Behavior Therapy (DBT); this involves the occupational therapist in an active role of education, awareness, and acceptance of both good and bad behaviors (Linehan, 1993).

Problem Statement

There is evidence pointing to the general effectiveness of meditation, and its effectiveness with specific populations such as clients who have had a stroke or suffered a traumatic brain injury (TBI) (Bedard, Felteau, Mazmanian, Fedyk, Klein, Richardson et al. 2003). There is a recent trend in the literature that demonstrates that individuals with chronic schizophrenia have similar cognitive impairments as those with stroke and TBI (Katz & Hartman-Maeir, 2005; Hartman-Maeir, Soroker, Ring & Katz, 2002). This trend suggests that treatment interventions commonly applied to individuals with neurological impairments could then be applied to individuals with schizophrenia.

The profession of occupational therapy historically began treating the mentally ill and now commonly provides intervention to clients with all three conditions. In the 1960s, the profession then began moving more towards treating primarily physical dysfunction, and the use of a more medical model (Schwartz, 2003). Presently, the profession is undergoing a paradigm shift to more holistic concepts, education, and re-emphasizing mental health. Yet, there is little research which suggests a possible solution for schizophrenia could come with incorporating meditation as a form of occupational therapy intervention. There is some evidence that occupational therapists are a leading profession in using meditation as a treatment intervention with other diagnosis (Schoenberger, Matheis, Shiflett, & Cotter, 2002). As a profession, meditation is used in treatment but the lack of research on the subject as well as in using meditation with those with schizophrenia offers little evidence to base practice on. The purpose of this study is to determine where current occupational therapy professionals' opinions stand regarding use of meditation as a possible treatment technique for this population.

Rationale

Chronic schizophrenia is one of the most disabling mental illnesses, affecting about 1% of the population. In 2001, indirect and direct costs were at approximately \$100 billion a year. From the time after onset, an individual may experience occupation related functional limitations in areas such as employment, interpersonal or self-care skills (Sadock & Sadock, 2001). Individuals with schizophrenia who have cognitive deficits are among the most commonly restrained patients in inpatient settings (Sailas & Wahlbeck, 2006). Furthermore, there is a higher risk of suicide in individuals with schizophrenia when compared to the general public (Fenton, 2000).

Since many individuals with schizophrenia are often hospitalized for a significant period of time, they need to relearn the skills they once held to interact within their community and society as a whole. This transitional period is just one aspect of schizophrenia that occupational therapy addresses. Therefore, occupational therapy is a discipline which needs to be incorporated into a course of therapy for an individual with schizophrenia in order to facilitate the return of these skills in the client.

Definition of Terms

Meditation. "A practice of concentrated focus upon a sound, object, visualization, the breath, movement, or attention itself in order to increase awareness of the present moment, reduce stress, promote relaxation, and enhance personal and spiritual growth" (Chrisman & Frey, 2005, para. 1).

Mindfulness meditation. Awareness of the moment; observing everything an individual experiences during meditation without question, evaluation or judgment. This is assuming that people are not normally this aware but can become so with regular practice, thus leading to a more controlled consciousness (Grossman, Niemann, Schmidt & Walach, 2004).

Transcendental meditation. Also known as concentrative meditation, it is the opposite of mindfulness meditation. The individual concentrates on a single sound, point in space or object, and all other thoughts are considered intrusive; increasing in competence of this technique the individual will maximize their awareness and relaxation (Walloch, 1998).

Schizophrenia. The persistence of positive symptoms for a total of at least one out of six months (Sadock & Sadock, 2001) with the presence of negative symptoms in

between the appearance of positive symptoms.

Positive Symptoms. Those which are excessive to what is considered normal behavior. For example, delusions or hallucinations (Sadock & Sadock, 2001).

Negative Symptoms. Those which are reduced from what would be considered normal, for example, flat affect, social or emotional withdrawal or neglected appearance (Sadock & Sadock, 2001).

Cognition. An individual's ability to learn and use information within their environment, it includes, but is not separated by, attention, memory, information processing, organization and reasoning (Toglia, 2005).

Executive functioning. Within schizophrenia, executive functioning is the manner in which gathered information and the skills that come from it; dealing with decision making, planning, and action. It is considered to be a component of cognition (Josman, 2005).

Self-awareness. Separated into two dimensions, online awareness and self knowledge. The former is the individual's perception of performance during an activity within context, and the latter is the individual's reflection on performance of a specific activity, out of its context (Josman, 2005).

Occupational therapy. Occupational therapy is a health profession which facilitates clients to participate "in tasks and roles that allow for productivity within a personally relevant context, such as self-care/maintenance, work or leisure" (Bair, Stein, Vargas, Falk-Kessler, Tubbs, Titus et al., 1999, para. 19).

Models of Practice. These are series of theoretical concepts within the profession of occupational therapy that guide "clinical practice, evaluation and assessment, and

treatment techniques” (Stein & Cutler, 2002, p. 112).

Cognitive behavioural therapy (CBT). A model of practice involving “altering the thoughts, emotions and behaviors of patients by teaching them skills to challenge and modify beliefs about delusions and hallucinations, to engage in experimental reality testing, and to develop better coping strategies for the management of hallucinations” (Gould, Mueser, Bolton, Mays & Goff, 2001, p. 335).

Multicontextual approach (MCA). MCA “indicates that occupational performance can provide feedback that influences a person’s self-perceptions and beliefs about his or her abilities and performance” (Toglia, 2003, p.266). It does not aim to treat cognitive components separately.

Model of human occupation (MOHO). A model of practice which, “promotes life satisfaction through a healthy balance of work, play, and leisure roles” (Stein & Cutler, 2002, p. 164) and assumes that individuals function based on motivation, personal roles and customs and “mind-brain-body performance subsystem (unified actions in perceptual-motor, communication, and cognitive areas)” (Stein & Cutler, 2002, p. 164).

Dialectical behavior therapy (DBT). A treatment practice developed for individuals with borderline personality disorder involving therapeutic activities with the patient, one on one sessions, group sessions, telephone contact for coaching between sessions, and team meetings to discuss the patient’s program (Palmer, Hirchall, Damani, Gatward, McGrain & Parker, 2003).

Purpose

The purpose of this study is to determine the opinions of clinicians currently in the field of occupational therapy regarding meditation as an intervention for individuals

with mental illness. Furthermore, an aim of this study is to determine how practicing clinicians view meditation to fall under the occupational therapy practice framework.

Chapter 2: Literature Review

This chapter examines the literature pertaining to meditation, its utilization in medicine with selected cognitive conditions, and the relevance to occupational therapy.

Meditation

Meditation is “a practice of concentrated focus upon a sound, object, visualization, the breath, movement, or attention itself in order to increase awareness of the present moment, reduce stress, promote relaxation, and enhance personal and spiritual growth” (Chrisman & Frey, 2005, para 1). It has been considered a holistic form of alternative medicine for many years and has been used to promote health; as one definition of health includes well-being, not just the absence of illness (World Health Organization, 2006). Meditation, in its many forms, helps calm and focus the mind and body, facilitating concentration and muscle relaxation; it slows heart rate and aids in deep breathing (Cardoso, de Souza, Camano, & Leite, 2004).

Meditation can be broadly classified into two distinct types. The first is concentrative where the individual concentrates on a single sound, object or point in space; all other thoughts are considered intrusions of the mind (Kabat-Zinn, 1982). This technique uses focus on the single element to clear the mind completely.

The second is mindfulness meditation and can be defined as absolute awareness of the moment; meaning the individual allows all thoughts or physiological feelings to be acknowledged by the mind, yet without emphasis and judgment (Kabat-Zinn, 1982). Ideally the person can generalize this sense of controlled consciousness to every day. This is analogous to the active process of brainstorming. For example, when brainstorming to solve a problem, an individual produces many thoughts or ideas, but no one idea receives

more attention than another, until brainstorming is over and the next step occurs. This mindfulness technique allows the individual to be proactive and choose at a later time what may be important to act on in daily life, rather than reacting to the first intrusive thought.

Meditation has been incorporated into treatments for those with physical impairments for at least 25 years; in 1979 Jon Kabat-Zinn developed a technique involving mindfulness meditation called Mindfulness-Based-Stress-Reduction (MBSR). MBSR is a method of meditation which deals with the stresses that accompany chronic illness with mindfulness, and has since been used to address a range of disabilities and impairments (Bishop, 2002).

In 1985 Iveson-Iveson addressed nurses in suggesting meditation as a method of bringing about self-awareness in their patients. Meditation was further suggested for the general public as a method of coping with their own stressful daily routines (Iveson-Iveson, 1985).

In a meta-analysis of 64 studies examining the effectiveness of mindfulness meditation on mental and physical health the following diagnoses were included: clients who had fibromyalgia, cancer, coronary artery diseases, depression, chronic pain, anxiety, obesity and binge eating disorders, and other psychiatric diagnoses. The analysis included both controlled studies and observational studies and found consistent results indicating that mindfulness meditation training can “enhance general features of coping with distress and disability in everyday life” (Grossman, Neimann, Schmidt, & Walach, 2004, p. 39).

Characteristics of meditation. Transcendental and mindfulness meditation are two distinct types of meditation, however, there are common elements to both that tend to be

labeled as general meditation. Regardless of the type, "virtually all forms of meditation profess to alter everyday behavior" (Davidson, Kabat-Zinn, Schumacher, Rosenkranz, Muller, Santorelli, Urbanowski, Harrington, Bonus & Sheridan, 2003, p. 564). This study involved 41 subjects, 25 of which were in the experimental group receiving a meditation training delivered by Jon Kabat-Zinn. Measures were self-reports of positive and negative affect as well as level of anxiety, before and after the MBSR training. Also measured was brain activity in four anterior electrode sites and corresponding activity to meditation training. Those in the meditation training group had increased activity in the left anterior electrode, "a pattern previously associated with positive affect" (Davidson et al., 2003, p. 565). A change in positive affect may alter everyday behavior.

For instance, another study incorporating MBSR treatment involved 136 participants. Treatment consisted of awareness of breathing, Hatha yoga (a form of yoga involving gentle stretching and posturing) along with meditation incorporated into eating, walking, and guided imagery (Reibel, Greeson, Brainard, & Rosenzweig, 2001). In this particular study, the variable studied was the effect of MBSR interventions on overall well-being. Using the Medical Outcomes Study Short-Form Health Survey (SF-36) developed by Ware and Sherbourne (1992) and referenced by Reibel in 2001, both mental and physical functioning was assessed pre- and post-intervention; vitality, social functioning, emotional role-limitations, and mental health addressed the mental aspects; and physical functioning, physical role limitations, bodily pain, and general health perception addressed the physical aspects. Results found significant improvements following the intervention in all areas of this assessment. Furthermore, the participants reported a notable decrease in general psychological distress. Following the program,

individuals were asked to rate their ability to deal with stress compared to prior ability on a scale of one to five, one meaning worse than before, and five meaning much better than before. Respondents chose four or five for a 97% positive response rate. When asked to report their sense of well-being on the same scale, 95% responded with a four or a five (Reibel et al, 2001).

Littman (2001) addressed the involvement of “belly breathing” as a relaxation technique possible to use in conjunction with Cognitive Behavioral Therapy (CBT). Cognitive-behavioral therapy is a treatment theory that evolved from traditional cognitive therapy and behavior therapy. This therapy combination results in a treatment which uses “verbal intervention procedures for cognitive change, and contextual or activity manipulations to encourage behavioral change” (Duncombe, 2005, p.190). Part of CBT is awareness of stress, and one’s cognition during stress, meaning the thought process accompanying the stress. Belly breathing is a part of many meditative techniques as well as a Zen technique for relaxation (Littman, 2001). Therefore, this breathing technique can be a component of CBT within the behavioral aspect as a learned action to reduce stress. According to this breathing technique, one places a hand on their belly and their chest in order to feel the physical movements; inhales to fill their belly first; followed by their chest then exhalation from the chest first; followed by the belly. This is one example of a breathing technique that can be preparation for a yoga session.

In referring to general meditation, any of these components or effects can be considered common characteristics. Decreased anxiety and/or a general feeling of well being as well as altered affect or behavior can be associated with meditation following practice. Any breathing technique, such as belly breathing, or deep breathing, and gentle

stretching are considered components of meditation.

Physiological effects of meditation. A study addressing stress reduction for hypertension in older African-Americans compared the use of transcendental meditation, progressive muscle relaxation (PMR), and an education control group. The blood pressure (BP) rates of 111 participants were measured blindly before and after their respective intervention. For the experimental groups, the intervention consisted of 1.5 hours of teaching and monitoring the technique along with 40 minutes of practice each day. This randomized, controlled study resulted in a greater reduction in BP in the meditation group than the PMR and control groups. (Schneider, Staggers, Alexander, Sheppard, Rainforth, Kondwani, Smith, & King, 1995) The anti-hypertensive effects of meditation are in agreement with another study completed by Alexander, Langer, Newman, Chandler & Davies in 1989 as well as a meta-analysis of mind-body techniques for promoting physical health completed in 2003 (Astin, Shapiro, Eisenberg, & Forsys, 2003).

Brain function was measured in healthy adults before and after being asked to write about an extremely positive and negative life experience as well as before and after a mindfulness meditation intervention (MBSR). Electroencephalogram (EEG) measurements showed more brain activity in the left, frontal areas in those who participated in the meditation intervention. Left sided activity is associated with “reductions in anxiety and negative affect and increases in positive affect” (Davidson et al., 2003, p. 569). The frontal lobe has also been associated with the location of general cognitive abilities (Fuller, 2003), and executive functioning (Trombly & Radomski, 2002; Lundy-Ekman, 2002). An injury in this area often results in decreased ability to “monitor

and self-correct performance” (Fuller, 2003, p. 1076).

Shapiro and Zifferblatt, as early as 1976, discuss the mental and physiological effects of Zen meditation which is a form of mindfulness meditation. The meditator sits in silence, focuses on their breathing, is aware of their own thoughts, acknowledges them but is not distracted by them. Without internal distractions, the individual is able to be fully aware of all the thoughts in their mind, much like the brainstorming example referred to previously. Ideally the relaxed state of mind is carried over past the meditation session and in this state of mind, one can objectively examine fears and concerns. It is in this sense that Zen meditation can reduce fear and generalized anxiety and increase feelings of self-control. (Shapiro & Zifferblatt, 1976) Furthermore, in bringing attention and awareness to one’s breathing, one may begin to “feel reciprocal changes in the rest of the body” (Iveson-Iveson, 1985, p. 25).

Physiologically, meditation can be expected to reduce stress and as a result, reduce blood pressure as well as generalized fear and anxiety. It can also be expected to increase brain activity associated with positive affect and general cognitive abilities. At this point in time, there have been fewer studies regarding the effect of meditation on psychological well-being than on physical conditions.

