The Impact of Meditation on Depression and Anxiety

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Abstract

Over the last 20 years the American people have, in increasing numbers, embraced spiritual practices from other cultures as healing modalities for their mental health issues. One of these spiritual practices is meditation. Research is showing that meditation does have therapeutic value in managing some symptoms of depression and anxiety such as ruminative thinking, panic attacks, avoidant behaviors, and some of the physiological responses such as heart rate, respiration, brain processes and more. This paper will explore research on various types of meditation that are being utilized in a variety of settings in the United States as well as in other countries. The research demonstrates that meditation can be an effective tool for symptom management of some psychiatric disorders, and may be universally applied as a healing modality.
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The Impact of Meditation on Depression and Anxiety

Introduction

In America, as in other parts of the world, there have been practices worshiping a divine source believed to have created the world and humankind. Organized religion has dominated American practices since the first settlement was created. Over the centuries there has been an ebb and flow with organized religion dominating the social collective at times, and at other times forms of spiritual practice would be the focus of worship. Today many Americans are turning to spiritual practices or non-Christian religious traditions at an increasing rate, with literature on these topics being sold at local bookstores in addition to the specialty bookstores where it has typically been found in the past.

Religious traditions from Asia with meditation practices such as Buddhism and Hinduism, are having the most influence in the field of mental health. Classical Buddhism has a detailed description of human psychology called Abhidhamma (Goleman, 1988). It was developed in India over 1500 years ago and continues to be followed today by Buddhist monks. The principles of Abhidhamma (Goleman, 1988) can be found in other faiths of Asia demonstrating that this system for defining healthy and unhealthy mental health is not limited to Buddhism. In the Abhidhamma (Goleman, 1988), meditation is one of the primary methods for transforming mental illness to mental health.

From Asia there has been the incorporation of many practices such as tai chi, qi gong, yoga and meditation in to American culture. Centers focused specifically on the development of these activities have sprung up around the country. Members of the medical and mental health communities took interest in these practices as well and today the two communities use these activities as healing modalities in hospitals, residences for senior citizens, and in therapy.
Additionally schools for children have incorporated yoga instruction and practice. Meditation practices from other religious traditions such as Christianity and Native American spirituality are being rediscovered and practiced once again in the lives of people. Due to the growing focus on meditation in the mental health and the medical fields, research is being conducted on the impact of meditation as a healing modality for depression and anxiety.

Today the shifts happening in America as a result of absorbing religious and spiritual practices from Asia, along with the reshaping of traditions already present in American culture, are making changes in mental health care. It is the purpose of this paper to review and compare the research that has been conducted in the field of mental health using various forms of meditation as a healing modality for depression and anxiety. Research on the impact of meditation on various psychiatric disorders, as well as how it changes the brain has been growing leading to collaborations (Begley, 2007) between scientists, the Dali Lama and Tibetan Monks.

This is of interest as in Asia it has traditionally been enough for the mystics to report on the experience of meditating, while in the West, there is a preference for knowing exactly what is occurring for people in measurable terms along with what is occurring in the brain. The research on meditation makes for exciting exchanges between scientists and mystics, with a burgeoning supply of information resulting from all the investigative work being done.

From the of research on meditation as a healing modality, it has been learned that meditation at the least brings a reduction in physiological symptoms of anxiety such as heart rate, respiration, hormone fluctuations in response to stress and more. For depression and anxiety ruminative thinking was brought under control enough to reduce symptoms, as well as aid in increasing emotion regulation. The application of meditation as a healing modality has demonstrated success as an adjunct to therapy and has been established as a component in some
forms of cognitive-behavioral therapy. The inclusion of meditation in mental health care is contributing to changes in the way people believe and live.

Variations of Meditation Practices

Description of Methods of Meditation

*Meditation.* Meditation, what is it? The Webster’s Dictionary defines meditation as an act of meditating; close or continued thought; the turning or revolving of a subject in the mind; serious contemplation; mental reflection; solemn reflection on sacred matters as a devotional act. The Yoga Sutras view meditation as “the act of inward contemplation and the intermediate state between mere attention to an object and complete absorption within it” (Ivanovski & Malhi, 2007, p. 77).

For many people when meditation is mentioned, the image comes to mind of a person sitting with their eyes closed and their legs crossed, in what seems like an uncomfortable position with their feet resting on the thigh of the opposite leg. Perhaps this person is sitting in a temple or a meditation center with incense burning, or in a beautiful garden. Whatever the image may be, the person meditating is removed from daily life.

As the practice of meditation has been incorporated into Western culture things have changed. People do meditation in shorts, their bathrobe, sitting in a chair, in research labs or moving around. There are leaders in the field of mental health who have developed ways of incorporating meditation into all that we do such as eating, walking and so on. Practicing meditation no longer requires a person to separate themselves from their daily activities for periods of times such as an hour, several hours, the entire day, or even a week. Today people are being taught eating meditations, walking meditations, three-five minute meditations, three deep
breathes meditation and more. This paper will not cover all forms of meditation that are being practiced, only the forms used to study their effects on depression and anxiety.

*Transcendental meditation (TM).* This is a type of meditation that has evolved from the Hindu mantra meditation from the Vedic tradition in Hinduism (Brooks, 1985), formulated by Maharishi Mahesh Yogi and brought to the West in the 1960s (Goleman, 1988). Some famous practitioners of Transcendental Meditation are the Beatles, the Beach Boys and Clint Eastwood.

To practice this meditation developed by Maharishi Mahesh Yogi, a person sits in a comfortable position with a straight back, their eyes are closed, breathing slowly, gently and deeply enough to move the diaphragm. Silently a sound or word, usually spiritual in nature, is repeated over and over in the mind. When thoughts enter the mind taking the focus off the sound or word, the person is to let the thoughts go and resume focusing on the mantra.

Repeated daily practice is to help a person move deeper and deeper within, achieving levels of consciousness that bring about union with the cosmic consciousness. When the union is attained a person will experience inner peace and pure awareness at all times, whether still or active. Continued meditation practice brings a person to a state of union with God consciousness, from which she will comprehend the sacred nature of creation. A person surrenders their individuality, living in harmony with nature and the Divine upon having achieved this union.

*Christian meditation (CM).* This form of meditation (Goleman, 1988) is also known as contemplative or centering prayer, and the people known as the Desert Fathers and Mothers developed it. The Desert Mothers and Fathers were early Christians who lived in caves in the deserts of Egypt and Palestine during the Fourth Century, in order to commune with God without the distractions of a community. The meditation consists of the repetition of a scriptural phrase, similar to the mantra meditation from Eastern religions, as one keeps all thoughts on the
phrase and God. The prayer is to be practiced in seclusion as well as during any activity a person may engage in through the course of the day. While active the prayer is repeated silently as one moves about, keeping all thoughts focused on the prayer and union with God. The purpose of this form of meditation is to attain purification, and the one-pointed concentration on God eventually leads to a union with the Divine.

*Mindfulness meditation (MM).* This is a being stage in meditation (Goleman, 1988) where a person realizes the randomness of thoughts that form her beliefs and life. She comprehends the nature of the mind and can move on to developing insight, which is another stage in this meditation. Other components to mindfulness meditation are a focus of the mind on all bodily activity including movement of the limbs, and a focus of the mind on feelings with no judgment as to their value, pleasantness or unpleasantness. Another component is focusing the mind on the mind, whatever mood or psychological thought presents itself, the mind simply notes it then lets it go. The mind witnesses its own processes and perceives with greater clarity and skill even the subtlest of thoughts. Currently this form of meditation is being used with greater frequency in a variety of healing modalities.

A program called Mindfulness Based Stress Reduction (MBSR), developed and pioneered by Jon Kabat-Zinn (1992) to aid patients in managing the stress and pain associated with physical illnesses and their treatments, has found a niche in the mental health community and is the focus of much research. The program uses MM along with yoga and instruction on the principles of meditation, to teach how continued practice develops a non-judgmental, non-reactive, moment-to-moment awareness of mental states and experiences. Other forms of meditation taught are a walking meditation, an eating meditation and a body scan, to foster a connection to the body and the sensations within it.
The MM is applied to activities such as eating and walking in order to generalize an attentive state of mind to all that a person does in a day. This fosters the ability to manage stress and to facilitate mentally healthy thoughts and actions, creating a state of equanimity within a person. Equanimity is described as becoming less reactive, more peaceful, serene and calm. In modern psychological terms it aids in maintaining affective balance and emotion regulation in the face of difficult and complex circumstances in life.

Another article reviewing material on MM (Kostanski and Hassed, 2008) describes it as fostering autonomy as a practitioner learns to not be controlled by “thoughts, sensations and emotions” (Kostanski and Hassed, 2008) versus trying to control them. In addition a practitioner gains release from thoughts and more through cultivating the ability to be present in the moment, “confronting a situation with an attitude of acceptance and yet acting when one needs to act” (Kostanski and Hassed, 2008). Ivanovski and Malhi (2007) write in a review article that MM is comparable to Zen meditation in creating “openness to experience” (Ivanovski & Malhi, 2007) as a result of the degree of absorption that is achieved while meditating. This state of absorption is thought to foster an increased capacity for concentration and “an ability to inhibit distracting stimuli” (Ivanovski & Malhi, 2007).

*Kundalini meditation (KM).* This meditation (Goleman, 1988) comes from the Tantric tradition in India, and the focus is on the raising of the kundalini energy lying dormant at the base of the spine. While a person practices a kundalini meditation they raise the energy up through seven spiritual centers called chakras. A chakra is a wheeling of spinning energy and has attitudes, motives and mental states attached to it.

Most human behavior stems from the first three chakras. The first chakra at the base of the spine is related to territory, a fight or flight reaction, possessiveness, and security. The second
The Impact of Meditation

The third chakra is the seat of human emotional life and self esteem. After these three chakras comes the fourth chakra at the heart, the fifth chakra at the throat, the sixth chakra at the place between the eyebrows often referred to as the third eye, and lastly the seventh chakra located at the top of the head. The purpose of this meditation is to raise the kundalini up past the first three chakras into the upper four chakras to achieve a spiritual union with the Divine.

*Loving kindness meditation (LKM).* This is another meditation (Goleman, 1988) practice that comes from the religion of Buddhism. The LKM is meant to cultivate a loving and compassionate mind toward oneself, all other people, as well as animals, plant life and inanimate objects, without attachment. Loving kindness is an aspect of what is considered mental health according to the Abhidhamma in Buddhism and is thought to contribute to global peace and love.

LKM begins with a person focusing on their self and cultivating an attitude of acceptance, compassion and love toward self. Once this attitude has been achieved toward oneself, the meditation moves out toward the loved ones of a person, then toward friends, associations and acquaintances in the community, sending the acceptance, compassion and love that were cultivated for oneself. Next a person works to extend these qualities to others, with whom one has a conflict or hostile attitude, after which, these qualities are finally sent out to the global village and all life contained within it. There are four qualities of love this meditation is meant to develop, that of friendliness, compassion, appreciative joy, and equanimity.

