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## Wellness Through a Creative Lens: Meditation and Visualization

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*This paper will examine literature focused on meditation and visualization, and their impact on mental and physical health. A key aspect of this examination includes understanding the defined meanings of both meditation and visualization. Specifically, the authors explore concepts of human consciousness, including mindfulness, quantum physics realities, and controlling mental imagery in neurology. These ideas provided the conceptual framework to study the effectiveness of meditation and visualization through an 8-week program for female university students, experiencing stress, anxiety, and sadness. Initial qualitative data analysis employed a thematic analytic approach. Preliminary findings, such as increased self-awareness and decreased anxiety, are discussed alongside existing literature that confirms the value of meditation and visualization approaches towards improved health.*

**KEYWORDS** *alternative methods, anxiety, consciousness, female university students, image rescripting, meditation, mental and physical health, mindfulness, sadness, self-awareness, spiritual, spirituality, stress, visualization, wellness*

Depression and anxiety levels are increasing among North American female university students (Arehart-Treichel, 2002). In a 2009 College Counseling Center Directors Annual Survey, 94% of Directors reported an increase in the number of students with significant psychological problems (Barr, Rando,

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Krylowicz, & Winfield, 2010). According to one Canadian counseling center, over the past decade, students' concerns have shifted from normal developmental issues, (75% in 2001; 35% in 2008) to more serious and severe mental health difficulties (25% in 2001; 65% in 2008; Beattie, 2010). This shift is especially alarming for female students, as women in general suffer disproportionately from depression and anxiety (Arehart-Treichel, 2002) and most campus counseling clientele are female (Beattie, 2010). Stress and anxiety are linked to feeling hopeless, while depression is linked to an inability to function and, in extreme cases, suicide (Barr, Rando, Krylowicz, & Winfield, 2010). Thus, useful intervention strategies to address anxiety and stress are essential to the success of female university students.

Meditation and visualization are ancient helping strategies well established in Hinduism, Judeo-Christianity, and traditional Chinese and Aboriginal medicine (Utay & Miller, 2006). These alternative interventions are resurfacing in contemporary North America and show promise for increased self-awareness, concentration, improved mood and sleep, reduced fear and anxiety, and pain reduction (Coholic, 2007; Dekro et al., 2002; Newberg & Waldman, 2009). Research on treatment effectiveness is still in its infancy with many methodological questions. Existing literature does not bring together the wide range of work that investigates meditation and visualization as viable interventions. This article examines how and why these practices have been employed by other research practitioners. In addition, the authors draw upon their recent pilot project (2010) conducted with female students attending a northern university.

### CONCEPTUALIZATION OF MEDITATION

Meditation is an umbrella term used to describe a variety of mind-body therapeutic approaches. Ospina et al. (2007) identified five main types of meditation generally used in research studying the effects of meditation practices on health: Mantra meditation (comprised of Transcendental Meditation, Relaxation Response [RR], and Clinically Standardized Meditation), mindfulness meditation (consisting of Vipassana, Zen, Mindfulness-based Stress Reduction [MBSR], and Mindful-based cognitive therapy), Yoga, Tai Chi, and Qi Gong.

Ospina et al. (2007) investigated a working definition of meditation that focuses on the common threads between the various styles by surveying seven experts in the field. Meditation was characterized as a practice that uses a defined technique, involves logical relaxation, and engages a self-induced state or mode. The investigation found that meditation sometimes has an embedded religious/spiritual/philosophical context. In addition, it can involve a state of psychophysical relaxation, mental silence, or an altered state of consciousness. It was found that meditation often employs self-focus

skills or the suspension of logical thoughts. It is important to note that the bulk of research conducted on meditation and health in the West focused on mindfulness meditation. As Hickey (2008) identified, "in 2007 and 2008, fully 80 percent of federally funded scientific research on meditation has focused on mindfulness" (p. 3). Defining mindfulness meditation is therefore important in understanding the relationship between meditation and health/wellness in our society.

Mindfulness meditation originated from the tradition of Theravada Buddhism and has evolved to fit Western ways of understanding. It is an exercise in concentration and insight where all stimuli are attended to equally, without any censorship or selection. In 1971, molecular biologist Kabat-Zinn developed MBSR in an attempt to make the mental and physical health benefits of meditation widely accessible in North America (Hickey, 2008; Starks, 2006).

The authors define meditation as the practice and process of concentration on the breath, sound vibration, and inner sensations of the body that arise out of de-identification with negative reactivity in the mind. The objective is to experience an underlying deeper aspect of self that many individuals do not perceive in day-to-day life. To attain this level of meditation, one must divorce him/herself from anxious thought. Consistent identification with anxiety and pain act as barriers to identification with peace and joy. Sen (2005) ascertains that yoga (a Sanskrit word meaning to add or unite) is not possible without beyoga (meaning to subtract or detach). Meditation begins with beyoga—the subtraction, detachment of all that interrupts an integrated and balanced mind-body-soul on the journey toward yoga uniting with the universe and that which one desires.