Psychological effects of meditation: depression. While the majority of studies focus on the physical and physiological effects of meditation, some information regarding the psychological effects is also available. In 2000, Teasdale Segal, Williams, Ridgeway, Soulsby and Lau published a study involving a technique integrating mindfulness with Cognitive Behavior Therapy termed Mindfulness Based Cognitive Therapy (MBCT) in individuals with depression. The treatment emphasizes “awareness of and relationships to

thoughts” instead of altering the thoughts themselves (Teasdale, Segal, Williams, Ridgeway, Soulsby & Lau, 2000, p. 616). Comparing MBCT to treatment-as-usual (TAU) in 145 patients currently in remission from major depression, the patients were assessed using an interview immediately following the 8-week intervention, and then each patient was involved in a 52-week follow-up phase. The findings showed that “MBCT approximately halved rates of relapse and recurrence over the follow-up period compared with patients who continued with TAU” (p.622). The intervention was administered in groups, with an average of 5 hours of instruction given to each patient. These results exemplify the possible cost-effectiveness of this treatment option for depression. This study was intended for remitted patients and not those with acute depression based on the probable “difficulties in concentration and intensity of negative thinking” affecting attention skills (Teasdale et al., 2000, p. 622).

Cognitive effects of meditation: schizophrenia. In 1986, a study completed by Lukoff, Wallace, Liberman, and Burke involved 28 male inpatient individuals with schizophrenia in a “holistic health program” (p. 274). The intervention protocol included a daily sequence of 15 min of yoga; 30 minutes of exercise; and 5 minutes of yoga along with meditative sessions lasting 20 minutes. The meditative sessions used “Carrington’s clinically standardized meditation” (p.276), which is comparable to transcendental meditation. The technique was introduced with the subjects closing their eyes and listening to soothing music followed by a meditation session involving a Sanskrit mantra chosen by the subject, lasting 20 minutes each morning. This holistic program was compared to a social skills training group. The study showed no significant differences between the holistic program and the social skills program, and both groups showed a

decrease in the “psychopathology over the course of the program” (p.280). This lack of conclusive evidence is not the important point of this study. The point is that there was no exacerbation of psychotic and cognitive symptoms in the participants. This finding may alleviate some concerns that professionals have when involving this type of population with a meditation intervention (Lukoff, Wallace, Liberman & Burke, 1986).

Furthermore, in a survey of psychiatric inpatients on their use of complementary and alternative medicine (CAM), the list of techniques included meditation. The individuals with schizophrenia comprised 9% of the sample. Their reasons for using these techniques were to reduce anxiety (50-60%), alleviate depression (40-44%), and reduce chronic pain (27-31%). The survey also found that these patients were participating in these CAMs of their own accord. In other words, their psychiatrists were not aware of this participation (Elkins, Rajab & Marcus, 2005). So the participants perceived the CAMs they participated in to have a desirable effect.

Summary. Meditation in general is not a novel technique in addressing both physical and psychological problems; there is, however, much less literature addressing psychological impairments, and even less addressing psychological impairments involving cognitive and psychotic symptoms. The research that does exist involving meditation is not consistent in the type of meditation being used with respective populations. For example, in those studies addressing individuals with chronic pain, the specific meditative technique, transcendental or mindfulness meditation, is not consistent across multiple studies. Meditation is used with a variety of diagnoses for a variety of purposes and can be involved as one component in a holistic treatment program.

Cognition

Cognition

“Cognition is a basic, human trait that underlies every human function” (Katz & Hartman-Maeir, 1997, p. 54). It involves memory, attention, self-awareness, and problem solving, among other components. However, these components do not function separately; they are intertwined with the person, the person’s unique context as well as with each other (Toglia, 2005). “Cognitive dysfunction can be seen in people with developmental, neurological or psychological dysfunction” (Toglia, 2005, p. 30). The lasting symptoms associated with stroke, traumatic brain injury (TBI) and schizophrenia in clients often present differently. Subsequently, they are often treated quite differently by professionals as well. However, one common impairment for all three conditions is in the area of cognition. More specifically, a lack of self-awareness as defined as an individual’s perception of personal performance in or out of context of a task. Cognitive impairments are commonly observed in executive functioning, information processing, and level of self-awareness (Katz & Hartman-Maeir, 2005). Because of these recent realizations of cognitive similarities among these populations, treatment methods and techniques for traumatic brain injury has transferred into treatment for those with schizophrenia. This shift has added a novel approach to treating schizophrenia outside of the medications patients have been prescribed for years. The cognitive impairments for each of these conditions are discussed below.

Stroke. A study examined the level of self-awareness in 36 patients with right hemisphere damage and 24 patients with left hemisphere damage 4-8 weeks post-stroke. The authors found that 30% of the whole sample “did not spontaneously acknowledge having a stroke after a general question regarding the reason for hospitalization”

(Hartman-Maeir, Soroker, Ring & Katz, 2002, p. 162). Furthermore, the same study noted that a lack of self-awareness of cognitive deficits due to stroke were significantly higher than that of physical or sensory deficits. Differences between hemispheric damage and the functional effects of such damage were also examined; the group with right hemispheric damage showed significantly more impairments than the group with left hemispheric damage in completing basic activities of daily living safely and independently (Hartman-Maeir et al., 2002). These results suggest that those with right hemisphere damage may have more significant self-awareness deficits than those with left hemisphere damage.

A phenomenological study by Tham, Borell, and Gustavsson (2000) examined the experience of unilateral neglect in individuals with right hemisphere damage following a stroke in four participants. The participants' occupations during therapy were observed, described and analyzed. The occupations were geared to challenging the participants' abilities in order to encourage discovery. The participants were also interviewed focusing on occupational experiences of their own lives. The findings demonstrated "importance of an awareness of disability before a person can consciously use compensatory strategies and incorporate them in daily life" (p.404). This level of awareness was not reached until the end of the 16-week study. It determined a sequence of steps a person progresses through in reaching awareness of disability, beginning with "experiencing the new and unfamiliar" (p.400), and gradually progressing to "incorporating new strategies" (p.400).

Traumatic Brain Injury (TBI). In comparing patient self-report and those of family members of the individual who sustained a brain injury, one study found that the individual had better self-awareness of physical deficits than of cognitive and behavioral deficits (Sherer, Boake, Levin, Silver, Ringholz & High, 1998). This discrepancy concurs

with other literature on brain injury. A study by Fleming and Strong (1999) examined awareness of functional deficits in those with TBI, 3 months post injury and again at 12 months post injury. Using a patient report assessment, the patients overestimated their ability in 14 of 30 items at 3 months. These 14 items were reduced to 3 after 12 months. These items were largely those addressing more complex cognitive ability, instrumental activities of daily living and socioemotional aspects, such as scheduling daily activities, driving, and handling arguments. Many of these areas are not typically addressed until post acute rehabilitation. Whereas subjects were found to have more accurate self-awareness regarding those occupations completed everyday, possibly due to the repetitive nature (Fleming & Strong, 1999). This discrepancy between self-awareness of physical and cognitive deficits is also in concurrence with the study mentioned above completed with a stroke population (Hartman-Maeir, Soroker, Ring, & Katz, 2002).

Dirette (2002) conducted a qualitative study concerning adaptive techniques of individuals with acquired brain injury and compromised self-awareness. Through client interviews, Dirette found that 3 of the 3 participants realized their lack of awareness only after attempting a functional activity in a specific context (Dirette, 2002). These results further demonstrate the importance of self-awareness in cognitive therapy and of training the client to make possible adaptations to avoid mistakes outside the security of therapy.

Schizophrenia. Schizophrenia is a major mental illness characterized by negative and positive symptoms as well as cognitive deficits, often characterized by a lack of self-awareness. Negative symptoms are considered those where the individual appears or feels to be in a state of mind that is somewhat subdued from what is considered normal, such as social withdrawal, having a flat affect, or a neglected appearance. Positive symptoms

are those where the individual's state of mind seems excessive to normal, such as active hallucinations or delusions. There are several types of schizophrenia as classified by the Diagnostic and Statistic Manual – IV – Revised (DSM-IV-R) (American Psychiatric Association, 2000). They are catatonic, disorganized, paranoid, undifferentiated, and residual type. The types are differentiated by the expressed symptoms; whether delusions and/or hallucinations are present or absent, and other symptoms such as grossly disorganized behavior (disorganized type), mutism or abnormal rigid posturing (catatonic), inability to meet criteria for one of the above mentioned types (undifferentiated), and presence of residual symptoms with an absence of delusions or hallucinations (residual type) (Sadock & Sadock, 2001). Treatment for schizophrenia has traditionally been pharmacological, typically administered in inpatient psychiatric units along with psychiatric rehabilitation techniques. Psychiatric rehabilitation techniques may include individual and group discussion of clients' interests, abilities and goals, as well as some arts and crafts sessions often lead by an occupational therapist (Lieberman, Wallace, Blackwell, & Kopelowicz, 1998). It may also involve attention modification techniques to address severe hallucinations and/or delusions (Hatashita-Wong & Silverstein, 2003).

A major implication for individuals with schizophrenia who have cognitive deficits is the fact that in the United States, Australia and Norway psychotic patients are among those who are most frequently secluded and/or restrained in inpatient settings due to violent behavior or the threat thereof. In Australia specifically, secluded patients were more likely to have a diagnosis of schizophrenia (Sailas & Wahlbeck, 2006).

A second major implication for this population is that in 2002 "nearly 4% of all schizophrenics who initially [were] medication responsive and continue[d] to be

one billion dollars a year" (Bach & Hayes, 2002, p. 1129). If clients are being readmitted this frequently, essentially their level of function is reverting back to baseline and the pharmacological interventions being utilized may not be effective.

A third major implication is that "suicide is the largest cause of premature death among individuals with schizophrenia"; between 0.3% and 0.6% of patients with schizophrenia commit suicide compared with .001% of the general population (Fenton, 2000). A study was published in 2004 by Bourgeois, Swendse, Young, Amador, Pini Cassano et al. that linked an individual's awareness of disorder and risk of suicide. The study divided 980 patients with schizophrenia into 3 groups; those treated with olanzapine, those treated with clozapine and those receiving no treatment. They were followed for over 2 years. Depression was measured using the Calgary Depression Scale as referenced by Bourgeois et al. (Addington, Addington, Maticka-Tindale, & Joyce 1992), specifically addressing hopelessness. Awareness was measured using the Scale of Functioning (item 12) as referenced by Bourgeois et al. (Rapaport, Bazzetta, McAdams, Patterson & Jeste, 1996). Results of this study, as stated by Bourgeois et al (2004), are consistent with previous research in that awareness is a significant predictor of suicide in patients with schizophrenia, however, levels of depression and hopelessness play a role in this interaction (Bourgeois, Swendse, Young, Amador, Pini, Cassano et al., 2004).

Another study completed by Buckley, Hasan, Friedman and Cerny in 2001 assessed 50 inpatients with schizophrenia and schizoaffective disorder using the Trails A and B subtests of the Luria-Nebraska Battery as referenced by Buckley et al. (Golden, 1981) for cognitive functioning, specifically attention and sequencing. The Brief Psychiatric Rating Scale (BPRS) was also used to assess positive and negative symptoms

Psychiatric Rating Scale (BPRS) was also used to assess positive and negative symptoms independently. Results on the depression items of this tool were compared to the results of the Luria subtests. These results showed a positive correlation between the Trails B subtest and past awareness, meaning the more cognitively impaired an individual, the less awareness they have. In analyzing the depression items of the BPRS and the Luria subtests, a negative correlation was found. The authors pointed this out to be counterintuitive. Generally it is thought that more awareness means a higher incidence of depression, but that was not the case in this study (Buckley, Hasan, Friedman & Cerny, 2001, p. 41). This study illustrated that an individual with higher cognitive functioning has increased self-awareness, which in some cases leads to a lower incidence of depression.

Davalos, Green and Rial (1999) investigated a controversial concept for treatment for those with schizophrenia. The intervention is modeled after neurocognitive interventions used with those with brain injury. They conducted a case study of a woman diagnosed with schizophrenia, undifferentiated type. She had been a patient in a mental hospital for two years, where the normal length of stay was six to eight months. After a year and a half of limited progress, a neuropsychological assessment was done which showed her chief deficit was in executive functioning. In response to this, the subject went through intensive cognitive rehabilitation, with emphasis on planning skills, problem solving and self-regulation, with the last stage of treatment focusing on self-awareness principles. The treatment consisted of two to three sessions per week totaling 20 sessions. These sessions used treatment modules providing the therapist with specific techniques to address cognitive functioning: establishing routines, development of

strategies and compensatory techniques. The techniques addressing a lack of self-awareness were used with hopes of generalization to novel situations (Davalos, Green & Rial, 1999).

The most significant improvement was in the subject's "everyday functioning, personal maintenance and abilities regarding semi-independent living" (Davalos, Green & Rial, 1999, p. 407). Prior to the treatment she had difficulty in expressing relatively minor needs. After treatment, she successfully acquired an independent living environment. She also sought out access to public transportation, thus decreasing her reliance on the mental health facility to organize her transportation. Research on the neuropsychological approach to treatment is scarce but it does provide an alternative intervention for the long term psychotic symptoms related to overall functioning.

In addition to psychiatric rehabilitation as previously mentioned, treatments involving occupational therapists as a team member considered alternative to the standard pharmacological intervention are assertive community treatment (ACT), dynamic cognitive therapy (DCT), and cognitive enhancement treatment (CET). ACT is a holistic intervention introduced to the Western World in the 1980s, while it has been practiced in parts of Europe and Africa for centuries. Instead of separating those with schizophrenia from the community, it is a common effort of intense rehabilitation and support from professionals and community members with the clients. The end goal is to successfully reintegrate them into the community (Anders, 2003). It relies very little on medication and more on education of the client, the family or caregivers, and the individuals of the community.

Dynamic Cognitive Therapy uses "mediated learning experiences", treatment .

sessions controlled by the therapist, to relate to cognition, and general functioning within society. The therapist works with the client on specific skills, then assists the client in reflecting on their performance. The idea is that this learning and self-awareness will lead to an increase in motivation, cognitive, and functional skills. Dynamic cognitive therapy consists of instrumental enrichment, a program of paper and pencil exercises, which teach and enforce specific skills related to cognition for daily function (Hadas-Lidor, Katz, Tyano & Weizman, 2001).

Cognitive Enhancement Treatment is similar to dynamic cognitive therapy except that the client learns skills in treatment, then puts them to use within their particular context. Treatment focuses on education, building self-awareness, and increasing coping skills. Within groups, some strategies are mirroring, and increasing conversational skills such as initiating and ending conversations. The therapist acts as a teacher and a trainer of socialization, problem-solving, and cognition. Over time, the therapist's supervision decreases, allowing the client to build self-confidence and self-efficacy (Miller & Mason, 2003). However, CET is not a well-developed method of intervention and is still under analysis.

Commonalities in symptomatology and clinical implications. The lack of awareness in traumatic brain injury (TBI) discussed above has definite clinical implications. These implications also result from the cognitive deficits associated with some instances of stroke and schizophrenia. In typical rehabilitation for brain injury, over learned self-care tasks are addressed early in the course of treatment. In this early rehabilitation phase, routine performance of brushing one's teeth, for example, could be mistaken as accurate self-awareness. In cases such as this, "it is also necessary to consider

purposive behavior with relation to novel activities, rather than rote habits or behaviors, which may have become so familiar that they no longer require planning" (McDonald, Flashman & Saykin, 2002, p. 334). The tasks requiring higher level cognitive skills are then addressed in the latter stages of rehabilitation.