*Centering prayer.* This form of meditation (Johnson et al. 2009) is a structured meditation practice that helps individuals to develop an awareness of their spirituality. It is said to refine intuitive faculties and open awareness to the spiritual level of being. Centering prayer is practiced by sitting comfortably with eyes closed, choosing a sacred word, like a mantra
meditation, that reflects your desire to be in the presence of the Divine. A person keeps their thoughts focused on the sacred word, always returning to it as other thoughts and sensations intrude.

When finished with the prayer it is recommended to sit in silence for a few moments and reorient to the environment. This meditation can be used by all religious and spiritual traditions as each person can choose whatever sacred word they would like. Another form of centering prayer is called the concentration method and it includes focus on the breath and parts of the body, or reciting a mantra. Centering prayer is often used in CM.

*Vipassana meditation (VM).* This form of meditation (Thatcher, 2008) comes from the tradition of Buddhism. The purpose of VM is to move a person through several phases toward achieving the experience of the emptiness of the mind as well as the material world and all actions contained in it. At this point thoughts are turned toward the body and psychological make-up and reflection on them leads to insight, which is a condition of the mind knowing itself. Through concentration on the body, the sensations contained within it, and how these interconnect with the mind and the processes of the mind, a person can transcend the impurities contained in the mind to develop clarity on how things are in order to develop a balanced mind and compassion.

*Sudarshan kriya yoga (SKY).* This form of meditation (Brown and Gerbarg, 2005) involves posture and breathing. A person learns the necessary yoga postures to facilitate the movement of kundalini energy in the body. Additionally there are several cycles of breathing patterns that are slow, deep and intended to calm while others are rapid and are meant to stimulate. This form of meditation is patented and can be learned from the Art of Living Foundation.
Cyclic meditation (CM). This meditation (Sarang and Telles, 2006) combines techniques that stimulate and calm and is based on ancient yoga texts. These texts suggest that using a combination of stimulating and calming practices may be helpful to reach a state of mental balance. In the research this meditation began with a period of relaxation with eyes closed. A spiritual verse was repeated followed by isometric contraction of the muscles of the body ending with supine rest for one minute. During supine rest the subjects would lie on their back with legs apart and arms away from the body. Next were further cycles of relaxation while repeating a verse, followed by muscle contractions with supine rest interspersed until the practice was finished. At the end of the meditation, a period of supine rest only would take place that was of equal length of time as the cycle of stimulation and calm.

The Physiology of Meditation

Meditation and the Human Body

The first research conducted on meditation in the United States focused primarily on bodily processes and TM was the meditation form studied most. In the 1970s, research on meditation showed a reduction in the number of headaches, colds and sleeplessness as it “increased the amount of helper cells that fight against infectious diseases” (Goleman, 1988, p. 170). Also discovered was that “relaxation training improved the regulation” of a number of processes in the body such as “glucose in adult-onset diabetes” (Goleman, 1988, p. 171). For persons with asthma the air flow in constricted passages was increased due to a reduction in emotions, which intensified the muscle contractions before the attack. Relaxation practice was demonstrated to control blood pressure while meditation reduced blood pressure by reducing the impact of the hormone norepinephrine released in response to stress.
Stress and tension. Goleman (1988) writes that people who meditated regularly were found to experience less anxiety in new situations and overall in their lives. Research on stress showed that meditation brought about a quick return to calm after experiencing a stressful incident. Participants in a study who meditated showed an arousal to a stressful situation comparable to those who did not meditate. The difference was that participants who meditated would return to a state of non-arousal quicker, while those who did not would retain the resultant tension for a longer period of time.

The build up of tension and stress stemming from repeated exposure to negative stimuli with not enough time to return to a state of non-arousal, leads to the formation of anxiety and psychosomatic disorders. The hormone norepinephrine is released in reaction to stress, which increases blood pressure. Meditation by aiding the body in returning quicker to a state of non-arousal, also reduces elevated blood pressure caused by stress.

DeBerry (1982) conducted a study on senior citizens because they experience significant stressors at a time when their bodies are least able to manage the hormonal changes that occur. DeBerry (1982) writes that there are two systems involved in the stress response. The main system is called sympathoadrenaomedullary and it contends with catecholamine levels (epinephrine and norepinephrine secretion) that affect the heart functions, respiration, glycogen, as well as cortisol levels, uric acid, and hypoxia.

The second system (DeBerry, 1982) affected by repeated stress is the hypothalamic-hypophysis-adrenocortical axis. This system is responsible for changes in corticoid levels that are secreted by the adrenal cortex and are vital in electrolyte balance, neuronal functioning, inflammation, and glucose, lipid and organic metabolism. Using meditation to lessen the impact
of stress on these systems can aid in reducing the development of serious health problems in the elderly.

Kabat-Zinn (Goleman, 1988) began his studies in mindfulness meditation during the 1980s, focusing on medical care. His research demonstrated that a mindfulness meditation practice along with a regular yoga practice, can reduce reliance on pain-killers as well as lessening levels of chronic pain for backaches, headaches and more. Kabat-Zinn (Goleman, 1988; Ramel, Goldin, Carmona, & McQuaid, 2004) developed an eight week program MBSR, from his work and research in mindfulness meditation, utilizing it in the care of patients with chronic stress due to illness. This program has proven to be beneficial in relieving the physiological symptoms of stress in patients with serious illnesses. Due to the effectiveness of MBSR (Kabat-Zinn, et al. 1992) it was applied to the treatment of anxiety, thereby becoming incorporated in the field of mental health.

Substance abuse. Two studies (Gilbert, Parker, & Claiborn 1978; Khalsa, Khalsa, Khalsa & Khalsa, 2008) on the use of meditation as an adjunct to chemical dependency treatment of alcoholism and drug abuse, found that it reduces constant stress, tension and other symptoms of anxiety. It is these symptoms of anxiety that cause behavioral and neuroendocrine changes and lead people to self medicate with alcohol and drugs. Substance abuse is a means to manage a system out of balance that oftentimes creates addiction.

Brain processes. Research methods have become more sophisticated over time, allowing researchers to investigate the brain, the impact of illnesses and stress on brain processes, and how this affects physical and mental processes in people. Meditation has received quite a bit of the investigation opening new doors to its impact on the human body and the brain The Dali Lama and Tibetan monks (Begley, 2007) are working with the scientific community in order to
meld Buddhism with science. The Dali Lama has had a long time interest in science and agreed to meet with scientists at the invitation of Adam Engle. In 1987 this meeting took place at the residence of the Dali Lama in Dharamsala, India and was “the first conference of the Mind and Life Institute” (Begley, 2007 p. 22).

Scientists have made an important finding about the brain, which is it has the ability to change itself due to a condition called neuroplasticity. What neuroplasticity means is that new neurons are created in the brain all the time and they can rewire the brain to work differently. The rewiring of the brain does not come easily, it requires work in the form of “attention and mental effort” (Begley, 2007). The Dali Lama is contributing significantly to the research on the brain and neuroplasticity in particular “because it resonates so well with Buddhism” (Begley, 2007). One practice being studied from Buddhism in regard to the effect it has on the human brain, is meditation.

A recent research study in India measured the impact of cyclic meditation on P300. P300 is “a cognitive neuro-electric phenomenon because it is generated in psychological tasks when subjects attend to and discriminate stimuli that differ from one another on some dimension,” (Sarang & Telles, 2006, p. 1421) and occurs from an “interaction between the frontal lobe and hippocampal and temporoparietal function” (Sarang & Telles, 2006, p.1428). P300 is “thought to indicate the amount of brain activity related to incoming information processing and it is more sensitive to the amount of attentive resources engaged during the task” (Sarang & Telles, 2006, p. 1428)

Sarang and Telles (2006) write that in addition to increasing a person’s ability to pay attention to a task, cyclic meditation has been found to reduce heart rate, respiration rate and oxygen consumption. Their project was focused on how meditation affects the ability to pay
attention while involved in a task in addition to “reducing metabolic and respiratory processes” (Sarang & Telles, 2006). The results proved that cyclic meditation was able to foster attention to a task in addition to reducing physiological processes.

*Mindfulness meditation.* MM is another form of meditation that is being studied for changes in brain processes. One of the pioneers of research on the affects of mindfulness on brain processes is Daniel Siegel (2007). In his book The Mindful Brain, Siegel (2007) discusses how mindfulness meditation seems to positively impact neuroplasticity of the brain, in response to training attention. He writes “Neuroplastic changes not only reveal structural alterations, but they are accompanied by changes in brain function, mental experience [such as feelings and emotional balance], and bodily states [such as response to stress and immune function]” (Siegel, 2007, p. 32).

Research on the brain has shown that when a person “enters into a mindful state of awareness of their breath, the superior temporal region was activated,” (Siegel, 2007) and this is connected to mirror neurons, which are a part of what is proposed to be a circuit of resonance. It is thought, although not yet empirically proven, that the resonance circuitry enables the mind of a person to tune into the internal state of another persons mind.

Siegal (2007) reported on research conducted at UCLA using brain scans that revealed when a subject was looking at a picture inspiring intense emotion, limbic firing was kept closer in balance when they could name the emotion experienced. There was an “increase in regional cerebral blood flow (rCBF) in the left and right amygdala, the primary fear center in the brain. Labeling the emotions lead to a diminished rCBF response” (Siegel, 2007, p. 225). This provides evidence for a “network in which higher regions attenuate emotional responses at the most
fundamental levels in the brain and suggest a neural basis for modulation emotional experience through interpretation and labeling” (Siegel, 2007, p. 225).

The Mindful Brain (Siegel, 2007) reviews another study conducted on participants with “higher degrees of mindfulness traits” (Siegel, 2007) with similar findings where researchers “found that they had more prefrontal activation than persons without training, during a procedure in which they named the emotion they saw on a photo of a face. The right ventrolateral cortex and medial prefrontal cortex were each activated during the labeling task. This prefrontal activation was accompanied by diminishment in amygdala activation in response to faces and was a process not found to this significant degree in those with out mindfulness traits” (Siegel, 2007, p. 225). It is suggested by Siegel (2007) “that mindfulness skills may promote more effective affect regulation”.

Adding to this, Farb et al. (2010) write that “neuroimaging of emotion regulation have identified a constellation of prefrontal regions associated with active reappraisal of the emotional salience of events” (Farb, et al. 2010, p. 25). The constellation of prefrontal regions is indentified in a study where “sadness provocation in both clinical and at-risk samples show altered activation in these same regions, notably the medial prefrontal, orbital frontal and subgenual cingulate cortices” (Farb et al. 2010, p.25). One neuroimaging study completed on MBSR “showed increased activation in the left anterior cortex” (Ivanovski, 2007, p. 78).