## RESEARCH WITH UNIVERSITY STUDENTS

This study investigated the effects of a mantra meditation/creative visualization program for female university students experiencing stress, anxiety, and sadness entitled *Realigning Self: A Pilot Project to Investigate the Effectiveness of the Sen System for Female University Students*. The Sen System stems from the business sector and has, until this study, not yet been investigated as a therapeutic intervention. We are interested in exploring the Sen System's effectiveness for female students in a northern university setting.

The meditation and visualization style utilized is based in an epistemology that human thought, with each image that accompanies it, has untapped creative potential that can be brought into awareness and used to create desired thoughts, feelings, and circumstance. While the notion that thought could create may appear as a childish fantasy, quantum physics theories provide evidence that it may not be such a preposterous view.

In *Quantum Reality: Beyond the New Physics*, Physicist, Nick Herbert (1985) highlights quantum reality theories that have particular significance for the authors' current research concerned with connecting the physical world and human consciousness. The first quantum reality (called the Copenhagen Interpretation, Part 1) dictates that there is no deep reality. Bohr (1963), a quantum physicist, put forth the claim that the sensual world we experience "floats on a world that is not as real. Everyday phenomena are themselves built not out of phenomena but out of an utterly different kind of being" (as cited in Herbert, 1985, p. 16). It is a wholeness without space and time.

The third quantum reality acknowledges reality as an undivided wholeness. This premise rests on the idea that despite the obvious separations and boundaries humans perceive through the senses, the world in actuality is a seamless and inseparable whole (Capra, 1975). German light/matter physicist Walter Heitler claimed that quantum theory requires that the separation of the world into an objective outside reality and a self-conscious observer can no longer be maintained. "Subject and object have become inseparable from each other as the act of observation dissolves the boundary between observer and observed" (as cited in Herbert, 1985, p. 18).

The seventh quantum reality states that Consciousness creates reality. In 1932, von Neumann wrote a German quantum theory text, now translated in English and considered a seminal work among the quantum mechanics community (von Neumann, 1955). Von Neumann was the first to evidence that a physical object's definable characteristics only exist if a conscious observer watches them. If an object is not under observation, it is represented as a "wave of probability" because there exists a wide range of possible mathematic values for its attributes—bundles of vibratory possibilities (Herbert, 1985). Alternatively, an observed object has definite particular physical properties such as being in one place at one time. According to Herbert (1985), during the act of measurement (observation), the mathematical description abruptly shifts—from a spread-out range of possible attributes to single actual attributes. This measurement-induced switch of descriptions is called the "quantum jump." Ordinary realists assume that an object possesses definite attributes whether observed or not, however, according to Herbert, the majority of physicists reject this position of ordinary realism and treat objects as definite only when measured (observed). "The Copenhagen interpretation consists of two distinct parts: 1. There is no reality in the absence of observation; 2. Observation creates reality" (p. 17).

Observer-created reality physicists uphold the absolute existence of matter (electrons, photons) but the attributes of that matter, such as the position in space or momentum, are dynamic and do not exist until consciously observed. Physicist Heisenberg (1958) is famous for declaring, "An atom is not a thing." He insisted that the unmeasured world is merely semireal, and achieves full reality status during the act of observation. The probability

wave refers to a potential of reality, which stands between an idea and event (Herbert, 1985). The quantum world holds several unrealized inclinations for action. "During the magic measurement act, one quantum possibility is singled out, abandons its shadowy sisters, and surfaces in our ordinary world as an actual event" (p. 27). Because quantum theory applies to everything, not just to atoms, all objects without exception exist in this partially unreal state of "objective indefiniteness." Heisenberg's (1958) strange picture of the quantum world as half-real possibilities that are actualized only during a measurement act is considered by many physicists to be the most reasonable guess as to how the world deep down really operates. Herbert (1985) ascertains that, "At the logical core of our most materialistic science we meet not dead matter but our own lively selves" (p. 25).