Three case studies were completed by Katz and Hartman-Maeir in 2002, with three clients with three different diagnoses; TBI, stroke, and schizophrenia. All three demonstrated a lack of self-awareness of their deficits and the functional implications of these deficits. Occupational therapy treatment for each client consisted of challenging and meaningful occupations to the client to allow for opportunities to discover their respective deficits. The client with TBI "did not demonstrate any substantial gains in self-awareness during the program, due to his successful avoidance of engagement in potentially challenging activities" (Katz & Hartman-Maeir, 2002, p. 287). In the end, he still had a significant lack of self-awareness deficit resulting in an inability to engage in, and learn from, occupational therapy interventions. The client who suffered a stroke was able to learn compensatory strategies and as a result "his functional repertoire improved greatly." The client with schizophrenia had a mix of unawareness and denial that "complicated the intervention strategies used" (Katz & Hartman-Maeir, 2002, p. 289). All three clients had deficits in lack of self-awareness that inhibited their success in occupational therapy intervention.

While the treatments for each client were not identical, the underlying rationale for each was similar. This rationale was to present the client with a safe situation which would allow them to challenge their abilities, and perhaps experience some failure. Experiencing failure may improve the identification of their limits and achieve some

awareness in traumatic brain injury, stroke, and schizophrenia. Numerous sources (Chittum, Johnson, Chittum, Juercio & McMorrow, 1996; Dirette, 2002; Fleming & Strong, 1999; Katz & Hartman-Maeir, 1997; Sherer, Boake, Levin, Silver, Ringholz & High, 1998) agree that self-awareness must be present if there are to be any therapeutic gains especially in safety awareness and activities of daily living. Often, clients with cognitive deficits have a lack of self-awareness of these deficits as well as any physical deficits, which may be present. Once aware of these deficits, clients are better able to learn and incorporate compensatory strategies in deficient areas. Awareness has been described as the primary factor in predicting whether someone is able to compensate for daily tasks (Dirette, 2002).

Summary. It is known that cognitive impairments are present in traumatic brain injury, stroke and schizophrenia. The lack of self-awareness and its result of decreased therapeutic success have not linked the three diagnoses until recently. Based on these similarities, the idea that occupational therapy treatment is applicable and relevant for all three diagnoses, given the presence of cognitive impairments, is currently being explored more extensively in professional literature.

Occupational Therapy

Occupational therapy is a health related and educational discipline that helps treat clients using concepts of holism and purpose. It uses theoretical models to guide evaluation and intervention with individuals as unique persons with many internal and external factors impacting their occupational performance. Occupational therapy is considered to address clients within concepts of holism, using models such as the model of human occupation (MOHO), multicontextual approach (MCA), cognitive behavioral

of human occupation (MOHO), multicontextual approach (MCA), cognitive behavioral therapy (CBT) and dialectical behavioral therapy (DBT) to treat the individual as a person with many internal and external factors impacting occupational performance.

Clients have many different needs and the occupational therapist must address these needs with the client's perspective in mind. When addressing individual needs, a holistic approach incorporates the "total needs of the patient in the context of the cultural and social environment" (Stein & Culter, 2002, p. 17).

Scope of Practice. According to the Occupational Therapy Practice Framework: Domain and Process, clients' needs can fall under six different areas. The first is in occupation which is defined as "life activities in which people engage", for example, work or leisure tasks (American Occupational Therapy Association, 2002, p 180-184).

The second area is performance skills; "features of what one does, not what one has, related to observable elements of action that have implicit functional purposes" (American Occupational Therapy Association, 2002, p 180-184). For example in preparing soup, the individual might stand with one hand on the counter for support when reaching to an overhead shelf. This movement pattern incorporates motor elements to keep the person standing erect, coordination elements in reaching and grasping the soup can, among other skills.

The third area is performance patterns, which are defined as "patterns of behavior related to daily life activities that are habitual or routine" (American Occupational Therapy Association, 2002, p. 180-184). For example, a useful habit would be keeping cans of soup in the same area of the kitchen so they are all easy to find.

The fourth area is context, which is defined as "a variety of interrelated conditions

within and surrounding the client that influence performance” (American Occupational Therapy Association, 2002, p. 180-184). For example, the task of preparing soup could change depending on if the individual is cooking for himself or herself only or for a family. This difference would impact the amount of soup made and size of the pot.

The fifth area of client need is activity demands, which is defined as “aspects of an activity...and required underlying body functions and body structure needed to carry out activity”. For example, preparing soup requires a container to put the soup in and a method of heating the soup (American Occupational Therapy Association, 2002, p. 180-184).

The last area of need is in client factors, which are defined as “factors that reside within the client and that may affect performance” (American Occupational Therapy Association, 2002, p. 180-184). For example, an individual would need to have intact cognition to complete the steps for preparing soup in the correct sequence. These areas of need can be addressed by the therapist using therapeutic use of self, therapeutic use of occupation, consultation or education. Therapeutic use of self is a clinician’s “planned use of his or her personality, insights, perceptions, and judgments as part of the therapeutic process”(American Occupational Therapy Association, 2002, p. 188).

Consultation is where clinicians use their knowledge and collaborate with the client and each other without direct influence on the outcome of treatment (American Occupational Therapy Association, 2002, p. 188). The education process involves “imparting knowledge and information about occupation and activity and that does not result in the actual performance of the occupation/activity” (American Occupational Therapy Association, 2002, p 188). Therapeutic use of occupation is using tasks or activities in

completed as a preparatory task prior to a larger task, such as deep breathing before a complicated cooking activity. Occupation can also be used therapeutically as a main occupation, such as preparing a salad to target hand strength and coordination. Each of these therapeutic processes is used to impact the client's well being and overlap to cover each area of need.

Occupational therapy is the most likely profession to include meditation into intervention. A survey was mailed to 7,479 nurses, physical therapists, occupational therapists and physicians asking questions on their personal and professional use of prayer and meditation. Occupational therapists reported personally using meditation more than the other professionals surveyed (Schoenberger, Matheis, Shiflett, & Cotter, 2002). The type of professional predicted better than gender whether or not meditation would be used in treatment. Still the strongest predictor was whether the professionals themselves practiced meditation (Schoenberger et al., 2002).

Mindfulness is relevant to occupational therapy as a preparatory method because "to achieve challenge-skills experience" (Wright, Sadlo, & Stew, 2006, p. 25) there is the need to feel relaxed and peaceful prior to the occupation. This would be similar to using thermal agents, such as hot or cold packs, to prepare a client's soft tissue for engaging in occupation. Meditation could be viewed as a holistic modality as it impacts an individual's body and mind simultaneously. As defined above, occupational therapy uses holistic concepts. Using these terms, meditation can be used in conjunction with holistic occupation.

Mental health practice. The World Health Organization views care in mental health around the world as needing improvement as mental disorders are increasing and

health around the world as needing improvement as mental disorders are increasing and the burden on society is growing (Brintnell, Haglund, Larsson & Piergrossi, 2005). There is no official published information regarding occupational therapy practice in mental health throughout the world. The Atlas Questionnaire Project developed by the World Health Organization to collect information from international countries regarding mental health was distributed to World Federation of Occupational Therapists (WFOT) member countries. Only 25 of 55 countries responded with their statistics regarding the percentage of practicing occupational therapists who work in mental health. The United States was not one of the 25 countries who responded. The United Kingdom had the highest percentage at 42% of occupational therapists in the country practicing in mental health. Second was Finland with 39% and the lowest was Argentina with 1%. Some countries did not have statistics in this area and were unable to calculate a percentage (Brintnell, Haglund, Larsson & Piergrossi, 2005). The American Occupational Therapy Association determined that only 4% of practicing occupational therapists in the US are in the mental health arena. This number puts the US near the bottom of the list internationally (American Occupational Therapy Association, 2005). The subset of occupational therapists that practice in mental health is becoming a minority despite the profession's origin in the field.

Models of Practice. Occupational therapy evaluates and treats an individual's ability to perform in various areas of his or her life, which may be impaired due to any number of deficits or illnesses. "Occupational performance is the core concept and focus of our profession, but awareness of strengths and deficits, and executive functions are prerequisites for successful functioning in any occupation, task or activity" (Katz &

The Model of Human Occupation is a common model for schizophrenia within occupational therapy. MOHO is based on three concepts related to the client, one of which is volition: basic motivation for action, combined with awareness of capabilities, leads to specific actions. An individual's self-awareness directly affects one's actions and motivation for such. Our actions are directed by our own perception of our competency and satisfaction. The second concept is habituation, which refers to behavior patterns that people automatically follow as a reaction to the time, day or season. While these routines are fairly automatic actions, it is still necessary for people to observe their environment during a task, any changes within their environment, and then respond to these changes based on their perception of these changes. The third basic concept of MOHO is performance capacity; an individual's ability to act based on physical and cognitive capabilities. "A major premise of this model is that individuals change as a function of their interaction with the environment and that there is a reciprocal interaction between the individual and the environment" (Stein & Cutler, 2002, p. 164). With all of these concepts, the therapist takes into account the client's specific abilities and chooses appropriate tasks to increase any lacking capabilities the client or therapist observe (Keilhofner, 2002).

A study completed by Duncombe in 2004 examined the difference in progress for individuals with schizophrenia when a cooking program was completed in the clinic versus in the client's natural environment: a group home. The results showed that there was no difference in cognitive level between the two groups; yet, there was a difference between the average score of the two groups. The group taught in the group home setting was 11.4 points higher than the average score of those participants taught in the clinic

setting (Duncombe, 2004). "The ultimate goal is to generalize skills mastered in the clinic to a non-therapeutic setting, such as in a work or home setting" (Stein & Cutler, 2002, p. 164). Therefore, learning and practicing a task within normal context impacts the ability to learn the skill. This study demonstrates the importance of environmental interaction on a client's performance as discussed within the MOHO model of practice.

The Multicontextual Approach to treatment (MCA) is also associated with the dynamic interactional approach (DIA). It has frequently been used in occupational therapy as a basis for cognitive rehabilitation, specifically for individuals with traumatic brain injury (Katz & Hartman-Maeir, 2005). MCA "indicates that occupational performance can provide feedback that influences a person's self-perceptions and beliefs about his or her abilities and performance" (Toglia, 2003, p.266). It also does not aim to treat cognitive components separately. All aspects of cognition are addressed in a holistic manner with the plan that the treatment will lead to use of learned skills in the client's personal contexts outside of therapy. Intervention under MCA is "sideways learning" (Toglia, 2003, p.266) meaning the same skill is emphasized in different tasks, which gradually increase in difficulty. The tasks provide enough challenge to keep the client engaged but not so much as to discourage them. "Training in self-awareness is embedded throughout intervention" (Toglia, 2003, p. 266). This training allows clients to reflect on their performance prior to, during, and following a task so they can learn from mistakes, and make corrections to actions if necessary.

Landa-Gonzales in 2001 presented a case study of a man who sustained a traumatic brain injury. The occupational therapist evaluated him using both standardized and non-standardized tests. Findings showed he had a lack of awareness of deficits as

and non-standardized tests. Findings showed he had a lack of awareness of deficits as well as deficits in safety awareness. Treatment using MCA was "awareness training" in conjunction with "daily occupational activities" (Landa-Gonzalez, 2001, p. 54-55). Awareness training consisted of such techniques as "repetitive education, feedback, self-rating scales and prediction" (Crossen, Barco, Velozo, Bolesta, Cooper, Werts, & Brobeck, 1989). After standardized and non-standardized reassessment of the client, the results showed that he improved in self-care, work performance, safety, and health and leisure involvement areas. At the eight month follow-up interview, the family reported that the client was still improving in daily occupations (Landa-Gonzalez, 2001).

Cognitive behavioral therapy (CBT) for individuals with psychosis involves "altering the thoughts, emotions and behaviors of patients by teaching them skills to challenge and modify beliefs about delusions and hallucinations, to engage in experimental reality testing, and to develop better coping strategies for the management of hallucinations" (Gould et al, 2001, p. 335). This model is often grouped with basic cognitive therapy (CT) or cognitive rehabilitation. A difference is that CT focuses on "information-processing deficits" more than CBT (Gould et al, 2001). CBT uses reinforcement and punishment as a technique in response to behaviors (Gould et al, 2001). In a meta-analysis examining the effect of cognitive therapy for psychotic symptoms, specifically positive symptoms, Gould included articles if the subjects had a diagnosis of schizophrenia or schizoaffective disorder. "All seven studies reported significant decreases in positive symptoms at post-treatment, and five of seven reported significant decreases in positive symptoms for CT relative to the control condition at post-treatment" (Gould et al, 2001, p. 339). Regarding long-term treatment, four out of

the four studies which included follow up analysis showed significant improvement over the duration of the follow-up period. These periods ranged from 9 months to 18 months. The purpose of this meta-analysis was to seek evidence for using a technique that helps alleviate positive symptoms in schizophrenia separate from pharmacological means. CBT is a widely researched and utilized technique for individuals with schizophrenia in the United Kingdom (Rector, 2005). CBT reduces positive symptoms as well as negative symptoms (Rector, Seeman & Segal, 2003) as compared to “enriched standardized treatment” (p. 9). Occupational therapists use the CBT approach in intervention to help clients re-engage in their daily occupations or develop new skills in order to successfully complete daily occupations.

Dialectical Behavioral Therapy stemmed from CBT when it proved ineffective with clients with serious, complex psychological problems to treat borderline personality disorder (BPD). This diagnosis, as outlined by the Diagnostic and Statistical Manual of Mental Disorders Text revision – 4th edition, involves “a pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity beginning by early adulthood and present in a variety of contexts” (Sadock & Sadock, 2001, p. 249). The severe difference between BPD and other psychological problems was found to be the risky behavior, such as suicide attempts, often associated with individuals with this diagnosis. Problems in treating this risky behavior were found, and the strategies were changed for such a serious population. Behavior was overtly identified and validated for the client in that all behaviors made sense in one way or another to the client. Techniques to change behavior often involved mindfulness, as it is considered a “core skill” in DBT (Linehan, 1993, p. 63). This skill is viewed as necessary to live a life without impulsivity

or "mood dependent behaviors" (Linehan, 1993, p. 63). Using mindfulness, clients acknowledged sound behaviors, as well as the harmful ones, and the focus on accepting all behaviors. This acknowledgement is a demonstration of the technique in mindfulness in taking a view of thoughts and behaviors where judgment is absent, and the client views them with objectivity. However, this acceptance does not negate the need for changing these behaviors. It merely emphasizes change of behaviors as a way to build a different life in accordance with the clients' own wishes and needs. The DBT therapist "provides a validating environment, extinguishes maladaptive behaviors, teaches skills to help with emotions and relationships, and ensures that all skills are reinforced, strengthened, and generalized to all relevant environments" (Swenson, Sanderson, Dulit, & Linehan, 2001, para. 7, p. 310). The occupational therapist would find what tasks are meaningful to the client. In participating in meaningful tasks, the client would be expected to be motivated and challenged. Throughout these tasks, if problem or risky behaviors were to emerge, it would be the role of the occupational therapist to acknowledge these behaviors with the client as well as promote coping strategies and acceptance of these behaviors.