Other brain processes are reported on in a review article by Ivanovski and Malhi (2007), who write that MM shows increases in “delta [frontal and posterior regions], theta [frontal region], alpha [central posterior] and beta one [frontal, central and posterior]” (Ivanovski & Malhi, 2007, p. 87) wave activity” in frontal and posterior regions during meditation as compared to when relaxed. Neuroimaging research of VM has detailed involvement of the dorsal
cingulate cortex and the right temporal lobe. An MRI investigation reported “increased cortical thickness in the right anterior insula, right middle and superior frontal sulci in Vipassana meditators as compared with controls” (Ivanovski & Malhi, 2007, p. 87).

The world of science is demonstrating the impact of meditation on the human mind and body. Research findings are showing the benefit of a meditation practice to people in the areas of physical and mental health. Anxiety will be the first topic examined for the affect of meditation in reducing symptoms in regard to mental health.

The Impact of Meditation on Anxiety

*Meditation and Anxiety*

People experiencing anxiety whether it is situational or a disorder, have physical symptoms such as accelerated heart rate, chest pains, shallow breathing to shortness of breath, muscle tension, increased arousal, difficulty sleeping, and sweating, according to the DSM IV (2000). These physical symptoms have been proven to be manageable through the regular practice of meditation as revealed in the literature reviewed in the section on physiology of meditation. While some physical symptoms of anxiety can be alleviated through meditation, what about anxiety symptoms that are psychological? What does research on this component of anxiety reveal?

*Mindfulness based stress reduction.* When addressing the treatment of anxiety one form of meditation that has been gaining notable acceptance and use in the field of mental health is MM. Kabat-Zinn and his MBSR program have gained recognition for affecting change in patients with serious medical issues who experience stress and pain, and have set the tone for incorporating MM in psychotherapy. MM is now a part of a number of treatment modalities such as dialectical behavioral therapy for the treatment of borderline personality disorder, acceptance
and commitment therapy, cognitive and behavioral therapy as well as for the treatment of anxiety disorders.

Kabat-Zinn and colleagues conducted a pilot study in two cycles in the Spring and Fall of 1988, using subjects with Generalized Anxiety Disorder (GAD) or Panic Disorder (PD) with or without Agoraphobia and MBSR as the treatment modality. The pilot study utilized factors that had not been included in other research such as having participants with anxiety that fit diagnostic criteria, and examining symptoms such as panic attacks and avoidant behaviors, instead of state-trait anxiety.

Results were positive with a statistically significant decrease in anxiety by the end of the pilot study. There were reductions in the amount of panic attacks, the level of fear experienced, and avoidant behaviors of agoraphobia such as being outside the home, on a bus, in a car or around people. These results remained statistically significant at the three month follow-up that was conducted.

One of the components of MM is learning to understand that your thoughts are not you, and to look at them without judging them, then let them leave your mind. It is suggested that this is complemented by the concentration that is developed, which creates a stability for a person to have the ability to observe fearful thoughts and feelings without reacting to them. Participants in the study reported that learning to view their anxious thoughts as just thoughts, was instrumental in and of itself in reducing their anxiety. They could envision more options in a given situation then their anxious thoughts enabled them to comprehend, leading to a feeling of increased control and a reduction in anxiety.

A comparison group that was not involved in the study but received the same MBSR training, revealed that there had been a reduction in anxiety in these participants as well. This
lead the researchers to suggest the similarity indicates the results of the study are generalizable. There was no control group, which would have been helpful to measure how much of the change could be attributed to the MBSR program.

A three year follow up study (Miller, Fletcher & Kabat-Zinn, 1995) used 18 of the participants from the original study (Kabat-Zinn, et al. 1992) and 39 members of the comparison group. They found that 10 of the 18 study participants continued practicing MM over the course of the three years; 16 participants continued practicing the technique of “Awareness of Breathing in Daily Life” (Miller, et al. 1995). Testing showed that medication made no significant difference on the effectiveness of MM in maintaining lowered levels of anxiety.

Results from the study completed on the 39 non-study participants at the three year follow-up, showed that lowered levels of anxiety had been maintained. This suggests that even at the three year follow-up, the positive gains made through MM practice continue to generalize to the “larger majority of participants” (Miller, et al. 1995) who attend the MBSR clinic.

Miller, et al. (1995) writes that MM is “oriented toward what is ‘right’ with people rather than toward what is ‘wrong’ with them and aims to nurture and strengthen innate capacities for relaxation, awareness, insight, and behavior change” (p. 197). Thus a person learns to rely on their own “inner resources” (Miller, et al. 1995), allowing them “to ‘respond’ to a potentially anxiety-producing situation with greater effectiveness rather than to ‘react’ with escalation, panic or fear,” (Miller, et al. 1995 p. 197).

Research using MBSR as the methodology of treatment (Gold, et al. 2010) was done on primary school teachers in the United Kingdom to help them manage “the increasing levels of stress” (Gold, et al. 2010) experienced in the educational setting, thereby reducing anxiety levels as well. Gold, et al. (2010) showed improvement in levels of anxiety experienced by the primary
school teachers although as a group the improvement was not of statistical significance. There was no testing on a particular symptom of anxiety however there were some qualitative remarks from the teachers. Teachers said of their new skills for managing stress, “It is very useful in times of crisis, like an invisible tool box you can carry around with you” and “Responding not reacting, it teaches us to take control.” Another teacher reported the effect on teaching saying, “Because I am calmer I meet deadlines and I do it better” (Gold, et al. 2010, p. 188). The theme of feeling more in control and responding to events versus reacting to them is expressed by the participants and supporting other research results.

Research on stress reduction conducted by Walach, et al. (2007) in Germany has similar findings. The study used employees in a busy service center and the treatment modality was MBSR. The quantitative measures did not evaluate anxiety, however the qualitative comments did reveal behaviors and feelings associated with anxiety that were relieved from having participated in the MBSR program.

Study participants reported a reduction in “experiencing immediate panic,” (Walach, et al. 2007) as well as an increased sense of being an observer causing a diminished need to react right away. Consequently participants reported “taking some time before answering phone calls” (Walach, et al. 2007). Quantitative measures did reveal an improvement in self efficacy resulting from an increased sense of control in the moment versus being controlled by what was happening externally in the service center.

Mindfulness for children. Further research on MBSR took place at the Teachers College at the University of Columbia in New York City (Semple, Reid, & Miller, 2005). This research project was conducted to “explore the potential usefulness of mindfulness techniques for treatment of childhood anxiety” (Semple, Reid, & Miller, 2005, p. 381). The researchers had to
modify the MBSR program as it is set up for adults, and design a MM program in which children could participate. This new adaption included much of what is standard for MBSR such as a walking meditation and a eating meditation, as well as instruction in how to practice mindfulness. The seated meditation time was reduced to three minutes in order to accommodate the short attention span natural to children. The study took place in the school of the children who were excused from class to attend the weekly session of forty-five minutes.

Semple, Reid, and Miller (2005) write that the results were favorable even though there might have been some expectancy effects influencing the teachers completing the behavior evaluations. The children showed improvement in one area of either academic functioning, internalizing problems, or externalizing problems, and it was speculated that MM might be effective for children with internalized anxiety. The majority of the children enjoyed the program and were “able to understand the concept of mindfulness” (Semple, Reid, & Miller, 2005), as well as to create ways to apply these concepts in their daily life. There was an improvement in concentration and self-efficacy that supports findings from other research.

Application to senior citizens. A study conducted by DeBerry (1982) on senior citizens demonstrates the applicability of meditation for all age groups. Seniors experience anxiety and depression due to increases in life stressors such as the loss of their homes, the death of a spouse and more. These life stressors increase “sympathetic activity” (DeBerry, 1982) affecting not only the mood of the seniors but their immune system, their hormonal balance, heart rate, respiration and more. These physiological changes can lead to increased susceptibility to illness at a time in life when the body is least able to contend with it, making stress management vital.

This study focused on elderly women who are widowed due to the death of a spouse because it was considered the greatest of life stresses. DeBerry (1982) used a relaxation-
meditation that included progressive muscle relaxation and a sitting meditation like TM with an image to concentrate on versus a mantra. One group received follow-up treatment with personalized tapes for use at home to continue with a daily practice after the completion of the study.

Both treatment groups showed improvement in state-trait anxiety with the most improvement occurring in the follow-up group. The continued daily practice with the cassettes was able to keep the state anxiety at a manageable level, while the improvement in trait anxiety suggests that daily practice can help to maintain a reduction in “automatic reactivity” (DeBerry, 1982). The ability of meditation-relaxation to reduce trait anxiety levels created speculation that it could be a technique to manage anxiety resulting from memories of the past, while lowered levels of state anxiety could aid in dealing with stressors that occur in the present.

Substance abuse. The therapeutic use of meditation on anxiety is being studied in the population of substance abusers because symptoms of anxiety lead to self medicating behaviors that can create addictions to alcohol and drugs. An early study (Gilbert, Parker, & Claiborn, 1978) conducted on participants suffering from alcoholism, used progressive muscle relaxation in one group, meditation in another group, with a third group as the control group engaging in quiet rest. The three methods of relaxation studied manifested varying degrees of improvement, with progressive-muscle relaxation showing the greatest improvement in mood as well as a reduction in tension. The impact of meditation created a state of “restful alertness” (Gilbert, Parker, & Claiborn, 1978) and there was a reduction in tension, however it did not affect mood.

Kundalini yoga. At a substance abuse program in India, Khalsa, et al. (2008) studied a Kundalini Yoga program comprised of “physical postures, breathing techniques, meditation” (Khalsa, et al. 2008) and chanting. KM was used for similar reasons as the study on alcoholism,
which is to reduce the stress experienced that leads to behavioral and neuroendocrine problems as well as anxiety. Results from this study are positive for reducing anxiety but not for reducing stress according to self report questionnaires completed by the participants. In addition this study was conducted in a program that incorporated a number of treatment modalities along with KM such as nutrition, individual and group therapy, spiritual studies, music and dance therapy, as well as components of yoga. For this reason the improvement in mood cannot be attributed to meditation alone, however the participants did report the yoga instruction, which included KM, was the most responsible for improvement in their well-being.

Kundalini yoga was examined by Shannahoff-Khalsa (2004) as a treatment modality for obsessive-compulsive disorder (OCD), one of the severest of the anxiety disorders and considered “one of the most difficult psychiatric disorders to treat” (Shannahoff-Khalsa, 2004, p. 92). Conventional treatment for OCD utilizes medication and cognitive-behavioral therapy (CBT) with the improvements gained from CBT proven to last longer than those gained via medication. Two studies were done in California, lasting twelve months each, using Kundalini yoga with components such as KM, physical postures and breathing techniques, as taught by Yogi Bhajan from India.

The first study conducted by Shannahoff-Khalsa (2004) was an open trial and had five participants who managed their OCD with fluoxetine and were stable. Three of these participants were able to discontinue medication five months before the study ended while the other two had cut their dosage in half. A year after the study had ended four of the five participants were off medication from anywhere between nine months to nineteen months. Due to the significant improvements made by the participants, Shannahoff-Khalsa (2004) conducted another study.
The second study (Shannahoff-Khalsa, 2004) was comprised of two groups, one using KM and yoga, the other using relaxation response and MM, with seven members in each group having completed three months of therapy. At three months there were some significant and non-significant improvements in the KM group only. At this point the MM and relaxation group merged with the KM group and after three months as one group, scores improved by almost half. The combined group continued for fifteen months at the end of which, six of the twelve participants had discontinued medication use for at least six months before the termination of the study, and the remaining six participants had reduced the amount of medication they took.

Kundalini yoga has several modalities of treatment therefore KM could not be found to be the sole factor creating change in the participants, which supports the findings from the study in India on substance abusers.

Transcendental meditation. The practice of TM was investigated and two studies demonstrated positive affects achieved from this form of meditation. The first study (Wachholtz & Pargament, 2008) was conducted on persons experiencing migraines. The research sought to discern whether the impact of using a spiritual phrase while meditating would bring changes in the body and reduce migraines to a greater extent, than meditation and relaxation without the spiritual content. Anxiety levels, which are high in people experiencing migraines, were also measured to see if they would be lower as a result of the meditation practice.

The findings were positive as there was a reduction in the number of headaches experienced for all the meditation groups. When comparing the results of the groups, the spiritual meditation group showed the greatest decrease in levels of trait anxiety, indicating “that the addition of an explicitly spiritual component enhanced this effect” (Wachholtz & Pargament, 2008, p. 363). Members of the spiritual meditation group showed greater headache self efficacy.
fostering a greater sense of control that was suggested to contribute to an improvement in mood as well as greater pain tolerance.

Brooks & Scarano (1985) researched TM as a treatment for posttraumatic stress disorder (PTSD) on Vietnam Veterans in Denver, Colorado. A study was conducted over a three month period comprised of two treatment groups, one practiced TM and the other received therapy, and group or family counseling. The results were positive for TM in significantly reducing the level of anxiety in PTSD, while the therapy group was reported to have demonstrated little improvement. The TM group was also found to have a faster habituation response to a stressful situation supporting previous research on the impact of meditation on the physiology of the body.

Brooks and Scarano (1985) state in their article that it is the quality of transcending experienced while deep in meditation, which induces a deep restful condition in the body. This creates an alert mind that enables the body to heal and remove the “deep impressions incurred from past stressful experiences” (Brooks & Scarano, 1985, p. 214). Participants reported that after meditating “I no longer have the same intensity of tension, rage, and guilt inside. It is as if a huge burden has been lifted” (Brooks & Scarano, 1985, p. 214). Seven of the ten participants in the TM group at the end of the study, felt they no longer need services from the Veterans Center, while three others chose to continue with therapy.

_Cancer patients._ Centering Prayer is a form of meditation similar to TM. It was the treatment modality in a pilot study (Johnson, et al. 2009) conducted on women with recurrent ovarian cancer, at the Mayo Clinic in Rochester, Minnnesota. This form of meditation was choosen as it requires no technology or special enviroment and can be utilized wherever a person
is. Demonstrating this fact, the study was conducted in the room where the participants were receiving chemotherapy.

Johnson, et al. (2009) found centering prayer was effective in reducing anxiety experienced by women receiving chemotherapy for ovarian cancer. Anxiety was reduced from the time of enrollment, to the end of the study, with anxiety decreasing further at the three month follow up and the six month follow up. The article stated that the “quality of life diminishes over time and with the advance of cancer” (Johnson, et al. 2009, p. 426). The Mayo Clinic study (Johnson, et al. 2009) demonstrated that centering prayer was effective in maintaining the quality of life for the participants of the study. This is meaningful as each woman was facing a fatal illness and by the time the study was published only one of the women remained alive. Johnson, et al. (2009) suggest centering prayer is worth further investigation regarding improvement of mood and quality of life for patients with a terminal illness.

Ando, et al. (2009) conducted research in Japan on cancer patients experiencing anxiety using a “modified version of the MBSR program,” (Ando, et al. 2009, p. 1092) and included spirituality for the impact it makes on quality of life. Modified MBSR signifies that the patients practiced cyclic meditation, “including both breathing and meditation, during which patients moved their hands and legs to focus their attention” (Ando, et al. 2009, p. 1093), and received instruction in “yoga and basic communication skills” (Ando, et al. 2009). The purpose of this study was to determine if MBSR could be an effective treatment modality for the Japanese people as research has shown it to be for people of other cultures.

Ando, et al. (2009) reported in their article, that their modified version of MBSR did affect anxiety levels in Japanese patients with cancer by reducing them, and suggested that it may be an effective “individual or short term therapy” (Ando, et al. 2009, p. 1093). Spirituality
did increase and was correlated to a decrease in anxiety levels, however the increase in

spirituality was not significant. Ando, et al. (2009) observed in regard to this increase in

spirituality that there was no posttraumatic growth in the cancer patients, which is said to be the

finding of “positive aspects” or “sense of meaning” (Ando, et al. 2009) in a stressful occurrence

for a person. They attributed the lack of growth to “variables such as pain” (Ando, et al. 2009).

Social relationships. Hutcherson, Seppala, and Gross (2008) did a study using the

meditation form of LKM that did not focus on an anxiety disorder, or state-trait anxiety. The

research looked at the effect of LKM on managing anxious feelings that can be a barrier to

forming relationships with other people and joining in activities in the community. Relationships

people have with others foster “physical and psychological well-being” (Hutcherson, Seppala, &

Gross, 2008), and yet American “society is becoming increasingly isolated and

distrustful…changes have resulted in smaller social networks, as well as an erosion of basic

confidence in the trustworthiness of others” (Hutcherson, Seppala, & Gross, 2008, p. 720).

Social relationships are complicated further by the automatic responses people develop

toward others that they may or may not be aware of having. These automatic responses can be

hard to address or change due to the lack of insight into the motivation behind the behaviors. In

Buddhist traditions LKM has long been used to create connections between people and foster

various forms of love towards others as well. The study conducted by Hutcherson, Seppala and

Gross (2008), looked at the impact of LKM on “positive mood [happy, calm, loving] and

negative mood [angry, anxious, unhappy]” (Hutcherson, Seppala, & Gross, 2008, p. 721), and

then on how mood affected the implicit (automatic) and explicit (known) responses toward a

picture of self, a person close to them, and neutral strangers.
The results demonstrated that the impact of LKM “changed positive mood [not negative mood], which was significantly correlated with change in positivity” (Hutcherson, Seppala, & Gross, 2008, p. 722) in the explicit response toward the pictures of the participant and close person, while the change toward neutral strangers was average. Change was observed in the implicit response toward the pictures of self and close other, however there was no change toward the neutral strangers. Hutcherson, Seppala, and Gross (2008) state that their study “provides the first evidence that LKM can impact responding at an automatic level” (Hutcherson, Seppala, & Gross, 2008, p. 723). This did not determine that the changing of the known response is what fosters greater social connection in comparison to the changing of the automatic response, therefore further research was suggested.

The ability to reduce or eliminate anxious feelings in order to foster connections among people in a social setting is important, and a study (Koszycki, Benger, Shlik, & Bradwejn, 2007) done in Canada compared the impact of MBSR and CBT on SAD. It was proposed that MBSR would be beneficial for the treatment of SAD as it can “diminish preoccupation with negative appraisal that fuels anxiety by helping patients learn to distance themselves from self-critical cognitions and intentionally deploy their focus and awareness to the external social situation” (Koszycki, Benger, Shlik, & Bradwejn, 2007, p. 2519). MBSR can reduce the physical symptoms of anxiety as reviewed earlier, and mindfulness is useful as it can be taught and practiced with the aid of audio-visual equipment, allowing persons with SAD to receive treatment at home. People experiencing SAD often don’t seek out mental health services due to their fears of negative evaluation and avoidance of any activity in the community therefore a home-based recovery program may increase follow through.
Koszycki, Benger, Shlik, & Bradwejn (2007) conducted cognitive-behavioral group therapy (CBGT) in a twelve week group and MBSR was conducted over eight weeks with one day of meditation, as laid out by Kabat-Zinn. Results of the study showed that both forms of treatment were effective in reducing symptoms of SAD. CBGT was more effective at reducing symptoms with reports of less “self-reported fear of interacting with others and being observed and scrutinized, greater reductions in clinician-rated avoidance of social phobic situations and illness severity, than MBSR-treated patients” (Koszycki, Benger, Shlik, & Bradwejn, 2007, p. 2524). Both treatments were equal in reducing “self-rated depression, disability, and improving quality of life” (Koszycki, Benger, Shlik, & Bradwejn, 2007).

A follow up (Koszycki, Benger, Shlik, & Bradwejn, 2007) was conducted on the participants of the study who completed the interventions. The remission rate was greater for the CBGT participants than the MBSR participants, while “MBSR produced robust improvements in social anxiety symptoms, less than ten percent of patients met study criteria for remission” (Koszycki, Benger, Shlik, & Bradwejn, 2007, p. 2524). The remission rate for the CBGT participants was modest and was attributed in part to the “severity and chronicity of illness” (Koszycki, Benger, Shlik, & Bradwejn, 2007). Study participants liked MBSR and had a low drop out rate, therefore it was suggested that it would be of interest to incorporate both treatment modalities into one, and test the effectiveness of it on SAD.

What did not work. One form of meditation, which has little impact in reducing anxiety is SKY (Brown & Gerbarg, 2005). SKY is a combination of postures and breathing techniques. Four different clinical open trails using SKY found only one form of breathing was able to reduce anxiety levels and that is a slow breath technique called Ujjayi. One breathing technique
called Bhastrika is rapid-cycling and feels like hyperventilation, which can trigger fear, causing a panic attack.

Brown and Gerbarg (2005) wrote in their article that SKY was also found to make no impact on the arousal symptoms of PTSD. A study conducted in India proposed that people with PTSD may benefit from the CBT-like aspects and psychoeducation of the SKY program in addition to some breathing techniques. It was observed that SKY can bring up “past trauma sensations and affect” (Brown & Gerbarg, 2005, p. 713), which can then be worked through in “a safe and supportive” (Brown & Gerbarg, 2005) environment.