Summary

Occupational therapists use motivating functional activities as treatment for their clients with the knowledge that such participation will help clients progress towards their individual goals. Throughout task completion in therapy, when clients are even partially unaware of their abilities, their progress and/or safety can be compromised. Thus, the therapist's job is to choose an appropriate task to challenge the clients' limits without requiring intact self-awareness, in addition to choosing a task which will help clients improve self-awareness. This lack of self-awareness as a cognitive impairment has been

recognized in individuals with a stroke and traumatic brain injury in the literature. Schizophrenia has also been related to these conditions as having common cognitive impairments. Meditation as a method of stress reduction has been used with TBI and stroke and is beginning to make way to those with schizophrenia.

The four models of practice mentioned above are core approaches used by occupational therapists to address a lack of self-awareness as a significant cognitive impairment. These models seem to support using self-awareness techniques which may include meditation or components thereof, such as deep breathing or body awareness exercises. All models involve a holistic approach to intervention, meaning clients' cognitive impairments are treated as dysfunction as a whole and not broken down into separate units. Having cognitive impairments means that the individual's performance ability is compromised, and by addressing their performance as a whole, the clients' cognitive processes are challenged within a context that is suitable for them.

While meditation may be beneficial to address a lack of self-awareness in those with schizophrenia, occupational therapy is above most things, client-centered. Therefore, if a meditative practice is not in the best interest of an individual, it is up to the client and the therapist to decide whether or not to use it. As a profession, meditation is used in treatment but the lack of research on the subject as well as in using meditation with those with schizophrenia offers little evidence to base practice on. The purpose of this study is to determine where current occupational therapy professionals' opinions stand regarding use of mindfulness as a possible treatment technique for this population.

Chapter 3: Methodology

This chapter will illustrate the steps taken and variables addressed in order to complete this study. The primary researcher will discuss the recruitment of subjects, the development of the survey instrument and the process of analyzing the data collected.

Research Questions

This study will address occupational therapists that treat those with schizophrenia, schizoaffective disorder or a related mental illness with psychosis, with the following research questions:

1. Are there occupational therapy clinicians who believe that in clients with schizophrenia, there is a lack of self-awareness which impacts occupational performance? If yes, do they believe that meditation can influence this deficit?

2. Are occupational therapy clinicians using meditation as an intervention? If no, what are some of their perceived barriers?

3. Do occupational therapy clinicians believe meditation is an accepted intervention within the profession of occupational therapy?

Subjects and Selection Method

The researcher chose a survey design for this study. The survey was converted to electronic format in order to reach a sufficient sample size in the time frame allowed for data collection. It also permitted easier contact with therapists internationally. A sample of convenience was contacted through online listservs. Subjects included are any practicing occupational therapist or occupational therapy assistant who is at least 18 years of age and works with individuals with a diagnosis of schizophrenia, schizoaffective disorder or a related mental illness with psychosis. Five listservs were identified that

members were likely to treat clients who had a diagnosis of schizophrenia, schizoaffective disorder or a related diagnosis with symptoms of psychosis. These listservs were contacted for approval to post a recruitment statement and URL link to the electronic survey on surveymonkey.com. The following listservs were selected and contacted for prior approval: American Occupational Therapy Association – Special Interest Section on Mental Health; American Occupational Therapy Association – Special Interest Section: Certified Occupational Therapy Assistants; OTNow, MOHO and OCCUPATIONAL-THERAPY. A recruitment statement was posted on each listserv (Appendix A). After receiving initial approval, one listserv decided to withdraw approval when the recruitment statement and URL were reviewed.

Operationalization of Concepts

The following section will describe how the questions in the demographic section of the survey were operationalized. Age is defined as number of years from birth to present day in question number one. Years of experience in occupational therapy is defined as the number of years spent working in any setting with the title of occupational therapist or occupational therapy assistant in question number two. In question three, years of experience in treating the target population is defined as the number of years spent working with individuals with a diagnosis of schizophrenia, schizoaffective disorder or a related mental illness with psychosis as an occupational therapist or occupational therapy assistant. In question four, percentage of caseload is defined as the number of clients being treated by the respondent that fall within the target diagnosis as mentioned above, out of the total number of clients treated by the therapist. Question five refers to the number of clients on the therapist's caseload who fall within the target

diagnosis and also have a history of drug and/or alcohol abuse out of the number of clients who fall within the target diagnosis but do not have a history of drug and/or alcohol abuse. Question six refers to the respondent's location of practice as an occupational therapist or occupational therapy assistant in one of the nine listed international regions, as well as an open-ended option in the case that the given list did not include the respondent's location. "Highest level of education" in question seven is defined as the most advanced degree of education earned by the respondent, whether or not it was in the field of occupational therapy. "Primary method of treatment" in question eight is defined as the respondent's view of type of occupational therapy intervention used with the clients within the target diagnosis. Seven choices were given as well as an open-ended option as necessary for the respondent. Those choices were cognitive behavioral therapy, life skills training, social skills training, expressive therapy, crafts, vocational training, stress management, and other. The open-ended option was given in order to allow the respondent to further clarify the techniques utilized. Question nine defines "personally meditated or participated in an activity that involved meditation" as the respondent participating in the action of meditating alone, or embedded within another activity, such as yoga during his or her personal time.

"Are there occupational therapy clinicians who believe that in clients with schizophrenia there is a lack of self-awareness which impacts occupational performance? If yes, do they believe that meditation can influence this self-awareness deficit?" The phrase "occupational therapy clinicians" in the first research question refers to those individuals with appropriate educational background who meet the criteria of their respective associations or countries to practice occupational therapy. They must

currently treat individuals with schizophrenia, schizoaffective disorder or a related mental illness with psychosis. "Believe" refers to the clinician agreeing that meditation can influence self-awareness.

"Occupational performance" is addressed in survey questions number 11. It refers to "the ability to carry out activities of daily life" (American Occupational Therapy Association, 2002, p. 50). The definition of occupational performance was not included on the survey; however, it is a cornerstone concept within the profession (Crepeau, 2003).

"Self-awareness" is addressed in four survey questions, numbers 10, 11, 12, and 18. The definition was provided in the survey as an individual's perception of their own performance during an activity in context, as well as the individual's reflection on performance of a specific activity, out of its context (Josman, 2005).

The term "meditation" is addressed by nine survey questions, numbers 12 through 16 and 19 through 22. The term is defined within the survey and throughout the study by two definitions. The first being a practice involving either concentrating on a single object or sound and pushing away all other distractions (Kabat-Zinn, 1982; Walloch, 1998). The second involves focusing on one's own breathing and acknowledging other thoughts, but not becoming distracted by them (Kabat-Zinn, 1982; Walloch, 1998). Both of these definitions were provided because, within literature addressing meditation, there is no single definition accepted by all.

"Are occupational therapy clinicians using meditation as an intervention? If not, what are some perceived barriers?" In the second research question the term "intervention" is addressed by seven survey questions, numbers 13, 15, 16, and 19 through 22. It is defined as a treatment process "directed toward achieving the

overarching outcome of engagement in occupation to support participation" (American Occupational Therapy Association, 2002, p. 25).

The term "perceived barriers" is addressed by survey question 16. The respondent is provided with six choices as well as an open-ended option. The choices are lack of finances, inadequate space, disbelief in method, size of caseload, inappropriate for facility, inappropriate for population, and other. Choices were derived from a research project examining the barriers of fieldwork educators in using occupation in practice, as well as the research committee's clinical judgment. "Perceived barriers" is defined as the subject's personal opinion of aspects that prevent them from using meditation in occupational therapy treatment (Barbuti, Clement, Fitzgerald, Frey, Henebery, Huizinga, Lee, & Sherman, 2005).

"Do practicing occupational therapy clinicians believe meditation is an accepted intervention within the profession of occupational therapy?" The third research question refers to meditation as an "accepted intervention within the profession of occupational therapy". This concept is addressed in four survey questions, numbers 19 through 22. The phrase is defined as a treatment method falling within the domains of practice for occupational therapy intervention (American Occupational Therapy Association, 2002).

Measurement Instrument

The survey was developed by the researcher based on literature regarding the use of meditation to influence self-awareness in the average population and as an intervention with chronic pain. There is very little literature regarding the use of meditation within the profession of occupational therapy, specifically with those who have psychiatric disorders. A paper draft of the survey was given to 14 occupational therapy department

faculty members as a pilot survey to increase validity. Minor changes were made in grammar and sentence formation. Other avenues to increase validity were beyond the scope of this thesis. The survey was converted to a web-based format using the surveymonkey.com software (surveymonkey.com, 1999). This software assigned each respondent's IP address with a number. This number without the linked IP address was transmitted electronically to the primary researcher as a way of identifying each survey and keeping any of the respondents's identifying information anonymous. The initial paper format is included in Appendix B.

The questions in the demographic section of the survey were developed to determine the general characteristics of the sample of respondents. The questions aim to find the basic characteristics of each respondent's caseload as well as the background of each respondent's education and level of experience with the individuals with a diagnosis of schizophrenia. Questions 1 through 5 were open-ended for simplicity. Questions 6 through 8 were multiple choice with an open-ended option to create categories for analysis but also address unforeseen answers. Question 9 was "yes" or "no" to create clear boundaries for analysis.

Survey questions 10 through 12 are based on clinicians' beliefs regarding self-awareness. Josman (2005), had defined self-awareness from the perspective of cognitive rehabilitation in occupational therapy. The possible answers for each question were a likert scale with five choices; strongly disagree, disagree, unsure, agree and strongly agree. For analysis purposes, strongly disagree and disagree were converted to mean "no" and agree and strongly agree were converted to mean "yes". "Unsure" responses were not used for some analysis.

Survey questions 13 through 16 were on the use of meditation as treatment based on two definitions as used in the literature by Kabat-Zinn (1982). Since the literature does not utilize a common definition of meditation, the two dominant types were described and used to answer the questions. Question 16 further aims to describe the reasons why clinicians may not be using meditation. The responses were chosen based on the pilot survey, literature review, and researcher/committee's clinical judgment. Choices for answer to question 13 were a likert scale with five different answers; never, rarely, sometimes, often, and always. "Never" was converted to "no" and "rarely", "sometimes", "often" and "always" were converted to "yes". "Yes" and "no" were then assigned numbers for analysis. Question 14 used a likert scale with "strongly disagree", "disagree", "unsure", "agree" and "strongly agree" as provided answers. Question 15 was open-ended and completion of this question was dependent on previous answer to question 13. If the response to question 13 was "no", it requested the respondent to omit answering question 15. Question 16 was multiple choice with an open-ended option. It requested the respondent to omit answering question 16 if they previously responded "yes" to question 13. Answer choices were as follows: inadequate space, disbelief in method, size of caseload, inappropriate for facility, inappropriate for population, and other, with space allotted for an open-ended answer. The respondent was asked to choose the one answer which most applied to their context. These barriers were assumed as relevant to most clinical settings based on researcher's clinical judgment, as well as results to a survey study determining fieldwork supervisors' perceived barriers to using occupation in occupational therapy practice (Barbuti, Clement, Fitzgerald, Frey, Henebery, Huizinga, Lee, & Sherman, 2005, December; Robinson, 2001; Wurm, 2004). All likert and multiple

choice answers were converted to numbers for data entry and computing purposes. "Yes" was entered as 1 and "no" was entered as 0.

Survey questions 17 and 18 are regarding body awareness as defined by Gard (2005). These questions were included to attempt to include those clinicians who may use body awareness techniques as defined as a component of some types of meditation. However, these clinicians do not consider these techniques as meditation.

Survey questions 19 through 22 aim to determine the clinicians' beliefs as to how meditation is related to occupational therapeutic treatment. In addition, the questions were designed to determine where in treatment meditation could be utilized most effectively, according to the current Occupational Therapy Practice Framework (American Occupational Therapy Association, 2002).

Design gathering, analyzing and interpreting data

Following Human Subjects Review Committee approval (Appendix C), a pilot survey was distributed to 14 occupational therapy department faculty members. Four surveys were returned and minor grammatical and phrasing revisions were made.

The recruitment statement (Appendix A) was approved and posted on four listserves: American Occupational Therapy Association – Special Interest Section on mental health, American Occupational Therapy Association – Special Interest Section: Certified Occupational Therapy Assistants, OTNow, and OCCUPATIONAL-THERAPY. A link was provided at the bottom which led the respondent to the web-based survey developed through SurveyMonkey.com. The first page of the survey was identical to the consent statement (Appendix E) provided to the Human Subjects Committee followed by the first page of the survey. A follow-up reminder message was posted after 2 weeks of the initial

page of the survey. A follow-up reminder message was posted after 2 weeks of the initial posting.

Raw, stripped aggregate data was returned to the researcher from SurveyMonkey.com, which was exported into Microsoft Excel and again into Statistical Package for the Social Sciences for Windows (SPSS), version 13.0 (SPSS for Windows, 2004)

Using SPSS V.13.0, the alpha level for significance was set at .05. Demographic factors were analyzed using descriptive statistics: frequencies (count and percent). The first page questions (1 through 9) were analyzed this way to determine the general characteristics of the sample.

In analyzing the first research question, "Are there occupational therapy clinicians who believe that in clients with schizophrenia, there is a self-awareness deficit which impacts occupational performance? If yes, do they believe that meditation can influence this deficit?" cross-tabulations were used to determine four separate groups of subjects.

These four groups were:

1. Those clinicians who do not believe that a lack of self-awareness is a deficit in schizophrenia.
2. Those clinicians' who believe a lack of self-awareness is a deficit in schizophrenia but do not believe this deficit influences occupational performance.
3. Those clinicians' who believe self-awareness is a deficit, which influences occupational performance, however, they do not believe meditation can influence occupational performance.
4. Those clinicians' who believe self-awareness is a deficit, which influences

one's level of self-awareness, which influences one's occupational performance and can be influenced by meditation.

Within these four separate groups, demographics were analyzed using frequency charts to determine the general characteristics of each group and determine any necessary further analysis. The survey questions analyzed to determine these four groups were questions 10 through 12.

In analyzing the second research question, "Are occupational therapy clinicians using meditation as an intervention, if no, what are some of their perceived barriers"? Frequency charts were used to determine the frequency of answers for survey question 13. Respondents were asked how often they incorporate meditation in treatment. In order to address the second half of the research question, respondents were asked what were primary barriers to using meditation as treatment (question 16)? In analyzing the third and final research question, "Do practicing occupational therapy clinicians believe meditation is an accepted intervention within the profession of occupational therapy," frequency charts were used for survey questions 19 through 22. Cross-tabulations were also used to relate demographic information to those subjects who answered questions 19 through 22 regarding meditation fitting into the realm of occupational therapy. Subject groups determined in research question number one were also analyzed in relation to the answers given to questions 19 through 22.