Research on the impact of meditation on anxiety proves that it can improve symptomatology benefiting the mental health and quality of life and work for people. Participants reported greater control in situations at work as well as over worrisome thoughts. Concentration was strengthened resulting in greater self efficacy at school and work. Other people experienced an increase in positive emotions reducing the focus on negative emotions, while others developed a greater sense of connection to loved ones and friends.

The Impact of Meditation on Depression

*Meditation and Depression*

It is important to have a clear idea as to which symptoms and cognitive processes can be successfully reduced when looking at treating depression. One of the cognitive processes of depression that can be impacted by meditation are dysfunctional attitudes that are “characterized by negative, rigid, and extreme assumptions and beliefs about self-worth and often involve conditional standards in areas of evaluation, perfectionism and interpersonal approval” (Ramel, Carmona, & McQuaid, 2004, p. 433). Rumination is another cognitive process to be impacted and is defined as “passively focusing attention on a negative emotional state like depression,” the
“symptoms, and thinking repetitively about the causes, meanings, and consequences of that state” (Ramel, Carmona, & McQuaid, 2004, p. 434).

There is a “high level of comorbidity between depressive and anxious disorders, which may be due to the to cognitive processes” (Ramel, Carmona, & McQuaid, 2004, p. 448) that are similar. These cognitive processes are the variations of ruminative thinking, which are a symptom of both disorders. The difference lies in the content of the repetitive thoughts, for example in depressive rumination the focus is on “past losses, incompetence, rejection and failures” (Ramel, Carmona, & McQuaid, 2004, p. 449). Repetitive thought in anxious disorders is worry, which has a focus on the future with “questioning thoughts on threats, harm and uncertainties” (Ramel, Carmona, & McQuaid, 2004, p. 449).

Mindfulness meditation. Research on meditation as a treatment modality for anxiety has shown favorable results, but could it make a positive impact on depression as well? Most of the studies covering anxiety also evaluated levels of depression and some of the research on anxiety was designed to investigate both anxiety and depression. Therefore the aforementioned studies are included in this section, in addition to others. Looking again at MM, researchers proposed that learning to look at thoughts from a nonjudgmental, open and accepting view as they arise, and letting them go, would increase choices, create cognitive flexibility, and “reduce rumination, overgeneralization, and self critical evaluation” (Ramel, Carmona, & McQuaid, 2004, p. 435). MM may be able to break up the destructive patterns that lead to relapse in depressive episodes.

Kabat-Zinn, et al. (1992) also covered depression in their study on the impact of MBSR on anxiety disorders. Similar to anxiety, there was a statistically significant reduction in depression from the pre-test levels to the post-test levels, with the improvements being maintained at the three month follow up. The three-year follow up conducted by Miller, et al.
(1995), showed depression levels were lower than at the three month point. There was no investigation into what specific symptoms of depression had been reduced.

Gold, et al. (2010) conducted a study using MBSR as a treatment modality on primary school teachers in the United Kingdom. All of the primary school teachers were found to be over the threshold for depression with five considered to have mild depression. The findings showed a significant decrease in the scores for depression from pretest to posttest, indicating that MBSR may be useful in improving depression. Similar to the study done by Kabat-Zinn et al. (1992), there was no investigation into which symptoms of depression were reduced and due to the small sample size, Gold, et al. (2010) cautioned against generalizing the results to other populations.

Research (Ramel, Carmona, & McQuaid, 2004) completed in San Diego using subjects recruited from the Veterans Administration Healthcare System and from the University of California San Diego, investigated the effectiveness of the eight-week MBSR course on depression. The findings reported levels of rumination were significantly reduced and the more MM was practiced, the greater the reduction in rumination. It was determined the reduction in rumination lead to a decrease in dysfunctional attitudes, in particular “beliefs relating to the need for approval” (Ramel, Carmona, & McQuaid, 2004, p. 448). Changes in cognitions due to a reduction in rumination brought about decreased levels of “depressive and anxious symptoms” (Ramel, Carmona, & McQuaid, 2004). The participants had a low compliance level in practicing the homework, which probably limited the results, yet the results did show significance. Most of the participants had had some CBT in the past while others were taking psychotropic medications, and MM was able to affect improvement in mood.

Further research into negative thought processes using mindfulness meditation-based clinical interventions (MMCI) that are based on MBSR, was conducted by Frewen, Evans,
Maraj, Dozois, and Partridge (2008) in Canada. They investigated levels of mindfulness and how they impact a person's ability to let go of automatic thoughts, which characterize rumination in depression and worry in anxiety. Frewen, et al. (2008) completed two studies.

The first study enlisted undergraduate students of psychology who had no previous experience meditating. The students were tested on their ability to let go of automatic thoughts related to rumination and anxiety after one session of MMCI. The students had one 15 minute session practicing MMCI, after which results showed a state of mind had been developed that produced lowered levels on “depressive, worry, and social fears-related cognitions” (Frewen, et al. 2008, p. 764).

Frewen, et al. (2008) conducted a second study investigating whether the results from the first study, could be generalized to a “treatment seeking sample experiencing a higher frequency of negative automatic thoughts” (Frewen, et al. 2008, p. 764). Research participants for the second study were experiencing symptoms of anxiety and depression that were at clinical levels, along with high stress. The treatment was almost identical to MBSR with weekly classes on psychoeducation, meditation with in-session practice, some cognitive therapy and weekly homework, however there was no day long meditation. A total of four groups were studied for the second research project (Frewen, et al. 2008) over a period of two school years at the University of Western Ontario.

The findings of the second study (Frewen, et al. 2008) support those of the first study. It was determined that MM fosters greater awareness of negative thoughts, along with a reduction in the frequency of negative thoughts and an increase in the ability to let go of negative thoughts with ease. The greatest clinical change occurred in the first four weeks of the group when the material on the “construct of mindfulness” (Frewen, et al. 2008) was covered, which included the
seven principals of MM and instruction in meditation and yoga. Frewen, et al. (2008) wrote that the research participants gave qualitative information demonstrating the clinical importance of the psychoeducational material in facilitating change, but did not elaborate on what it was in their paper. Frewen, et al. (2008) found that becoming more mindful does not make a person immune to negative thinking. Instead what “more mindful individuals report is a greater capacity to let go of their negative thoughts, and thus may perceive negative thoughts as being more controllable and less intrusive and bothersome” (Frewen, et al. 2008, p. 771).

Transcendental meditation. The studies conducted using TM, one utilizing Vietnam Veterans as research participants (Brooks & Scarano, 1985) and the other utilizing research participants (Wachholtz & Pargament, 2008) who regularly experience migraine headaches, both had results indicating TM was effective in reducing levels of depression. However neither study looked into to which symptoms of depression were reduced and how they might have been reduced. In the study conducted by Wachholtz and Pargament (2008) on people experiencing migraines, it was found that the spiritual meditation was the most effective in reducing depression in comparison to the secular meditation and relaxation techniques. Both the secular meditation and the relaxation techniques also showed a reduction in levels of depression albeit more modest than the spiritual meditation.

Application to senior citizens. Research conducted by DeBerry (1982) covering both depression and anxiety in a geriatric population of widowed women, utilized relaxation techniques and meditation on peaceful images (oceans, mountains, etc.). Results demonstrated the anxiety that is an “integral component of agitated and endogenous depressions, can be successfully treated by relaxation-meditation” (DeBerry, p. 519) techniques. What occurred for the widows in the study was the less anxiety these women experienced, the more depression they
experienced through negative mood and cognitions. One woman commented, “I’m much calmer now, but, you know, also much sadder…sometimes at night all I do is think about him. I never used to before…in fact I think it was not thinking about him that made me nervous” (DeBerry, 1982, p. 519).

It was suggested that “the inner-directiveness involved in meditation practices might be conducive to the reemergence of repressed thoughts and feelings” (DeBerry, 1982, p. 519), and that medication is more helpful to the “vegetative complaints” (DeBerry, 1982) of the anxiety component. Mood and affective components on the other hand, respond better to psychotherapy, with a combination of both methods being the most effective treatment. It was suggested that the elderly may be more willing to take part in therapy after their anxiety levels have been reduced, which allows other issues to rise.

*Positive emotions and loving kindness meditation.* Fredrickson, Coffey, Pek, Cohn & Finkel (2008) ran a study in North Carolina recently, using LKM for the treatment modality, along with the broaden-and-build theory of positive emotions developed by Barbara Fredrickson, one of the researchers of the study. The broaden aspect of the theory views positive emotions as “momentarily broadening the attention and thinking of a person, enabling them to draw on higher-level connections and a wider-than-usual range of ideas that can help build consequential personal resources that may be cognitive, psychological, social or physical” (Fredrickson, et al. 2008, p. 1045). These resources enable a person to effectively meet challenges in life leading to success, health and happiness in the future.

The build component in the theory “holds that positive emotions set people on trajectories of growth that, over time, build consequential personal resources” (Fredrickson, et al. 2008, p. 1046). Positive emotions can create “increases in optimism, tranquility, ego-resilience,
mental health, and the quality of close relationships” (Fredrickson, et al. 2008, p. 1046). The researchers of this study used LKM to increase positive emotions in the participants to “build personal resources that hold positive consequences for the mental health of the person and overall life satisfaction” (Fredrickson, et al. 2008, p. 1047).

Feelings of depression were measured in the participants and none of them had levels of clinical significance. The build hypothesis was tested and the results showed that the increase of positive emotions experienced, predicted change in depression or life satisfaction. Thus LKM was shown to increase positive emotions more, in comparison to the intent-to-treat group over the course of the study, increasing resources that create significant life satisfaction, and a decrease in symptoms of depression. LKM did not decrease negative emotions leading the researches to suggest that the increase in positive emotions “helps to keep the depressive symptoms at bay” (Fredrickson, et al. 2008, p. 1057).

*A turnabout for sky.* Three studies (Brown & Gerbarg, 2005) using SKY as the method of meditation show promise in the treatment of depression, which is of interest as SKY was not effective in treating anxiety. One is a pilot study conducted over three months on participants with Dysthymia or Major Depression using only the breathing techniques of SKY as treatment. The findings showed “significant reductions” (Brown & Gerbarg, 2005) on two scales for depression after four weeks of training and practice.

A second three month study (Brown & Gerbarg, 2005) utilizing breathing techniques of SKY showed effectiveness in treating depression in outpatients with Dysthymic Disorder. The results showed that sixty-eight percent of those completing the study experienced remission of the disorder. Patients who did not achieve remission had a practice rate that was less than three
days a week, while patients experiencing remission practiced three days a week or more. This created speculation that sufficient time spent practicing is necessary for remission to occur.

The final study (Brown & Gerbarg, 2005) using SKY breathing techniques was conducted on persons with severe melancholic depression. SKY, practiced six days a week, was compared to electroconvulsive therapy (ECT) given three times a week, and imipramine (IMN) one hundred fifty milligrams, given at night. Results showed ECT to be the most effective at treating the depression and IMN and SKY to be comparable in treating the depression.

Treating depression in persons who abuse substances is as important as the treatment of anxiety because depression can also lead to self medicating behaviors that create addiction. Three studies showed variations of meditation to be effective in reducing depression. The study conducted by Gilbert, et al. (1978) on mood changes in alcoholics, already reviewed in the section on anxiety, demonstrated that progressive muscle relaxation was able to reduce levels of depression whereas meditation was not.

Substance abuse. The research in India (Khalsa, et al. 2008) using KM as a part of Kundalini Yoga, found the reduction of depression levels was of statistical significance. However this cannot be attributed to meditation alone due to the number of treatment modalities utilized in this program, as was the case with anxiety. The third study (Kallis-Colon, Martinez, Sayers, & Suarez, 2009) presented at the American Psychological Association Convention in 2009, showed that a meditation and yoga program in a chemical dependency treatment program for women, did reduce levels of depression. The program meet two times a week for five weeks, after which the depression scores were lowered enough to be statistically significant. Similar to the research from India improvement cannot be credited to meditation alone as yoga was a component of this program as well.
Centering prayer and cancer patients. The pilot study on the affect of centering prayer for women with ovarian cancer receiving chemotherapy, also reviewed in the section on anxiety, measured depression as well. Levels of depression had been reduced at the completion of the study and “remained about the same despite the progression of the disease” (Johnson, et al. 2009, p. 426). Reducing depression can contribute to the quality of life for persons with terminal cancer.

Reviewing research on SKY (Brown & Gerbarg, 2005), centering prayer (Johnson, et al. 2009), meditation with yoga (Khalsa, et al. 2008; Kallis-Colon, et al. 2009), progressive-muscle relaxation (Gilbert, et al. 1978) and others, the findings show a reduction in depression. Henry Emmons, in his book Chemistry of Joy (2006) emphazies exercise as one of the best activities to engage in to improve depression. This may explain how meditation programs that include yoga, are able to affect improvement in depression. Some of the research covered in this section does look into how symptomatology of depression is affected by meditation, yet there continues to be a need for greater detail in the research on depression.

Combining Meditation with Established Treatment Modalities

Meditation as an Adjunct to Psychotherapy

Mindfulness meditation and cognitive behavioral therapy. Some of the studies already reviewed have indicated the research was not conducted on meditation alone. Examples of this are the use of yoga postures along with meditation, or psychoeducation classes on how to meditate, or as in MBSR, there is instruction in the seven principles of mindfulness. Another example would be meditation in a chemical dependency treatment facility where participants are in groups and utilize other treatment modalities in addition to meditation. Some treatment modalities already incorporate meditation in to their program, such as dialectical-behavioral
treatment (DBT) and acceptance and commitment therapy (ACT). There have been some studies completed in recent years that have investigated meditation as an adjunct to CBT for anxiety disorders and depression as well as several studies on treatments utilizing MM in conjunction with CBT.

Evans, et al. (2008) conducted a study on GAD because it is the “least successfully treated of these anxiety disorders” (Evans, et al. 2008, p. 717) being “characterized by long-term, intense, and excessive worry” (Evans, et al. 2008, p. 716). CBT is an established treatment modality for GAD. It was suggested that the practice of MM, with a focus on openness, non-judgement, and detachment towards thoughts, would enhance the effectiveness of CBT. Mindfulness could be effective in managing the residual symptoms of GAD that CBT has not been able to alleviate. The treatment in this study followed the MBSR model and added some CBT in the form of “cognitive exercises such as observing the association between worried thought, mood and behavior” (Evans, et al. 2008, p. 718).

Evans, et al. (2008) wrote in their article that the outcomes from this study showed “statistically significant reductions in anxiety, tension, and worry” (Evans, et al. 2008, p. 719). Five research participants, who had clinically significant scores indicative of pathological worry at pre-treatment, had scores below the cutoff range for pathological worry at post-treatment. Three participants had clinically significant scores on tension-anxiety at pre-treatment assessments and at post-treatment assessments, the scores had been reduced to a non-clinical level.

Evans, et al. (2008) concluded that mindfulness can be an effective adjunct to CBT, yet cautioned against “over interpretation of the results” (Evans, et al. 2008, p. 720) due to the small, non-randomized size of the study population. Evans et al. (2008) also looked for depressive
symptomatology along with measuring for anxiety. They found “three of five participants” (Evans, et al. 2008, p. 719) with clinically significant levels of depressive symptoms at pre-treatment, had scores that had dropped to below the level for clinical significance at the post-treatment assessment.

MM was used in combination with exposure-based cognitive therapy in a study conducted on persons with Major Depressive Disorder. The researchers of this study Kumar, Feldman, & Hayes (2008) created a program of three phases. The first phase of the study incorporated some of the practices of MBSR along with instruction in “problem-solving and coping skills, and healthy lifestyle skills” (Kumar, Feldman, & Hayes 2008, p. 737). This is thought to prepare the client for the next phase where the focus is on “accessing and exploring negative experiences mindfully, without avoidance and rumination” (Kumar, Feldman, & Hayes 2008, p. 737). The processing during the second phase brings the client to a place of having a more balanced and realistic view of self and the world, while the third, and last phase, works to develop this new view.

According to Kumar, Feldman, & Hayes (2008) researching this treatment modality was done to explore where increases in mindfulness correlated with decreases in rumination and avoidance, two symptoms of depression that work to maintain the it. Post-treatment findings showed that as mindfulness increased, participants experienced a decrease in rumination and avoidance along with other depression symptoms. The results did not determine to what extent the changes in mindfulness could be contributed to MM alone, versus the impact of the therapy. Other evidence “suggests that increases in metacognitive awareness [a ‘decentered’ perspective], one proposed mechanism of mindfulness interventions, occurs in both MBCT and in cognitive therapy for depression and is associated with symptom reduction in both treatments” (Kumar,

Teasdale, et al. (2000) examined the use of MBCT as a treatment to prevent relapse or reoccurrence of depression. The research was done in three different countries, the United Kingdom, Wales and Canada, setting this study apart from all others as it incorporated participants from three similar yet different cultures. Teasdale et al. (2000) compared the results of treatment as usual (TAU) for depression with TAU combined with MBCT. TAU consisted of telling the study participant to follow their usual course of care should symptoms of depression recurre.

The research was conducted over the course of 60 months and was comprised of TAU for one group while the other group began with the eight weekly sessions of mindfulness combined with CBT for depression. After the eight weeks of instruction and practice were completed the MBCT group was to continue practicing the skills they learned as well as following TAU. There were bimonthly follow up sessions for both groups.

Teasdale, et al. (2000) found upon completion of the study that MBCT did reduce relapse of depression rates by approximately half in comparison to TAU. Teasdale, et al. (2000) learned further that for participants who had experienced three or more depressive episodes, MBCT reduced the recurrance of depression, but not for participants who had experienced two or less depressive episodes. Additionally medication did not alter the effectiveness of either TAU or MBCT.

Teasdale, et al. (2000) suggest these results indicate that persons with three or more depressive episodes have a greater risk of relapse because their “depressogenic thinking patterns” (Teasdale, et al. 2000, p. 622) are automatic and more easily reactivated. MBCT was able to disrupt “those processes at times of potential relapse” (Teasdale, et al. 2000, p. 622). It was also
suggested that MBCT “may hold considerable therapeutic promise” (Teasdale, et al. 2000, p. 622), however this study does not clarify if the specific skills of MBCT or nonspecific factors brought about the change.

Another study conducted in Northwest England by Splevins, Smith, and Simpson (2009) investigated MBCT as a treatment modality for depression as well as anxiety. The study population was adults, middle age and older, with a few persons experiencing anxiety along with depression in addition to those experiencing only depression. Splevins, Smith, and Simpson (2009) distinguished their study from other research, by looking at the impact of specific components of mindfulness on depression, anxiety and stress such as “describe, act with awareness, observe and accept without judgment” (Splevins, Smith, & Simpson, 2009, p. 329).

Splevins, Smith, and Simpson (2009) found at the end of an eight week program that MBCT did reduce levels for depression and anxiety, “with effect sizes in the medium range for anxiety and in the large range for depression and stress” (Splevins, Smith, & Simpson, 2009, p. 332). Additionally participants significantly increased their “ability to be mindful, both as an individual score, and as individual components with medium to large effect sizes” (Splevins, Smith, & Simpson, 2009, p. 332). “Increases in mindfulness ability” (Splevins, Smith, & Simpson, 2009) were found to have a “significant and moderate association with decreases in levels of depression, anxiety and stress” (Splevins, Smith, & Simpson, 2009, p. 333).

Regarding the individual components of mindfulness that were studied, results showed that “to act with awareness and accept without judgment were associated with decreases in depression, anxiety and stress” (Splevins, Smith, & Simpson, 2009, p. 333) however both components were “correlated significantly only with depression” (Splevins, Smith, & Simpson, 2009). Splevins, Smith, and Simpson (2009) stated that the majority of the research participants
had reported moderate to severe levels of depression before the study, and upon termination, depression levels were in the mild range.

The component ‘observe’ had no relationship to changes in depression, anxiety or stress, according to Splevins, Smith, and Simpson (2009). They speculated that ‘observe’ may not be “sufficient on its own as a skill, to increase well-being” (Splevins, Smith, & Simpson, 2009). It may also be other mindfulness components were not developed enough as skills after an eight week program, “to demonstrate the benefits of being able to observe well” (Splevins, Smith, & Simpson, 2009, p. 333). Interestingly ‘observe’ along with ‘act with awareness’ had elevated scores, indicating they were more developed. The pre-treatment the levels for these two components were more consistent with scores for experienced meditators. Splevins, Smith, and Simpson (2009) suggested these developed mindfulness abilities in the participants may be a result of age, meaning older adults experience increased vulnerability and naturally learn to observe and act with awareness as a means of self protection.

A study (Finucane & Mercer, 2006) coming from Scotland researched the efficacy of MBCT to reduce symptoms in treating active depression and depression with anxiety. Due to the participants experiencing active depression, Finucane and Mercer (2006) did shorten the lengths of some meditation times in order to lessen difficulties in staying with the meditation as “concentration is affected in depression” (Finucane & Mercer, 2006, p. 4). Scores for depression and anxiety were lowered at posttreatment, as is consistent with other research.

At the three month follow up, “5 of 11 participants continued to have significant levels of depression and anxiety,” (Finucane, & Mercer, 2006, p. 11) and 2 of the 5 reported “the course as beneficial to them despite no improvement in their depression and a worsening of their anxiety” (Finucane & Mercer, 2006, p. 11). It was also noted that the drop out rate was
significantly greater for participants with two episodes of depression when compared with the drop out rate for those with three or more. Finucane and Mercer (2006) suggest that “duration of illness is an important motivating factor for engaging with MBCT” (Finucane & Mercer 2006, p. 10).