Limitations, Delimitations, Assumptions

Due to the nature of a web-based survey, the respondent had no immediate opportunity for clarification from the researcher if confused by the wording. Contact information, such as primary researcher's email address was given in the body of the

recruitment statement posted on each listserv. This information was to provide the respondent with an opportunity to ask questions regarding the survey or to receive the results after the study was completed.

The purpose of the study is descriptive in nature and does not manipulate any variables, such as a specific treatment technique, so it cannot be generalized to a larger population.

The population is limited to a the set of occupational therapists who self-identify as currently working with clients whose diagnosis is schizophrenia, schizoaffective disorder, or a related mental illness with psychosis. The primary researcher has no indication of any further characteristics of the clients and is relying on the knowledge of the clinician to identify the appropriate clients.

Access to populations is limited to listservs which grant permission to recruit. This permission granting presented a problem when one particular list serve refused access because the survey was not viewed as relevant enough to the foundation of the listserv. Further limitation resulted from contacting subjects through listservs is that access to the population is limited to members who belong to that listserv and who identify themselves as treating the specified target population.

The primary researcher was working with several assumptions. Definitions of terms used such as self-awareness, meditation and body awareness, were provided at the heading of the survey section respective to the definition. It is assumed that the respondent answered each question honestly, based on the definitions provided at the heading of each section. It is also assumed the respondent did not allow their previous knowledge of any term to influence their response. In addition, the researcher also made

the assumption that the respondent understood the concepts of “occupational performance”, “method of preparation”, and “occupation-based activity” as these concepts are central to the profession of occupational therapy.

Practicing clinicians were assumed to be credentialed appropriately according to the expectations of their country and/or respective professional associations. It is also assumed that the clinicians’ practice according to the stipulations as defined by their respective licensure, registration, certification, or other qualifying legal limitations.

Chapter 4: Results

This chapter will provide the results to the demographic section of the survey as well as each research question of this study. The total number of surveys returned was 61; however, 50 met the inclusion criteria. Since the total number of clinicians reached is unknown due to the nature of a web-based survey, the overall return rate is also unknown.

Demographics

The average age of the subjects was 41.5 years ($N = 50$, $SD = 11.78$) with a range of 20 years to 59 years. The average number of years of experience in occupational therapy was 13.97 years ($N = 50$, $SD = 10.43$) with a range from 1 year to 37 years. The average number of years of experience in treating a population with a diagnosis of schizophrenia, schizoaffective disorder, or a related mental illness with psychotic symptoms, was 11.49 years ($N = 49$, $SD = 9.81$), with a range of 1 to 36 years. Each clinician's caseload had an average of 52.37% ($N = 49$, $SD = 33.27$) of clients with the diagnosis of schizophrenia, schizoaffective disorder, or a similar disorder with psychotic symptoms. The range was from 1 to 100%. Each clinician's caseload had an average of 32.82% ($N = 45$, $SD = 27.04$) of clients with a dual-diagnosis of substance abuse. The range was also from 1 to 100

The practice location of the 50 respondents is as follows: United States, 64%; Europe, 26%; Canada, 8%; and Scandinavia, 2%. The majority of respondents (46%) had a bachelor's degree in occupational therapy as their highest educational degree, 18% had a master's degree in occupational therapy, 12% had an associate's degree in occupational therapy, 4% had a doctoral degree, 4% had a diploma, and 16% had their highest degree in a related field, such as counseling or psychology. The majority of the sample (82%)

responded that they had personal experience with meditation at some point in their lives.

Results for Research Question One

The first research question was "Are there clinicians who believe, that in clients with schizophrenia, there is a self-awareness deficit which impacts occupational performance? If yes, do they believe meditation can influence this self-awareness deficit". Analysis of this question involved cross-tabulations of questions 10-12, resulting in four groups of clinicians. Group 1 were those clinicians who do not believe that a lack of self-awareness is a deficit in individuals with schizophrenia. Group 2 were those clinicians who believe a lack of self-awareness is a deficit in individuals with schizophrenia but this does not influence occupational performance. Group 3 were those clinicians who believe a lack of self-awareness is a deficit in individuals with schizophrenia, which influences occupational performance but is not influenced by meditation. Group 4 were those clinicians who believe a lack of self-awareness is a deficit in individuals with schizophrenia, which influences occupational performance and can be influenced by meditation. The percentage of respondents who do not believe that a lack of self-awareness is a deficit (Group 1) in those with schizophrenia is 14% ($N = 7$). The percentage of respondents who believe that a lack of self-awareness is a deficit (Group 2) is 18% ($N = 9$), but these clinicians do not believe that it impacts one's occupational performance. The percentage of respondents who believe that self-awareness is a deficit which impacts occupational performance (Group 3) is 20% ($N = 12$), however, these clinicians do not believe that meditation can influence one's level of self-awareness. The percentage of respondents who believe that a lack of self-awareness is a deficit in individuals with schizophrenia which impacts their occupational performance (Group 4)

is 48% ($N = 24$). They also believe that one's lack of self-awareness can be influenced by meditation. (Refer to table 1.)

Table 1

Summary of Sample Clinicians' Beliefs ($N = 52$)

Clinicians' Belief	Percent of Sample
Group 1: lack of self awareness is not a deficit in schizophrenia	14% ($N = 7$)
Group 2: Lack of self-awareness <i>is</i> a deficit in schizophrenia, but does not influence occupational performance	18 % ($N = 9$)
Group 3: Lack of self-awareness <i>is</i> a deficit in schizophrenia, <i>does</i> influence occupational performance but is not influenced by meditation	20% ($N = 12$)
Group 4: Lack of self-awareness is a deficit in schizophrenia, does influence occupational performance and <i>is</i> influenced by meditation.	48% ($N = 24$)

Results for Research Question Two

The second research question is "Are occupational therapy clinicians using meditation as an intervention? If not, what are some of their perceived barriers?" This was addressed by survey questions number 13, 16 and 17. Question 13 referred to incorporating meditation into treatment by the respondent, question 16 referred to barriers to incorporating meditation into treatment. Multiple choice answers for question 16 were: lack of finances, inadequate space, disbelief in meditation as a method, size of caseload, inappropriateness for facility or population, or other with which an open-ended option was provided. Results for question 13 by the 50 respondents were as follows: 2% of the sample always use meditation treatment techniques with those with schizophrenia; 18 % often use it; 30% sometimes use it; 25 % rarely use it; and 25% never use it. Since not all respondents had caseloads of 100% clients with schizophrenia, the primary researcher accepted answers of rarely, sometimes, often and always as meaning "yes" and an answer of never meaning "no." This conversion would mean for the above results that 75.5% do use meditation, and 24.5% do not use it, regardless of caseload size.

The results for the 49 respondents answering question 17 regarding the use of body awareness techniques are as follows: 63% have used them ($n = 31$); 14% are unsure ($n = 7$); and 23% ($n = 11$) have not used these techniques.

The clinicians who responded "never" ($n = 12$) to whether or not they incorporate meditation into treatment (question 13) identified the following as barriers: "inadequate space" (9%); "disbelief in method" (9%); "inappropriate for facility" (18%); "inappropriate for population" (18%); and "other" (45%). The open-ended "other" option responses identified additional barriers such as "not familiar with treatment" ($n = 3$),

“concern for those with active psychosis” ($n = 1$), “different goals for OT” ($n = 2$), “behavioral resistance” ($n = 1$), “personal negative experience” ($n = 1$), “meditation was not a focus of treatment” ($n = 1$), “short length of stay” ($n = 1$), “a different professional uses meditation, specifically therapeutic recreation and social work” ($n = 2$), and that meditation is “not discipline specific” ($n = 1$).

There are 10 clinicians in Group 4 who believe a lack of self-awareness is a deficit in individuals with schizophrenia which influences occupational performance and can be influenced by meditation, yet they do not incorporate it into treatment. 40% ($n = 4$) view their barrier as inappropriate for the population, and 60% ($n = 6$) chose “other” and inserted their own perceived barrier.

Those clinicians in Group 3, ($n = 7$) who believe a lack of self-awareness is a deficit in individuals with schizophrenia which influences occupational performance but can not be influenced by meditation, 14.3% ($n = 1$) do not incorporate meditation into treatment due to “inadequate space”, 28.6% ($n = 2$) do not incorporate meditation into treatment because it is “inappropriate for the population”, and 57.1% ($n = 4$) chose “other” as the perceived barrier.

Those clinicians in Group 2, ($n = 6$) who believe that a lack of self-awareness is a deficit in individuals with schizophrenia but does not influence occupational performance, 16.7% ($n = 1$) do not incorporate meditation into treatment as it is “inappropriate for the facility”, 50% ($n = 3$) believe meditation is “inappropriate for the population”, and 33.3% ($n = 2$) chose “other.”

Those clinicians of the entire sample who responded “never” to incorporating meditation into treatment (question 13), 9% ($n = 1$) perceived the barrier as “inadequate

space”, 9% ($n= 1$) perceived the barrier as disbelief in method, 18% ($n= 2$) perceived the barrier as inappropriate for facility, 18% ($n= 2$) perceived the barrier as inappropriate for the population and 45.5% ($n= 5$) chose “other.”

Results for Research Question Three

Research question three is “do practicing occupational therapy clinicians believe meditation is an accepted intervention within the profession of occupational therapy?” Of those clinicians in Group 4 (48% of total sample), 69.6% agree meditation falls within occupational therapy as a preparatory method, 26.1% are unsure, and 4.3 % disagree. Of this same group of individuals, 39.1% agree meditation falls within occupational therapy as a main occupation, 34.8% are unsure, and 26.1% disagree.

Another subgroup determined by survey question 13 is a subgroup of the entire sample that does incorporate meditation into treatment (75.5%). Of these individuals, 69.4% agree meditation falls within occupational therapy as a preparatory method, 25% are unsure and 5.6% disagree. Of this same group of individuals, 50% agree meditation falls within occupational therapy as a main occupation, 27.8% are unsure and 22.2% disagree.

Another way of showing the relationship between meditation and occupational therapy is if the clinician views that meditation is supported by a model of practice used by the profession. In addressing whether occupational therapy, and related, models of practice support meditation as a treatment intervention within the subgroup of clinicians who use meditation as intervention ($n = 37$), 61.3% agree that they do support meditation, 29.0% are unsure, and 9.7% disagree. Within the subgroup of clinicians who do not use meditation as intervention ($n = 13$), 41.7% agree that occupational therapy and related

models of practice support meditation, 33.3% are unsure, and 25% disagree.

The respondents ($n = 27$) who answered the open-ended question 22 “please name one or more model(s) of practice you think support using meditative interventions” identified the following models:

Model of Human Occupation (MOHO) – 29.6% ($n = 8$)

Cognitive-behavioral therapy – 25.9% ($n = 7$)

Sensory modulation – 11.1% ($n = 3$)

Eight other models were identified by several respondents including the “Canadian Model of Occupational Therapy (CMOT)”, “person-environment-occupation model”, “occupational adaptation”, “person-occupation-performance model”, “medical model”, “coping”, “biofeedback”, and “occupational science”.

Additional Analysis

Three additional questions were analyzed in order to further describe the population reached for this study. Those questions were as follows: does the percentage of a clinician’s caseload determine how frequently they use meditation; does the clinician’s location of practice influence their beliefs; and does personal experience with meditation influence whether a clinician incorporates meditation into treatment? Further correlations between demographics and other factors were completed but did not show significant results.

Does the percentage of a clinician’s caseload determine how frequently they use meditation? This question was addressed by survey questions 4 and 13. Of those who “never” used meditation in treatment ($n = 8$), 2 respondents have a caseload with the schizophrenia between 0 and 20%, 1 has a caseload between 21 and 40%, 1 has a

caseload between 41 and 60%, 3 have a caseload between 61 and 80% and 1 has a caseload between 81 and 100%. Of those clinicians who "rarely" use meditation ($n = 9$), 3 clinicians have a caseload between 0 and 20%, 1 has a caseload between 21 and 40%, 1 has a caseload between 41 and 60%, 3 have a caseload between 61 and 80%, 1 has a caseload between 81 and 100%. Of those clinicians who "sometimes" use meditation as treatment ($n = 8$), 3 have a caseload between 0 and 20%, 1 has a caseload between 21 and 40%, 1 has a caseload between 41 and 60%, 2 have a caseload between 61 and 80% and 1 has a caseload between 81 and 100%. Of those clinicians who "often" use meditation in treatment ($n = 7$), 1 has a caseload of 0 to 20%, 2 have a caseload of 21 to 40%, 2 have a caseload of 61 to 80%, and 2 have a caseload of 81 to 100%. Of those clinicians who "always" use meditation in treatment ($n = 1$), 1 has a caseload of 21 to 40%.

Does location of practice influence beliefs? This question was addressed by survey questions 6, 10, 11, and 12. As stated previously, 32 respondents were practicing within the United States, 13 were practicing in Europe, 4 were practicing in Canada and 1 in Scandinavia. Due to the small number of practitioners in Canada and Scandinavia, a Chi-square test could not determine any significance. It is difficult to make a comparison within these results.

Does personal experience with meditation influence whether a clinician incorporates meditation into treatment? This question was addressed by survey questions 9 and 13. The responses for question 13 regarding the frequency of using meditation in treatment were collapsed from a 5 point likert scale or "never", "rarely", "sometimes", "often", and "always". Those who answered "never" were equated with "no". All other answers were equated with "yes". The results for this question are as follows: 69.3% ($n =$

34) have personal experience with meditation as well as incorporating meditation into treatment; 12.2% ($n=6$) have personal experience, but do not incorporate meditation into treatment; 6.1% ($n=3$) do not have personal experience with meditation but do incorporate it into treatment; and 12.2% ($n=6$) do not have personal experience and do not incorporate meditation into treatment. Using these numbers it would appear that a chi-square analysis would yield significance; however, because the responses were collapsed into two groups from five for one question under analysis, one cell had one respondent in it making the chi-square test not possible.

Chapter 5: Discussion

This chapter will address the results of this study and their relevance to the profession of occupational therapy.

Demographics

The characteristics of the average clinician within the sample of this study are comparable to the characteristics of clinicians in existing literature. The finding that clinicians who have personal experience with meditation are more likely to practice it is also in accordance with existing literature. For example, a study which examined which discipline is most likely to use meditation as part of treatment was predominantly female (72%), the mean age was 41 years and the mean numbers of years as a practicing professional was 14. This sample was comprised of physicians (28%), physical therapists (29%), occupational therapists (25%) and nurses (18%), with 92% females, a mean age of 39 years, and a mean of 13 years as a practicing professional (Schoenberger et al, 2005). According to the WHO Atlas project and the World Federation for Occupational Therapy, the average occupational therapist in mental health is female, between ages 20 and 39 and has a bachelor's degree. This information applies internationally and the United States did not contribute data. As compared to this study, the average age was 41.5 years and the majority of clinicians are practicing with a bachelors' degree.