Finucane and Mercer (2006) wrote that the information gathered from the qualitative interviews “suggests a correlation between the amount of effort participants invested in developing their own mindfulness practice and the improvement in psychological well-being” (Finucane & Mercer, 2006, p. 10). They reported the benefits of MM as “an increased ability to relax, improved mood, greater self-awareness and self-worth, improved sleep and new ways of working with negative thoughts and emotions” (Finucane & Mercer, 2006, p. 10). Participants who continued with MM practice at home made other changes such as “going back to work, giving up smoking, and increasing exercise” (Finucane & Mercer, 2006, p. 12), while those “whose depression and anxiety had resolved also had more social support and fewer on-going interpersonal problems” (Finucane & Mercer, 2006, p. 12).

Finucane and Mercer (2006) cautioned that this study was only exploratory and the findings should not be generalized, but rather more research is needed. They were uncertain as to whether components of CBT that were not in MBCT, such as “goal setting, assertiveness training, schema work, behavioral activation, etc.” (Finucane & Mercer, 2006, p. 12) may have increased the affectiveness of the treatment had they been included. They did conclude that MBCT may be of benefit to persons experiencing active depression and anxiety and not just for persons experiencing a remission of the symptomatology.

Kim, et al. (2009) conducted a study in South Korea that researched the effectiveness of MBCT as an adjunct to pharmacotherapy for PD and GAD. Patients were stabilized on their
medications and no dosages were changed during the course of treatment. Two groups were formed, one was an anxiety education disorder (AED) group, the other was an MBCT group. In the MBCT group, “mindfulness techniques were taught along with cognitive approaches [observing thoughts and awareness], education about PD or GAD and cognitive distortions specific to” (Kim, et al. 2009, p. 603) the disorders. The education group received instruction on the “biological aspects of PD or GAD” (Kim, et al. 2009, p. 603). The participants were “not allowed to engage in meditation or yoga on their own, nor to attend psychotherapy” (Kim, et al. 2009, p.603), therefore program adherence in regard to the homework was “greater than 80 percent in every participant” (Kim, et al. 2009).

Kim, et al. (2009) found after eight weeks of treatment that MBCT produced significantly greater decreases of anxiety scores than the AED group. The reduction in scores for depression were not clinically significant for MBCT, yet they were significantly lower in comparison to the depression scores from the AED group. There were also reductions in subscale scores for obsessive-compulsive and phobic anxiety but not for other subscales, suggesting that “MBCT can reduce phobic and obsessive-compulsive symptoms” (Kim, et al. 2009, p. 605). Kim, et al. (2009) suggest that their results demonstrate “MBCT reduces anxious and depressive symptoms in patients with PD or GAD by moderating worry and rumination” (Kim, et al. 2009, p. 605).

Mindfulness based stress reduction. Biegel, Shapiro, Brown, and Schubert (2009) researched MBSR as an adjunct to treatment as usual (TAU) on a population of adolescents in Virginia. TAU consisted of “individual or group psychotherapy and/or psychotropic medication management” (Biegel, et al. 2009, p. 858). The wait list group was the control group and some participants were taking medication although many were not.
The results indicated that MBSR along with TAU “significantly reduced self-reported anxiety, depressive and somatization symptoms, and improved self-esteem, and sleep quality compared with TAU-only control participants” (Biegel, et al. 2009, p. 864). The MBSR group, when compared to the control group, had “significant declines in self-reported perceived stress, obsessive symptoms and interpersonal problems” (Biegel, et al. 2009, p. 864). The MBSR group also “showed significant increases in GAF scores and a higher percentage of mental health changes, large enough to warrant a change in diagnosis, and the change was most pronounced for participants with mood disorders” (Biegel, et al. 2009, p. 864). Nonsignificant declines in the MBSR group were shown in anxiety disorders, V-code diagnoses, substance-related and disruptive disorders, while the TAU group showed few declines in these disorders and even a few “increases in prevalence” (Biegel, et al. 2009).

Biegel, et al. (2009) mentioned homework practice is a part of MBSR. Their exploratory analyses of the participants who completed the study “found that the amount of formal practice, particularly the number of days of sitting mindfulness practice and average length of each practice session, were related to a number of changes from baseline to follow-up in the clinical or self-report measures assessed in the study” (Biegel, et al. 2009, p. 864). These results validate what has been proven in other research on meditation, which is regular practice is necessary to create improvements in mental health.

Combined with a training program. Smith, Compton, and West (1995) researched a training program for enhancing happiness and while this in not a clinical treatment modality, it merits a look. The Personal Happiness Enhancement Program (PHEP) was developed by M. W. Fordyce, in the late twentieth century in an effort to aid people in developing greater happiness in their lives. His program “focuses on both cognitions and behaviors” (Smith, Compton, &
West, 1995, p. 269) and has fourteen fundamentals of happiness, such as “keep busy and be more active, spend more time socializing, be productive at meaningful work,” etc. (Smith, Compton, & West, 1995, p. 269). Smith, Compton, and West (1995) investigated whether adding meditation (a form of TM with the word peace as the mantra) to PHEP would improve the effectiveness of the program through “significant changes in depression, anxiety and happiness” (Smith, Compton, & West, 1995, p. 270). They compared a meditation and PHEP group to a PHEP only group and a control group.

Supporting other research, meditation did aid PHEP in reducing depression and anxiety and increase happiness more than PHEP alone, and both PHEP groups showed effectiveness over the control group. Smith, Compton, and West (1995) also found there were two subgroups in the meditation group, one that practiced meditation three or more times a week and one that practiced meditation less than three times in a week. It was proposed that in order for meditation to enhance PHEP, the participant needs to meditate a minimum of three times a week.

It is clear that more research needs to be conducted on meditation to positively impact an established psychotherapy treatment modality. The findings from current studies look promising, with results showing meditation can enhance treatment outcomes when used as an adjunct to psychotherapy. Additionally research results show the importance of regular practice of meditation inorder to impact psychological changes.

Adlerian Individual Psychology

An Adlerian Comment on Meditation

Meditation does not appear to be incorporated into Individual Psychology to the extent that it is making inroads in other theoretical practices such as CBT, ACT, chemical dependency, and DBT. The Adlerian community focuses on the fifth task of life, which is spirituality, not on
any specific technique used to form a relationship to the Divine. Meditation is a technique that
when practiced regularly, brings one in to harmony with the Divine, therefore Adlerians would
not give the same attention to it as a religious tradition, such as Christianity or Islam.

*Mindfulness Meditation.* Some Adlerians have commented on meditation and how it can
fit in to Adlerian Individual Psychology. One example is MM as an adjunct to Adlerian treatment
for bulimia. Marwa Azab (2001) writes in her article that research shows that persons with an
eating disorder often have relatives with a major affective disorder, or may experience depressive
episodes before the onset of their eating disorder. Thus the question is whether the bulimia is a
result of the depression or vice versa. Azab (2001) states from the Adlerian perspective the
answer is irrelevant, rather the focus is on the discouragement present in the person with bulimia.
According to Azab (2001) encouragement is integral to Adlerian therapy as the person “does not
have the courage to abandon useless maladaptive behaviour for two reasons: first, change is
threatening: and second, they are unaware of what to exchange it for. The Adlerian therapist
facilitates the exchange transaction while fueling the person with encouragement” (Azab, 2001,
p. 52).

The loss of control is characteristic of binge eating and the binge eating as a behavior has
a purpose, whether it is useful or not. Binge eating becomes a part of the life style of a person
and an Adlerian therapist would focus on the loss of control rather than on the behavior. A life
style assessment would be conducted to determine whether the life tasks are being met. Azab
(2001) states that the family constellation is “particularly crucial in understanding the disturbed
eating behaviour” (Azab, 2001, p. 53). Children can use food as a means to rebel against the
authority of their parents, or “as a weapon to threaten the parents, or to gain control” (Azab,
Azab (2001) writes that it is important to give the client the control in the situation because of the experience of the loss of control. It is concerning the issue of control where MM can be of benefit to the client through instruction, practice and showing how thoughts are transitory and will pass. When thoughts of purging or binging occur, these thoughts feel as if they are taking over and the client experiences a loss of control. MM instruction and practice give the client the control to let go of these thoughts and chose another course of action. Azab (2001) states “by staying in the moment, observing all present emotions and letting go of them, the client learns to treat all emotions and sensations equally without magnifying some and avoiding others” (Azab, 2001, 58). The client learns greater impulse control through the realization that “the urge to binge or purge” (Azab, 2001) can pass.

Azab (2001) writes that “MM may enhance the poor therapeutic outcome” (Azab, 2001, p. 60) for clients with bulimia, and advises Adlerians that it is a therapeutic technique. She also recommends that due to the use of a non-judgmental attitude toward thoughts and events, the Adlerian therapist would be wise to practice MM themselves as a means of adhering to the Adlerian stance of being “non-judgmental and separating the deed from the doer” (Azab, 2001, p. 60).

Buddhism. An Adlerian therapist in Japan gives two perspectives on Individual Psychology and Buddhism in two separate articles. Shunsaku Noda (1990) takes a look at meditation as an adjunct to therapy in the first article, when he compares Adlerian Individual Psychology with Buddhism. According to Noda, Individual Psychology is the Western Psychology most like Buddhism, describing Buddhism as “a system of practical knowledge to help people by releasing them from suffering” (Noda, 1990, p. 28), as is Individual Psychology.
Noda (1990) states that Buddhism is a system of spiritual therapy, not a psychotherapy, where “theory is elaborated as far as beneficial to the practice of therapy” (Noda, 1990, p. 28), and he believes Buddhism shares this with Individual Psychology. Both practices focus on a “teleological interpretation of human life” (Noda, 1990, p. 29) based on goal striving, yet have radically different understandings around the application. Goal striving in Individual Psychology aids a person in becoming a member of a community and finding happiness in being a social being.

Goal striving in Buddhism is viewed as the cause of suffering, and a person needs to lose their sense of self and to cease striving, as happiness is gained through dissolving into the Universe. According to Noda (1990) consciousness can be obtained through meditation only, and consciousness is what people need in order to work with their thought processes. Consciousness is the vehicle to Buddha-hood, which is the achievement of enlightenment through much practice of meditation. Meditation is “to be alert, to be aware of everything within and around us” (Noda, 1990, p. 38) and essential to achieving Buddha-hood and the dissolution into the Universe.

Noda (1990) looks at Buddha-hood and gemeinschaftsgefühl stating that the degree of gemeinschaftsgefühl is relative to the extent of goal striving, therefore the greater the goal striving, the greater the feelings of inferiority. When the goal striving is reduced so are feelings of inferiority, which leads to an increase in social interest and gemeinschaftsgefühl. Whereas meditation, which “means fully conscious life” (Noda, 1990), leads to the attainment of Buddha-hood and Buddha-hood is personal happiness and social evolution.

Meditation is also utilized in life style and Noda (1990) states that “Buddhists and Adler regard personality as a system of behavior patterns. Both assert that personality is created
through coping actions to tasks from the environment. Both insist that personality can be changed through conscious action” (Noda, 1990, p. 39).

Buddhists do not believe in changing life style, rather they believe that a person is healthy or free when “liberated from every fixed pattern of behavior” (Noda, 1990, p. 39). This returns to goal striving because in life style there are patterns of behaviors that lead to goal striving. Since goal striving is viewed as the suffering of people in Buddhism, it needs to end and with it life style as well. Buddhism emphasizes the end of life style, yet not all people are at a place of seeking Buddha-hood when entering into psychotherapy.

In applying Adlerian psychotherapy with his clients, Noda (1990) states that he uses meditation as a means to loosen up the processes of the life style to make the system more maleable to change. He reports having applied meditation in his practice and the effect “was dramatic” (Noda, 1990). “Lifestyle seems to be very fragile after meditation” (Noda, 1990, p. 42), and the clients were much more open to his “interpretation and advice” (Noda), changing “their fixed behavior pattern with less hesitation” (Noda, 1990). This suggests that becoming conscious enables a person to change their behaviors with greater ease.

Noda (2000) wrote in another article on Buddhism, Individual Psychology and Holism, that Individual Psychology has a type of “relative holism” (Noda, 2000, 291) because it views the person as whole, but not the person and the world as being whole. Individual Psychology views the person as being challenged by the world when meeting the life tasks, whereas in Buddhism the individual and the universe are unified, any opposition between them is an illusion. “The world is a unified harmonious cosmos of which individuals are elements” (Noda, 2000, p. 291) and Noda (2000) names this “absolute holism” (Noda, 2000). Meditation is the means by which a person may “feel the unity of the universe” (Noda, 2000, p. 291) and
understand that the conflicts he or she has, whether they be intrapsychic or interpersonal, are nothing more than illusions. Noda (2000) concludes this article writing “Buddhism further challenges Individual Psychologists to understand the concept of social interest as the result of humans as being a part of the greater whole and not in conflict with it. Acceptance of absolute holism eliminates the need for striving which hampers the expression of social interest” (Noda, 2000, p. 294).

The Conclusion of the Impact of Meditation on Depression and Anxiety

*The Conclusion*

Research shows that there is a growing acceptance and incorporation of meditation into the practice of psychotherapy, along with an increased interest in researching the impact of meditation on depression and anxiety. It appears from the material discussed in this paper that the majority of research has taken place since 2000. Scientific opinion has not formed a unified vision regarding the impact of meditation on mental health yet mental health practitioners are moving forward incorporating it into various forms of treatment. Some of these treatments are DBT, ACT, and CBT as well as individual therapy.

Incorporating meditation into treatment for mental and emotional well-being is not new. There is the book Abhidhamma (Goleman, 1988) contained in the Pali Canon of the Theravadan Buddhists, which outlines the psychologies of the “ideal mode of being” (Goleman, 1988) for people, and defines meditation as a mean to transform the self. Included in the Pali Canon is a type of cognitive therapy that educates a person on the ideal personality and describes what thoughts and emotions may get in the way of achieving this ideal state.

Buddhism is not the only religion that contained practices to achieve mental health. Early Christianity also practiced Christian meditation, which was designed to bring a person closer to
God and to improve their psychology and conduct in order to exemplify the presence of God on Earth. The book, Cloud of Unknowing (Johnston, 1973), whose author is anonymous, was written in the 14th Century, and it describes how to engage in Christian meditation in order to develop a relationship to God, and to develop the mental health that will aid a person in their journey.

Meditation may not be new as a treatment modality for achieving mental health from a historical point of view, however it is relatively new in current mental health practices and in medical care. It was in the medical field where much of the research on meditation began by investigating how it impacted the physiology of the human body. The form of meditation most studied at that time was TM and it was found to aid in boosting the immune system, reducing blood pressure as well as the rate of respiration and oxygen consumption. Additionally TM was found to aid a person in returning to a state of nonarousal after experiencing a stressful situation thereby positively impacting the physiology of the body.

Further research on the impact of meditation on the physiology of the body has been conducted, with new findings occurring that provide more information. The brain is one area in the human body where researchers are discovering how meditation creates new neurons that can deliver more information, heal the body and the brain, and improve mental health. This process has been labeled neuroplasticity and scientists are working with the Dali Lama and Tibetan monks to research this phenomenon.

Many symptoms of anxiety are physical such as rapid and shallow breathing, increased heart beat, the stress response, etc., and it had already been established that meditation can reduce these symptoms. Anxiety is one condition which can impact social and personal relationships, employment and physical health. The cognitive symptoms of anxiety are excessive
worry and preoccupation with things, as well as being so controlled by fear that it becomes unmanageable. It is these cognitive symptoms that receive much of the focus in current research on meditation and mental health.

MM is a form of meditation that has been examined because it teaches a person to release their thoughts as they come in to their mind. A person can learn to comprehend that thoughts are transitory therefore fearful thoughts can be released. MM also teaches a person to remain in the present moment, reducing worry as it is future oriented thinking. Sitting and observing fearful thoughts and then letting them go, teaches a person to be more open and able to stay calm in the presence of fear inducing situations that may arise in their life. Experiencing less fear may reduce avoidant behavior as a coping strategy to manage it, which may lead to improved social and occupational circumstances, along with an improvement in physical health.

Some research has shown that medication can be reduced or even discontinued when symptoms of anxiety are decreased. People report a greater sense of control, being able to respond versus react in situations. A reduction in anxiety can also lead to a decrease in substance abuse, improvement in concentration, less tension, and an improvement in the quality of life. Migraine headaches were found to be reduced through meditation, and when a spiritual component was included in the meditation, there was a greater reduction in the number of migraines. A decrease in migraines lead to lowered levels of anxiety experienced by a person, which improved the quality of life for some of the study participants. Reducing anxiety in people also lead to improvements in relations with others in the community and for some they achieved the ability to occasionally leave their home on their own.

All forms of meditation did not demonstrate efficacy in reducing anxiety. The meditation form SKY had only one breathing technique that was able to lower anxiety. MBSR was not as
effective as CBT in reducing symptoms of SAD, or in aiding in maintenance of remission of symptoms.

Research on depression was not as detailed as that on anxiety. However, it was shown that meditation does reduce rumination which is the focusing of passive attention on the problems in your life, how they occurred and what the consequences are. Decreasing rumination was shown to reduce negative evaluation a person might have about themselves and was accomplished by learning to let go of negative thoughts as they arose.

The meditation form LKM was able to create more positive thoughts and emotions, and this aided a person in keeping negative thoughts out of awareness. Meditation does not remove rumination and negative thoughts instead it fosters the skill of letting go of thoughts and building more positive emotions and attitudes. The practice of LKM reduces symptoms and increases a sense of connectedness between the self, family and friends, the community, the country and lastly, the world.

Research showed meditation lowered levels of anxiety and depression decreasing the need to self medicate for persons experiencing addiction. It was demonstrated with a population of seniors that meditation can bring up repressed thoughts and feelings associated with depression that can be worked out in therapy. This indicates that the impact of meditation can create conditions for healing and recovery to take place.

Research into meditation as an adjunct to established therapy modalities revealed more detail around the impact of meditation on depression. MM was the form of meditation used most in conjunction with other treatment programs, and it was found that increases in mindfulness were able to reduce rumination and avoidant behavior. A MBCT program for non-active depression was shown to decrease relapse rates in persons who had experienced three or more
depressive episodes. Study results demonstrated the components of mindfulness, act with awareness and accept without judgment, were instrumental in reducing anxiety and in significantly reducing depression. Research findings on anxiety showed MBCT was able to reduce anxiety levels, tension, worry, as well as phobic and obsessive-compulsive symptoms.

Adlerian psychotherapists are beginning to incorporate meditation into the theory of Individual Psychology. MM has been combined with Adlerian therapy for bulimia to give the clients a sense of control over their thoughts of purging, helping them to choose another course of action. An Adlerian psychotherapist in Japan used meditation in therapy to help loosen up the fixed nature of behaviors and beliefs that are a part of a Lifestyle. A few minutes of meditation made the client more open to suggestions for changes that would resolve conflicts arising from the life style that brought the client into therapy.

Homework was an essential part of the treatment in most of the studies, and it usually consisted of practicing meditation, yoga, or breathing. It was found that the amount of time spent meditating affected the results of the studies. Treatment outcomes showed that the more time a participant spent in meditation, increased the improvement the treatment was able to affect on them. This worked in reverse as well, meaning insufficient homework practice diminished the efficacy of the treatment.

Many of the studies noted that people enjoyed the meditation programs. Participants not only perceived themselves as having benefited from the treatment, they also found it pleasant to meditate. Some qualitative remarks made by participants said the program was too short and would have liked to have had more sessions. This is of value because when a client enjoys a treatment, they are more likely to do it thereby increasing the efficacy of the treatment modality.
It is also of value that the research reviewed for this paper comes from many parts of the world, such as Japan, Korea, the United Kingdom and other parts of Europe, in addition to the United States of America. This demonstrates that meditation as a mental health treatment modality can be valid across cultures. Research has also shown meditation to be effective for various age groups, from children to senior citizens. Combine age and culture and the universal applicability of meditation to impact change in people begins to take form.

*For the therapist.* Marwa Azab, an Adlerian therapist, made a recommendation for therapists to practice MM in order to become skilled at the Adlerian position of being non-judgmental toward clients and seeing the difference between the action and the person. There are other therapists who are joining in on this recommendation to use MM in order to become more effective in the therapist-client relationship. Bruce, Shapiro, Constantino, and Manber (2010) wrote an article explaining how MM helps a therapist to be more open, non-judgmental, accepting and in tuned with what the client is experiencing.

Bruce, et al. (2010) viewed the resonance circuitry as the means by which a therapist can empathize with a client, while the self regulatory circuits maintain the awareness of self and other in order to observe the process of the client, as outlined by Daniel Siegel in his book *The Mindful Brain* (2007). Bruce, et al. (2010) suggest this state of attunement can be beneficial in preventing ruptures in the therapeutic relationship as well as in repairing a rupture that occurred. Practicing MM enables a therapist to develop the ability to retain awareness and presence in the moment with a client who is experiencing something that may be intense, or may trigger an issue of the therapist. Meditation can impact change in depression and anxiety thereby improving the quality of life for people, and it is being shown to benefit the mental health professional as well, and the quality of work they provide.
References