“Are there occupational therapy clinicians who believe that in clients with schizophrenia, there is a lack of self-awareness deficit which impacts occupational performance? If yes, do they believe that meditation can influence this self-awareness deficit?”

This research question separated the sample of this study into four groups, as previously discussed. Group 1 is made up of those clinicians who do not believe that a

lack of self-awareness is a deficit in individuals with schizophrenia (14%). These clinicians may perceive the most affected deficit to address in those with schizophrenia has physiological or biochemical roots. They may also perceive self-awareness to be embedded within other deficits, such as general cognitive functioning and treat lacking self-awareness as a part of decreased general cognition.

Group 2 clinicians (18%) are those who believe a lack of self-awareness is a deficit but it does not impact occupational performance in individuals with schizophrenia. These clinicians may see the implications of decreased self-awareness, such as decreased compliance with medications or therapy services. However, they may believe that disciplines other than occupational therapy directly address it, such as psychiatry or psychology. For the clinicians in this group who do address decreased self-awareness, they are doing so with level of performance in mind. In other words, the self-awareness part is the means, not the end, of the intervention. For example, a client with decreased self-awareness may also have decreased attention to task. So an occupational therapy treatment session may involve a cooking activity, which progressively increases in time to increase attention to task. If during the task, the client gradually sees that he or she is completing the task in less time and it is becoming easier, the increased attention is the target skill but self-awareness is also addressed as the client sees progress from session to session.

Group 3 clinicians (20%) are those who believe a lack of self-awareness is a deficit, which impacts occupational performance, but they do not believe meditation can influence one's level of self-awareness. Meditation may be used for a different purpose; for example, stress reduction prior to a difficult or strenuous occupation. A deep

breathing exercise could be used to calm a client before a complex cooking activity in order to facilitate performance. It was not analyzed, however, whether this group of clinicians believed meditation to be more dominantly a preparatory occupation or a main occupation.

Group 4 clinicians (48%) are those who believe a lack of self-awareness is a deficit, which impacts occupational performance and that meditation can influence one's level of self-awareness. However, this group of clinicians is smaller than those clinicians who claimed to use meditation as treatment (75.5%). These individuals may still not use meditation in treatment, and the barriers listed in survey question number 16 and addressed under research question two may be the specific reasons why. Nearly half of the sample use meditation to address a lack of self-awareness in individuals with schizophrenia. Given the lack of literature targeting this particular intervention method for this population, these results are surprising. Thus begs the question of why there is a lack of literature targeting this area of practice in light of the growing trend of looking towards evidence-based practice to fuel intervention ideas?

Are occupational therapy clinicians using meditation as an intervention? If not, what are some perceived barriers?

Despite the lack of existing literature regarding the use of meditation in occupational therapy practice, a noteworthy portion of this sample has used meditation. The responses to the question addressing the use of meditation as an intervention are mixed between "never" and "always". The varied responses to this question show the sample of clinicians reached were a reasonably unbiased group, as opposed to reaching only those clinicians interested because they already use meditation as treatment.

There was also a significant portion of the sample who agreed that they incorporate body awareness exercises in treatment. It was not analyzed whether or not there was a group of clinicians who incorporate meditation techniques as treatment as well as incorporating body awareness techniques into treatment. However, addressing the use of body awareness techniques determined that there are clinicians who incorporate components of meditation within treatment but may not consider it meditation. The operational definition of body awareness techniques in this study involves the basic components of meditation; however, it did not encompass the more abstract components, such as self-awareness. It is possible that these clinicians who use body awareness are addressing self-awareness, and other end products of meditation, inadvertently.

The respondents predominantly identified the single most inhibiting barrier as meditation is "inappropriate for the population". One reason for this could be the treatment setting; for example, an acute inpatient setting where the focus is on regulating medications and becoming stable. Another possible reason for this could be the specific setting, for example a state institution where treatment for psychosis is predominantly pharmacological, and meditation is viewed as too alternative for the population within the setting. Yet, as mentioned previously, it was found that psychiatric inpatients do use complementary and alternative medicine but may not always reveal this information to their physician. However, the most chosen answer of those offered was "other." Of the nine open-ended answers provided following the choice of "other," there was no single concept that was identified more often than any other. However, the open-ended responses all fit into two categories of client factors, such as "concerned about active psychosis", and therapist factors, such as "not familiar with treatment".

Do practicing clinicians believe meditation is an accepted intervention within the profession of occupational therapy?

There was some agreement that meditation falls within the realm of occupational therapy. Of those clinicians who do use it as treatment (75.5%), only 5.5% disagree that it falls under the realm of occupational therapy as a preparatory occupation, and 22.2% as a main occupation. The majority at 69.4% agree with meditation being a preparatory occupation, and 50% as a main occupation. The rest are unsure at 25% for a preparatory and 27.8% as a main occupation. Evidently, the general view was that it is more of a preparatory method of treatment as opposed to the main occupation in a therapy session. However, because the two questions regarding meditation as a preparatory or main activity are not mutually exclusive, there is possibly some overlap. Clinicians could believe meditation to be a preparatory and main activity within a treatment session. The percentage of clinicians who are unsure have a few possible reasons for this. The educational curriculum, continuing education or professional organization that these clinicians were exposed to throughout their education and career may not have addressed meditation as a treatment technique. This lacking curriculum would also partially explain the perceived barrier of the therapist being unfamiliar with meditation as treatment, as mentioned above. Educational curriculum is fueled by acceptable therapist behavior, and techniques, and is increasingly based on evidence-based practice. Furthermore, many clinicians who have been in the field for years were exposed to Uniform Terminology III in defining aspects of the profession. Not until 2002 when the American Occupational Therapy Association created the Occupational Therapy Practice Framework were preparatory occupation, and occupation-based intervention introduced as defining terms

(American Occupational Therapy Association, 2002).

Those clinicians who had personal experience with meditation may not necessarily be those who incorporate it into practice. Considering that the percentage of clinicians who have personal experience (82%) was larger than the percentage of those who incorporate it into practice (75.5%), it may be viewed as only personally relevant and not professionally. However, it may be suggested that because these two percentages are close, having personal experience with meditation could influence whether the clinician uses it professionally.

In order to further address how meditation falls within the realm of occupational therapy practice, respondents were asked to identify any models of practice they believed to cover meditation in practice. One of the most frequently identified models was cognitive behavioral therapy (CBT). CBT is one approach used in occupational therapy practice that is frequently noted in existing occupational therapy literature regarding the treatment of schizophrenia. However, CBT was originated outside of occupational therapy and therefore is not occupationally based. In using this model of practice, it is up to the therapist to incorporate occupation and apply CBT to that. Other models of practice referenced were very occupationally based, such as, person-environment-occupation model or the occupational adaptation model of practice. The variety and number of models indicated is surprising because of the lack of occupational therapy literature regarding meditation.

Conclusion

In conclusion, the demographics of the population addressed are typical of the population addressed in similar studies regarding the use of meditation. There are

clinicians who believe that meditation can successfully address lack of self-awareness deficits in individuals with schizophrenia and furthermore, there are clinicians who incorporate meditation into treatment for individuals with schizophrenia. Despite the little existing occupational therapy research linking meditation to lack of self-awareness deficits in those with schizophrenia, clinicians surveyed in this study do find meditation to fall within occupational therapy scope of practice.

Chapter 6: Summary, Conclusions and Recommendations

This chapter will summarize the information presented by this study and discuss recommendations for further research on the topic of meditation in therapy.

Within the limits of this study, there are clinicians who believe the potential of meditation as an intervention to impact levels of self-awareness in individuals with schizophrenia. These clinicians may also be those who do in fact incorporate meditation into their therapy. However, it is possible that there is a subset of clinicians who believe in the potential of meditation, but do not practice it for any number of reasons.

These clinicians were addressed with research question number two. Those who do not incorporate meditation into their therapy perceive a variety of barriers as roadblocks. Most of the perceived barriers fell into two categories; client factors or clinician factors. However, if the conditions of these barriers were lifted, there would be no guarantee that these clinicians would begin to incorporate meditation into therapy.

Most clinicians in this study viewed meditation to be a preparatory activity as well as a main occupation. Of those clinicians who see the benefit of meditation in response to a lack of self-awareness deficits that come with schizophrenia, most view meditation as fitting in occupational therapy practice as a preparatory method, as opposed to a main occupation in a therapy session. However, in answering this research question the results to the two questions addressing meditation as a preparatory activity and as a main occupation are not mutually exclusive, therefore there is most likely some overlap.

Recommendations for Future Research

Given a view of mental health practice by occupational therapists varies greatly internationally, improving the sampling of this study by reaching a more extensive group

of international therapists could give a clearer idea of the beliefs of clinicians within the United States versus the international arena.

In addition to expanding the sample of international clinicians, it would be beneficial to expand the topic of discussion to related professionals, such as psychiatrists. Finding their opinions on the use of meditation with those with schizophrenia and its impact on self-awareness would be one step. A necessary next step would be to articulate the views of the profession regarding the role of occupational therapists in therapy for mental illnesses, specifically with individuals with schizophrenia and related illnesses. Broadening discussion topics and closing the gap between professions would give a better understanding of how occupational therapy is viewed within psychosocial therapies by other professions as well as give a realistic view of the future of occupational therapy in treating those with psychiatric illnesses.

In response to the clinicians who do not use meditation as therapy, exploring barriers further and in more detail could be beneficial. In addition to perceived barriers, exploring educational institutions and their curriculums to determine if meditation is discussed with students and to what extent. If it is discussed, what are students' perceptions and beliefs following the material? If it is not discussed, what are barriers perceived by the faculty and/or the institution that enforces such a curriculum. In order to improve attention given to meditation in the mental health arena, the professional organizations should approve funding for an increase in continuing education focusing on meditation as an intervention and enhance literature available for these programs.

Appendix A: Recruitment Statement

To all Occupational Therapists and Occupational Therapy Assistants,

I am a graduate Occupational Therapy Student at Ithaca College in Ithaca, New York. I am in the process of completing my graduate thesis entitled "The Role of Meditation in Psychosocial Occupational Therapy for Individuals with Schizophrenia". The purpose of this study is to find how practicing occupational therapists in the international arena feel about meditation and including it in occupational therapy intervention

I am providing you with a link to my 22 question online survey, which will take approximately 15 minutes to complete, if you choose to do so. You only need to click on the link, complete the survey and click "submit" and you will be done. You must be 18 years of age or older to participate and currently treating clients with a diagnosis of schizophrenia, schizoaffective disorder or mental illness that involves psychotic symptoms. All submissions will be completely anonymous and you may exit the survey at any point without penalty.

The results from this survey will be analyzed and presented to the faculty and students of the Occupational Therapy Department of Ithaca College and included in a submission to a relevant professional journal.

If you have any questions or need any further information, I can be contacted via email at bpalomb1@ithaca.edu and my faculty advisor Marilyn Kane at mkane@ithaca.edu.

Thank you very much for considering my survey!

Appendix B: Survey Instrument

(These are the questions to be posted on the Web survey, the format displayed here is the paper version)

The Role of Meditation in Psychosocial Occupational Therapy

Demographics

1. What is your age?
2. How many years of experience do you have working in occupational therapy?

3. How many years of experience do you have treating clients with a diagnosis of schizophrenia, schizoaffective or mental illness that involves psychotic symptoms? _____
4. What percentage of your present caseload has a diagnosis of schizophrenia, schizoaffective or a mental illness that involves psychotic symptoms?

5. What percentage of your clients with a diagnosis listed in #4 also have a dual-diagnosis of substance abuse? _____
6. Where do you practice? (choose one)

<ul style="list-style-type: none"> ▪ USA ▪ Canada ▪ Europe ▪ Scandanavia ▪ Asia ▪ Middle East 	<ul style="list-style-type: none"> ▪ Africa ▪ South America ▪ Australia/New Zealand ▪ Other: (please specify) _____
---	---
7. What is your highest level of education? (choose one)

<ul style="list-style-type: none"> a. Associates in OT (or equivalent) b. Diploma c. Bachelors in OT (or equivalent) 	<ul style="list-style-type: none"> d. Masters in OT (or equivalent) e. Doctorate in OT (or equivalent) f. Other: (please specify) _____
---	--
8. What would you consider your primary method of treatment for the clients with

the diagnosis in question # 4?

- a. Cognitive-behavioral therapy
- b. Life skills training
- c. Social skills training
- d. Expressive therapy
- e. Crafts
- f. Vocational Training
- g. Stress management
- h. Other: (please specify) _____

9. Have you ever personally meditated or participated in an activity that involved a type of meditation? (for example: yoga)

Yes No

For each of the following statements please express if you agree or disagree (choose only one option)

For the following 3 questions, the term “self-awareness” is defined an individual’s perception of their own performance during an activity within context, as well as the individual’s reflection on performance of a specific activity, out of its context (Josman, 2005)

10. Lack of self-awareness is a common deficit in those with schizophrenia.

Strongly disagree Disagree Unsure Agree Strongly Agree

11. Occupational performance is influenced by one’s level of self-awareness.

Strongly disagree Disagree Unsure Agree Strongly Agree

12. Meditation can influence one’s level of self-awareness.

Strongly disagree Disagree Unsure Agree Strongly Agree

For the following 4 questions, the term “meditation” can be defined as involving either concentrating on a single object or sound and pushing away all other distractions (Kabat-Zinn, 1982; Walloch, 1998)

OR

Involving focusing on one’s own breathing and acknowledging other thoughts, but *not* becoming distracted by them (Kabat-Zinn, 1982, Walloch, 1998)

13. I incorporate/have incorporated a type meditation into treatment for those with

schizophrenia, schizoaffective disorder or other mental illness involving psychotic symptoms.

Never Rarely Sometimes Often Always

14. Deep breathing involved with meditation brings about changes throughout the body and mind.

Strongly disagree Disagree Unsure Agree Strongly Agree

15. If you use meditation as a form of intervention, what percentage is done in a group format vs. individually? (if you do *not* use it, please omit this question).

16. If you do not use meditation as a form of intervention, what is the primary inhibitor of including meditation in your interventions? (if you *do* use it, please omit this question)

- a. Lack of finances
- b. Inadequate space
- c. Disbelief in method
- d. Size of caseload
- e. Inappropriate for facility
- f. Inappropriate for population
- g. Other (please specify): _____

For the following 2 questions, the term "body awareness" is defined as one's knowledge of the position of his or her body, the level of tension in his or her muscles and the depth of his or her inhalations and exhalations.

17. I have included a form of body awareness exercises in my treatment sessions for those clients with a diagnosis of schizophrenia, schizoaffective or mental illness that involves psychotic symptoms?

Strongly disagree Disagree Unsure Agree Strongly Agree

18. One's level of body awareness can reflect one's level of self-awareness.

Strongly disagree Disagree Unsure Agree Strongly Agree

19. I think that meditation falls into the realm of occupational therapy as a method of preparation for occupation-based activity.

Strongly disagree Disagree Unsure Agree Strongly Agree

20. I think that meditation falls into the realm of occupational therapy a main occupation during a therapy session.

Strongly disagree Disagree Unsure Agree Strongly Agree

21. I think Occupational Therapy Theory-Based models of practice support using meditation and mind/body techniques in intervention.

Strongly disagree Disagree Unsure Agree Strongly Agree

22. If you agree with the above statement please name one or more model of practice you think support using meditative interventions.

Do you have any comments?

Thank you very much for completing this online survey!

Appendix C: Human Subjects Board Proposal
 ALL-COLLEGE REVIEW BOARD
 FOR
 HUMAN SUBJECTS RESEARCH
 COVER PAGE

Investigators: Bianca Palombizio, BS OTS

Department: Occupational Therapy

Telephone: (860) 306-7722 cell

Project Title: The Role of Meditation in Psychosocial Occupational Therapy regarding Individuals with Schizophrenia

Abstract:

Chronic schizophrenia is one of the most disabling mental illnesses, affecting about *1% of the population*. In 2001, indirect and direct costs were at approximately \$100 billion a year. From the time after onset, an individual may experience occupation related functional limitations in areas such as employment, interpersonal or self-care. (Sadock & Sadock, 2001)

One symptom of schizophrenia that is gaining attention is the idea of decreased self-awareness or poor insight; however, this is not included in the DSM-IV definition of schizophrenia. (Subotnik, Nuechterlein, Irzhevsky, Kitchen, Woo, Mintz, in press) Those with impaired self-awareness may not recognize their deficits and needs for readjustment into their community. This lack of insight into their strengths and weaknesses can hinder their cooperation and motivation for any type of treatment. Furthermore, this can cause the individual to take actions or participate in events that may be above their present ability level therefore presenting a dangerous situation to the individual. For example, clients in this population often graduate to supportive apartments with minimal supervision; if the individual has a poor perception of their abilities it could result in harm to themselves or other individuals in such daily life tasks as cooking.

The purpose of this study is to determine the opinions and practice of professional occupational therapists working with the mental health population on whether meditation has a role in psychosocial occupational therapy; specifically with individuals who suffer from deficits in self-awareness. In a national mail survey it was determined that occupational therapists were more likely to incorporate meditation into their practice than physicians, nurses and physical therapists are. However, the study did not address for what meditation was used. (Schoenberger et al, 2002) Present treatment under occupational therapy for schizophrenia includes occupation with a cognitive behavioral approach, addressing memory, volition and general executive functioning. (Josman, N. 2005) A relatively new approach to cognitive treatment is incorporating meditation into cognitive behavioral therapy; called Acceptance and Commitment Therapy (ACT). Results from a study done in 2002 comparing ACT and treatment as usual (TAU) in individuals with schizophrenia, schizoaffective disorder, mood disorder with psychosis, delusional disorders and psychosis NOS, demonstrated a significantly lower rate of rehospitalization in those individuals with the ACT treatment. (Bach & Hayes, 2002).

Proposed Date of Implementation: January 2006

Bianca Palombizio, BS OTS

Marilyn Kane MA OTR/L

Print or Type Name of Principal Investigator and Faculty Advisor

Signature (Use blue ink) Principal Investigator and Faculty Advisor

ALL-COLLEGE REVIEW BOARD
FOR
HUMAN SUBJECTS RESEARCH
CHECKLIST

Project Title: The Role of Meditation in Psychosocial Occupational Therapy regarding Individuals with Schizophrenia.

Investigator(s): Bianca Palombizio, BS OTS

Investigator HSR Use	Use Only Items for Checklist
<u> X </u>	1. General information
<u> X </u>	2. Related experience of investigator(s)
<u> X </u>	3. Benefits of the study
<u> X </u>	4. Description of subjects
<u> X </u>	5. Description of subject participation
<u> X </u>	6. Description of ethical issues/risks of participation
<u> X </u>	7. Description of recruitment of subjects
<u> X </u>	8. Description of how anonymity/confidentiality will be maintained.
<u> n/a </u>	9. Debriefing statement
<u> n/a </u>	10. Compensatory follow-up
<u> X </u>	11. Appendix A - Recruitment Statement
<u> X </u>	12. Appendix B - Informed Consent Form (or tear-off Cover Page for anonymous paper and pen/pencil surveys)
<u> n/a </u>	13. Appendix C - Debriefing Statement
<u> X </u>	14. Appendix D - Survey Instruments
<u> n/a </u>	15. Appendix E - Glossary to questionnaires, etc.

Items 1-8, 11, and 12 must be addressed and included in the proposal. Items 9, 10, and 13-15 should also be checked if they are appropriate - indicate "NA" if not appropriate. This should be the second page of the proposal.

Human Subjects Proposal

1. General Information About the Study

a. Funding: All funding would come from the Ithaca College Occupational Therapy department; the primary researcher would pay for any other costs.

b. Location: This study would be conducted and all data would be analyzed on the Ithaca College campus.

c. Time Period: Data will be collected in January and February of 2006, the remainder of the study including data analysis will be conducted during March of 2006.

d. Expected Outcome: The results of this study would be included in the primary researcher's masters' thesis, presented to the students and faculty of Ithaca College and eventually submitted to a professional journal.

2. Related Experience of the Researcher and Faculty Advisors

Bianca Palombizio is a graduate student in the Ithaca College Occupational Therapy program. Her experience in this area is limited to the coursework at Ithaca College. Relevant courses include Biostatistics, Medical Ethics, Research Methods, Research Methods Seminar, Clinical Psychiatry and Occupational Therapy in Adults. The research coursework involved ethical and professional issues.

Marilyn Kane is an assistant professor in the occupational therapy department. She has been an occupational therapist for approximately 30 years. She has been involved in assessment tool and program development (Functional Needs Assessment for Chronic Psychiatric Patients), and the associated analysis of the tool/program effectiveness with that population. She has successfully supervised four (4) graduate student theses, served on four (4) thesis committees, and conducted three group research courses (20 graduate students). She is completed conducting research (with former assistant professor Susan Leicht) on using the Dynavision 2000 to improve occupational performance in post-CVA clients. She has just completed research (with assistant professor Donna Twardowski on the effectiveness of using a disability simulation learning experience with occupational therapy students to change attitudes towards individuals with disabilities. She is also working with Associate Professor Diane Long to measure the effectiveness of case/problem based learning for teaching clinical reasoning to OT students. She is also working with Assistant Professors Sharon Stansfield and Deborah King on use of virtual reality based intervention with clients with CVAs. Outcomes from the research include one publication, one AOTA-NHTSA grant, and three national level presentations (posters and workshops).

3. Benefits of Study

This study would increase upon the existing research on occupational therapy interventions for chronic schizophrenia and perceptions of using meditation as a complementary occupational therapy treatment technique. It will bring into focus a realistic view of where occupational therapists believe meditation fits as a treatment for those with deficits in self-awareness under occupational therapy, as well as a representation of the present use of meditation within psychosocial occupational therapy.

4. Description of Subjects

This study will survey any practicing occupational therapist or occupational therapy assistant, who is at least 18 years of age and works with individuals with mental illness that involve psychotic symptoms will be asked to complete it internationally using SurveyMonkey.com as the surveying tool.

5. Description of Subject Participation

The subject will be presented with a link to the survey on SurveyMonkey.com. The first page describes the possible risks of participation as well as serves as the consent form. (see appendix A). The subject will then be asked to complete a survey of 23 questions, which will take the participant 10-15 minutes. At any point, the subject may exit the survey without penalty. The return of the survey data to the researchers will be completely anonymous unless the subject voluntarily offers personal information or comments at the close of the survey.

6. Ethical Issues

a. Risks of Participation: The only possible risk is embarrassment should the subject feel they lack experience or knowledge in regard to any particular question. In response to this, the respondent is made aware in the consent statement that they may omit questions if they choose and that all responses are kept anonymous.

b. Informed Consent: The first page of the survey will address the consent of the subject. (see appendix A).

7. Recruitment of Subjects

a. Recruitment Procedures: A link to the survey, available via SurveyMonkey.com (see Appendix B) will be posted on the American Occupational Therapy Association Mental Health Special Interest Section List-serve, Model of Human Occupation List-serve, American Occupational Therapy Association list-serve, Canadian Occupational Therapy Association List-serve and SIS list-serve.

b. Inducement to Participate: There will be no inducement to participate.

8. Confidentiality/Anonymity of Responses

All responses will be completely anonymous, as the survey will not be linked with any sort of identifying information, i.e. an email address. The aggregate raw data will be returned to the researcher through SurveyMonkey.

9. Debriefing

The subjects would not be deceived so no debriefing is necessary.

10. Compensatory Follow-Up

There is no need for structured follow-up.

Appendix D – Human Subjects Review Committee Approval

ITHACA

OFFICE OF THE PROVOST AND VICE PRESIDENT
FOR ACADEMIC AFFAIRS

February 8, 2006

Bianca Palombizio, Graduate Student
Department of Occupational Therapy
School of Health Sciences and Human Performance

Re: The Role of Meditation in Psychosocial Occupational Therapy with Individuals with Schizophrenia

The All-College Review Board for Human Subjects Research (HSR) has received your request for review of the responses to stipulations made on February 3, 2006. The proposal has been reviewed and the Board authorizes you to begin the study. This approval will remain in effect for a period of one year from the date of authorization.

After you have finished the project, please complete the enclosed Notice-of-Completion Form and return it to my office for our files.

Best wishes for a successful study.

Sincerely,



Garry L. Brodhead, Associate Provost
All-College Review Board for Human Subjects Research

/mt

Enclosure

Ref: HSR 00106-11

Appendix E – Informed Consent Page of Survey

I have read and understand the message posted on the List-serve inviting me to participate in this study. I understand that I will begin this survey by clicking on the “next” button on this page. If I do not wish to continue with the survey, I may exit by clicking on the “exit this survey” link in the top right corner of the page or by simply closing my browser window.

I understand that the researcher will keep all responses to this survey anonymous; however, the responses to this survey are not submitted through an encrypted website, meaning there is a chance that a third party could see my responses.

I understand that I may omit any questions. I also understand that I am free to withdraw and exit the survey at any time without penalty.

I am at least 18 years of age and agree to participate in this survey. I understand that by proceeding with this survey I am giving the researcher my consent to use this data.

References

- Addington, D., Addington, J., Maticka-Tindale, E., & Joyce, J. (1992). Reliability and Validity of a Depression Rating Scale for Schizophrenics. *Schizophrenia Research*, 6, 201-208.
- Alexander, C. N., Langer, E. J., Newman, R. I., Chandler, H. M., & Davies, J. L. (1989). Transcendental Meditation, Mindfulness, and Longevity: An Experimental Study with the Elderly. *Journal of Personality and Social Psychology*, 57, 950-964.
- American Occupational Therapy Association. (2005). Consumer Information. *American Occupational Therapy Association*. Retrieved May 3, 2005 from www.aota.org.
- American Occupational Therapy Association. (2002). Occupational therapy practice framework: Domain and process. *American Journal of Occupational Therapy*, 56, 609-639.
- American Psychiatric Association. (2000). American Psychiatric Association Diagnostic and statistical manual of mental disorders. (3rd ed. rev.) DSM-III-R, American Psychiatric Association, Washington DC.
- Anders, S. (2003). Improving community based care for the treatment of schizophrenia: Lessons from native Africa. [Electronic version] *Psychiatric Rehabilitation Journal*, 27, 51-58, Retrieved December 1, 2004 from EBSCOhost database
- Astin, J. A., Shapiro, S. L., Eisenberg, D. M., & Forsys, K. L. (2003). Mind-body medicine: State of the science, implications for practice. *Journal of American Board of Family Practitioners*, 16, 131-147.

- Bach, P. & Hayes, S. C. (2002). The use of acceptance and commitment therapy to prevent the rehospitalization of psychotic patients: A randomized controlled trial. *Journal of Consulting and Clinical Psychology, 70*, 1129-1139. Retrieved on January 17, 2006 from ScienceDirect database
- Bair, J., Stein, F., Vargas, S., Falk-Kessler, J., Tubbs, C., Titus, J., et al. (1999). Skills training of occupational therapy for persistent schizophrenia [Letter to the editor]. *American Journal of Psychiatry, 156*, 1292-1296. Retrieved December 11, 2005, from <http://proquest.umi.com>
- Barbuti, J., Clement, S., Fitzgerald, C., Frey, J., Henebery, H., Huizinga, J., Lee, M., & Sherman, E. (2005). *Inhibitors and Facilitators to the Use of Occupations by Fieldwork Supervisors in Occupational Therapy Practice*. Unpublished graduate study, presented December 9, 2005 at Ithaca College, New York.
- Bedard, M., Felteau, M., Mazmanian, D., Fedyk, K., Klein, R., Richardson, J., et al. (2003, July 8). Pilot evaluation of a mindfulness-based intervention to improve quality of life among individuals who sustained traumatic brain injury. *Disability & Rehabilitation, 25*, 722-731. Abstract retrieved March 10, 2006, from Taylor & Francis database: <http://taylorandfrancis.metapress.com>
- Bishop, S., R. (2002). What do we really know about mindfulness based stress reduction? *Psychosomatic Medicine, 64*, 71-84. Retrieved on September 12, 2006 from Google Scholar Database.
- Bourgeois, M. Swendse, J. Young, F. Amador, X. Pini, S. Cassano, G. B. et al. (2004). Awareness of Disorder and Suicide Risk in the Treatment of Schizophrenia: Results of the International Suicide Prevention Trial. *The American Journal of*

Psychiatry, 16, 1494-1496, Retrieved on April 10, 2005 from PsycArticles Database.

Brintnell, E. S., Haglund, L., Larsson, A., & Piergrossi, J. (2005, November).

Occupational therapy in mental health today: A survey and some reflections.

World Federation of Occupational Therapists Bulletin, 52, 9-15.

Buckley, P., Hasan, S., Friedman, L., & Cerny, C. (2001). Insight and schizophrenia.

Comprehensive Psychiatry, 42, 39-41.

Cardoso, R., de Souza, E., Camano, L., & Leite, J. R. (2004) Meditation in health: An

operational definition. *Brain Research Protocols*, 14, 58-60, Retrieved March 5,

2005 from ScienceDirect database.

Chittum, W. R., Johnson, K., Chittum, J. M., Juercio, J. M., & McMorrow, M. J. (1996).

Road to awareness: An individualized training package for increasing knowledge and comprehension of personal deficits in persons with acquired brain injury.

Brain Injury, 10, 763-776.

Chrisman L., & Frey, R. J. (2005). Meditation. *The Gale Encyclopedia of Alternative*

Medicine. 2nd Edition. Jacqueline L. Longe, Editor. Farmington Hills, MI: Gale

Group. Retrieved on September 12, 2006 from Health and Wellness Resource

Center database.

[http://ezproxy.ithaca.edu:2112/servlet/HWRC/hits?docNum=DU2603000513&ye](http://ezproxy.ithaca.edu:2112/servlet/HWRC/hits?docNum=DU2603000513&year2=&year1=&tcit=1_1_0_0_1&locID=nysl_sc_ithaca&rlt=1&origSearch=true&t)

[ar2=&year1=&tcit=1_1_0_0_1&locID=nysl_sc_ithaca&rlt=1&origSearch=true&t](http://ezproxy.ithaca.edu:2112/servlet/HWRC/hits?docNum=DU2603000513&year2=&year1=&tcit=1_1_0_0_1&locID=nysl_sc_ithaca&rlt=1&origSearch=true&t)

[=RK&s=1&r=d&items=0&secondary=false&o=&n=10&day2=&day1=&l=d&sgP](http://ezproxy.ithaca.edu:2112/servlet/HWRC/hits?docNum=DU2603000513&year2=&year1=&tcit=1_1_0_0_1&locID=nysl_sc_ithaca&rlt=1&origSearch=true&t)

[hrase=true&month2=&month1=&c=4&bucket=ref&SU=meditation](http://ezproxy.ithaca.edu:2112/servlet/HWRC/hits?docNum=DU2603000513&year2=&year1=&tcit=1_1_0_0_1&locID=nysl_sc_ithaca&rlt=1&origSearch=true&t)

Crepeau, E., B. (2003). Analyzing Occupation and Activity. In Crepeau, E. B., Cohn, E.

- S., and Schell, B. A. B. (Eds). *Willard & Spackman's Occupational Therapy*. Philadelphia: Lippincott Williams & Wilkins. 187-199.
- Crossen B., Barco, P. P., Velozo, C. A., Bolesta, M. M., Cooper, P. V., Werts, D., & Brobeck, T. V. (1989). Awareness and compensation in postacute head injury rehabilitation. *Journal of Head Trauma Rehabilitation*, 4, 46-54.
- Davalos, D. B., Green, M., & Rial, D. (1999). Addressing executive functioning and cognitive rehabilitation in the treatment of schizophrenia. *Rehabilitation Psychology*, 44, 403-410. Retrieved April 6, 2005, from Academic Search Premier Database.
- Davidson, J. R., Kabat-Zinn, J., Schumacher, J., Rosenkranz, M., Muller, D., Santorelli, S. F., Urbanowski, F., Harrington, A., Bonus, K., & Sheridan, J. F. (2003). Alterations in brain and immune function produced by mindfulness meditation. *Psychosomatic Medicine*, 65, 564-570. Retrieved on December 10, 2005 from MEDLINE database.
- Dirette, D. (2002). The development of awareness and the use of compensatory strategies for cognitive deficits. *Brain Injury*, 16, 861-871. Retrieved April 5, 2005 from CINAHL Database.
- Duncombe, L. W. (2005). The Cognitive-Behavioral Model in Mental Health. In Katz, N. (Eds.), *Cognition & Occupation Across the Life Span. Models for Intervention in Occupational Therapy*. (pp. 187-210). Bethesda. American Occupational Therapy Association.
- Duncombe, L. W. (2004). Comparing learning of cooking in home and clinic for people with schizophrenia. *American Journal of Occupational Therapy*, 58, 272-278.

- Elkins, G., Rajab, M. H., & Marcus, J. (2005). Complementary and alternative medicine use by psychiatric inpatients. *Psychological Report, 96*, 163-166.
- Fenton, W. S. (2000). Depression, suicide and suicide prevention in schizophrenia. *Suicide and Life-Threatening Behavior, 30*, Retrieved April 10, 2005, from CINAHL Database.
- Fleming J. & Strong, J. (1999). A longitudinal study of self-awareness: Functional deficits underestimated by persons with brain injury. *Occupational Therapy Journal of Research, 19*, 3-17. Retrieved April 6, 2005, from CINAHL Database.
- Fuller, K. S. (2003). Traumatic Brain Injury. In Goodman, C. C., Boissonnault, W. G., & Fuller, K. S. (Eds). In *Pathology: Implications for the Physical Therapist*. (pp. 1072–1085). Philadelphia: Saunders. (Original work published 1998).
- Gard, G. (2005). Body awareness therapy for patients with fibromyalgia and chronic pain. *Disability and Rehabilitation, 27*, 725-728.
- Goisman, R., M. (1997). Cognitive-behavioral therapy today. [Electronic Version] *Harvard Mental Health Letter, 13*. Retrieved on March 2, 2005 from Academic Search Premier database.
- Golden, C. J. (1981). A Standardized Version of Luria's Neuropsychological tests. In: Filskov, S., Boll T. J., (eds): *Handbook of Neuropsychology, 2*. New York, NY: Wiley.
- Gould, R. A., Mueser, K. T., Bolton, E., Mays, V., & Goff, D. (2001). Cognitive therapy for psychosis in schizophrenia: An effect size analysis. *Schizophrenia Research, 48*, 335-342.
- Grossman, P., Neimann, L., Schmidt, S., & Walach, H. (2004). Mindfulness-based stress

reduction and health benefits: A meta-analysis. *Journal of Psychosomatic Research*, 57, 35-43. Retrieved March 5, 2005 from CINAHL Database.

Hadas-Lidor, N., Katz, N., Tyano, S., & Weizman, A. (2001). Effectiveness of dynamic cognitive intervention in rehabilitation of clients with schizophrenia. [Electronic version] *Clinical Rehabilitation*, 15, 349-359. Retrieved November 21, 2004 from EBSCOhost database.

Hartman-Maeir, A., Soroker, N., Ring, H. & Katz, N. (2002). Awareness of deficits in stroke rehabilitation. *Journal of Rehabilitation Medicine*, 34, 158-164.

Hatashita-Wong, M., & Silverstein, S. M. (2003). Coping with voices: Selective attention training for persistent auditory hallucinations in treatment refractory schizophrenia. *Psychiatry*, 66, 255-261. Retrieved April 6, 2005, from PsycArticles Database.

Iveson-Iveson, J. (1985). Developing Self-Awareness. *Nursing Mirror*, 141, 25.

Josman, N. (2005). The Dynamic Interactional Model in Schizophrenia. In Katz, N. (Eds) *Cognition & Occupation Across the Life Span: Models for Intervention in Occupational Therapy*. (pp. 164-185). Bethesda, MD. American Occupational Therapy Association.

Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation. *General Hospital Psychiatry*, 4, 33-47.

- Katz, N. & Hartman-Maeir, A. (2005). The Dynamic Interactional Model in Schizophrenia. In Katz, N. (Eds.) *Cognition & Occupation Across the Life Span. Models for Intervention in Occupational Therapy*. (pp. 169-185) Bethesda, MD. American Occupational Therapy Association.
- Katz, N. & Hartman-Maeir, A. (1997). Occupational performance and metacognition. *Canadian Journal of Occupational Therapy*, 64, 53-62.
- Kielhofner, G. (2002). *A Model of Human Occupation: Theory and Application*. (3rd Ed.). Chicago, IL: Lippincott Williams & Wilkins.
- Landa-Gonzalez, B. (2001). Multicontextual occupational therapy intervention: A case study of traumatic brain injury. *Occupational Therapy International*, 8, 49-62.
- Lieberman, R. P., Wallace, C. J., Blackwell, G., & Kopelowicz, A. (1998, August). Skills training versus psychosocial occupational therapy for persons with persistent schizophrenia. *American Journal of Psychiatry*, 155, 1087-1091. Retrieved December 11, 2005, from <http://proquest.umi.com>
- Linehan, M. M. (1993). *Skills Training Manual for Treating Borderline Personality Disorder*. New York: Guilford Press.
- Littman, A. B. (2001). Mind/body tools and techniques. *Mind/Body Medicine: Using Your Mind for Better Health (Harvard Special Health Reports)*. Retrieved from Health & Wellness Resource Center on November 10, 2005.
- Lukoff, D., Wallace, C. J., Lieberman, R. P., & Burke, K. (1986). A holistic program for chronic schizophrenia patients. *Schizophrenia Bulletin*, 12, 274-282.
- Lundy-Ekman, L. (2002). Cerebrum: Clinical Applications. In *Neuroscience. Fundamentals for rehabilitation*. (2nd ed., pp. 409-431). Philadelphia, PA:

- Saunders. (Original work published 2001).
- McDonald, B. C., Flashman, L. A., & Saykin, A. J. (2002). Executive dysfunction following traumatic brain injury: Neural substrates and treatment strategies. *NeuroRehabilitation, 17*, 333-344.
- Miller, R. & Mason, S., E. (2004). Cognitive enhancement therapy: A therapeutic treatment strategy for first-episode schizophrenia patients. [Electronic Version]. *Bulletin of Menninger Clinic*, 213-228. Retrieved November 21, 2004 from EBSCOhost database.
- Palmer, R. L., Hirchall, H., Damani, S., Gatward, N., McGrain, L., & Parker, L. (2003). A dialectical behavior therapy program for people with an eating disorder and borderline personality disorder – Description and outcome. *Journal of Eating Disorders, 33*, 281-6. Retrieved on September 16, 2006 from CINAHL database.
- Rapaport, M. H., Bazzetta, J., McAdams, L. A., Patterson, T., & Jeste, C. V. (1996). Validation of the scale of Functioning in Older Outpatients with Schizophrenia. *American Journal of Geriatric Psychology, 4*, 218-228.
- Rector, N. A. (2005). Cognitive-behavioral therapy for severe mental disorders. *Canadian Journal of Psychiatry, 50*, 245-246. Retrieved October 27, 2005 from ProQuest database.
- Rector, N. A., Seeman, M. V., & Segal, Z. V. (2003). Cognitive therapy for schizophrenia: A preliminary randomized controlled trial. *Schizophrenia Research, 63*, Retrieved on November 4, 2005 from ScienceDirect database.
- Reibel, D. K., Greeson, J. M., Brainard, G. C., & Rosenzweig, S. (2001). Mindfulness-based stress reduction and health-related quality of life in a heterogeneous patient

- population. *General Hospital Psychiatry*, 23, 183-192.
- Robinson, A. K. (2001). *Psychologists perceptions of occupational therapy and the treatment of eating disorders*. Unpublished manuscript, Ithaca College, New York.
- Sadock, B. J. & Sadock, V. A. (Eds.). (2001). *Kaplan & Sadock's Pocket Handbook of Clinical Psychiatry*. Philadelphia, PA: Lippincott Williams & Wilkins.
- Sailas, E. A., & Wahlbeck, K. (2006). Restraint and Seclusion in Psychiatric Inpatient Wards. *Current Opinions in Psychiatry*, 18(5), Retrieved January 18, 2006, from <http://www.medscape.com>
- Schoenberger, N. E., Matheis, R. J., Shiflett, S. C., & Cotter, A. C. (2002). Opinions and Practices of Medical Rehabilitation Professionals Regarding Prayer and Meditation. *Journal of Alternative and Complementary Medicine*, 8, 59-69. Retrieved March 5, 2005 from EBSCOhost database.
- Schneider R. H., Stagers, F., Alexander, C., Sheppard, W., Rainforth, M., Kondwani, K., Smith, S., & King, C. G. (1995). A randomized controlled trial of stress reduction for hypertension in older African Americans. *Hypertension*, 26, 820-827, Retrieved on February 1, 2006 from hyper.ahajournals.org
- Schwartz, K., B. (2003). The History of Occupational Therapy. In Crepeau, E. B., Cohn, E. S., and Schell, B. A. B. (Eds). *Willard & Spackman's Occupational Therapy*. (5-13). Philadelphia, PA: Lippincott Williams & Wilkins.
- Shapiro, D. H. & Zifferblatt, S. M. (1976). Zen meditation and behavioral self control: Similarities, differences and clinical applications. *American Psychologist*, July, 519-531.
- Sherer, M., Boake, C., Levin, E., Silver, B. V., Ringholz, G. & High, W. M. (1998).

- Characteristics of impaired awareness after traumatic brain injury. *Journal of the International Neuropsychological Society*, 4, 380-387, Retrieved January 10, 2006 from EBSCOhost database.
- SPSS for Windows, Rel 13.0. 2004. Chicago: SPSS Inc.
- Stein, F. and Cutler, S. K. (Eds.) (2002). *Psychosocial Occupational Therapy: A Holistic Approach 2nd Ed.* Albany, NY: Delmar.
- SurveyMonkey.com. (1999). [Computer software]. Retrieved January 10, 2006, from surveymonkey.com.
- Swenson, C. R., Sanderson, C., Dulit, R. A., & Linehan M. M. (2001). The Application of Dialectical Behavior Therapy for Patients with Borderline Personality Disorder on Inpatient Units. *Psychiatric Quarterly*, 72, (307-324). Retrieved on July 26, 2006 from Proquest database.
- Teasdale, J. D., Segal, Z. V., Williams, J. M. G., Ridgeway, V. A., Soulsby, J. M., & Lau, M. A. (2000). Prevention of Relapse/Recurrence in Major Depression by Mindfulness-Based Cognitive Therapy. *Journal of Consulting and Clinical Psychology*, 68, 615-623, Retrieved January 10, 2006 from Academic Search Premier database.
- Tham, K., Borell, L., & Gustavsson, A. (2000). The discovery of disability: A phenomenological study of unilateral neglect. *American Journal of Occupational Therapy*, 54, 398-407.
- Toglia, J. P. (2003). Multicontextual Treatment Approach. In Crepeau, E. B., Cohn, E. S., and Schell, B. A. B. (Eds). *Willard & Spackman's Occupational Therapy*. (264-267). Philadelphia, PA: Lippincott Williams & Wilkins.

- Toglia, J. P. (2005). A Dynamic Interactional Approach to Cognitive Rehabilitation. In Katz, N. (Eds.) *Cognition & Occupation Across the Life Span. Models for Intervention in Occupational Therapy*. (29-72). Bethesda, MD: American Occupational Therapy Association.
- Trombly, C. A., & Radomski, M. V. (2002). Assessing abilities and capacities: Cognition. In *Occupational therapy for physical dysfunction*. 5th ed., 197-211. Philadelphia, PA: Lippincott Williams & Wilkins.
- Valentine, E. R. & Sweet, P. L. G. (1999). Meditation and attention: A comparison of the effects of concentrative and mindfulness meditation on sustained attention. *Mental Health, Religion & Culture*, 2, 59-70.
- Walloch, C. L. (1998). Neuro-occupation and the management of chronic pain through mindfulness meditation. *Occupational Therapy International*, 5, 238-248.
- Ware, J. E., & Sherbourne, C. D. (1992). The MOS 36-Item Short-Form Health Survey (SF-36): I. Conceptual Framework and item selection. *Med Care*, 30, 473-483.
- World Health Organization. (2006). Official records of the world health organization, no. 2, p. 100 <http://www.who.int/suggestions/faq/en/>. Retrieved September 12, 2006.
- Wright, J. J., Sadlo, G., & Stew, G. (2006). Challenge-skills and mindfulness: An exploration of the conundrum of flow process. *Occupation, Participation and Health*, 26, 25-32.
- Wurm, R. S. (2004). *Spirituality and occupational therapy*. Unpublished manuscript, Ithaca College, New York.