What does quantum physics have to do with meditation and visualization? The nature of the quantum jump, when objects suddenly have measurable definable attributes in time and space, is the biggest mystery in quantum physics. Herbert (1985) believes the mystery of the quantum jump can be explained by human consciousness. He envisions a "holistic physics" where he conjoins Heisenberg's picture of the "way the world really works" with a relationship between mind and matter. He proposes that mind is not a rare phenomenon associated with certain complex biological systems, but is everywhere, universal in nature. The quantum consciousness assumption asserts that consciousness is an integral part of the physical world, not an emergent property of special biological or computational systems. He ascertained that conscious human decision is what brings one vibratory possibility into reality above others. Sen's (2005) view of human consciousness coincides with quantum physics findings that conscious observation creates reality. Sen argues that conscious visualization, which focuses on one's own desires and goals, has the power to create feelings and events in the phenomenal world of one's own life. If the above mentioned quantum realities do in fact exist, Sen offers an invaluable application: to imagine and work with the connected creative forces of the universe to bring into actuality one's aspirations and desires. The authors attempted to explore these notions in conjunction with cognitive behavior theory for female university students struggling with their thoughts and consciousness as it relates to stress, anxiety, and sadness.

The theory of consciousness, put forth by Sen (2005) is tapped into through the assiduous practice of four proclamations: a. *Pragyanaam Brahman/Consciousness creates*; b. *Tat Tvam Asi/Everything is Consciousness*; c. *Ayam Atman Brahman/My Consciousness creates*; and d. *Aham Brahmasmi/I create* (p. 113). Participants were guided through these mantra meditations consecutively. As with mindfulness meditation, the goal is to gain control of mental processes but, with the added dimension of focusing on the radical idea of self as a creator.

## RESEARCH ORGANIZATION AND DESIGN

Request for participants was extended via posted advertisements throughout a northern Canadian university and included the university counseling center, where the researchers conducted the study. Criteria to participate included: female university student over eighteen, self-identify as struggling with anxiety, stress, and/or sadness, and a desire to try a new meditation/visualization system. A convenience sample was applied for the purposes of this pilot study. Six students from the university were chosen to participate.

The principal investigator, along with the coinvestigator, facilitated an 8-week psychoeducational group using a combination of book reading and reflection, breath and mantra meditation, creative visualization, reflective discussion, and writing techniques. Each participant was provided with the *Ancient Secrets of Success* book (Sen, 2005) and a journal to reflectively write. Participants were invited to read a section of the book in between sessions and practice meditation at home daily for five minutes.

This qualitative inquiry used an arts-based approach and employed thematic analysis as a methodology. Arts-based research concentrates on using artistic elements such as story, poetry, visual art, dance, and/or drama to enrich research relationships, data collection and the representation of the research (Leavy, 2009). Thematic analysis is a method used to identify, analyze, and report patterns (themes) across a data set in rich detail (Braun & Clarke, 2006). "A theme captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set" (p. 81). While most qualitative research is thematic in nature, thematic analysis can be used with different theoretical frameworks so it corresponds with arts-based research. The authors of this pilot study use thematic analysis as a realist method to report experiences, meanings, and the reality of participants (Braun & Clarke, 2006). This flexibility allowed for the identification of initial themes, which will be included in the larger comparative analysis between Phase I and Phase II.

Data collection methods included audio taped preindividual and postindividual interviews, semistructured group interviews, reflective journals, collage, and a focus group. The examination in this article focused on in-group semistructured interviews and preindividual and postindividual interviews from the pilot study.

In one initial theme, authors found that participants frequently referred to sleep disturbance as impacting their health and wellness. Sleep disturbance inhibited participants from optimal daily performance. After nightly meditations, participants reported a reduction in anxiety about falling asleep and an increase in undisturbed sleep time. One participant reported on

her meditation experience, “so I did immediately have results because I normally go to sleep only after hours so I was like ‘wow, a neat little trick to fall asleep’ . . . so I’ve been using it as a sleeping tool.” Another participant, Jerusha explained, “I don’t sleep well and all my classes are at night so my whole schedule is shifted and . . . I meditated before sleep and I was out.” Participants reported increased levels of breath meditation were directly related to better sleep quality, which resulted in waking less agitated and a decreased level of perceived stress the next day. Caldwell, Harrison, Adams, Quin and Greenson (2010) also found that meditation improves sleep quality for college students.

In addition to breath meditation, the authors of this pilot study employed mantra meditation techniques of repeating a phrase or sound, while attempting to passively ignore distracting thoughts. The authors found that students reported reduced anxiety and stress. Jerusha noted the following:

I was coming in my bedroom and I could feel the anxiety trying to sneak in and so I just yelled louder . . . and it worked, it just was like whoosh and I just smashed it all out of there and by the time I was done I felt really good.

Jerusha consciously fought to disconnect with anxiety and connect with a peace inducing sound. She felt the feeling she wanted to gain momentum and in her words “smashed” the anxiety away. This experience allowed her to gain a sense of mastery over her thoughts and feelings.

Dekro et al. (2002) studied the use of mind/body intervention techniques to address college students’ stress. They used mantra meditation to induce RR, which is a set of physiological changes including a decrease in heart rate, oxygen consumption, blood pressure, and rate of respiration. These researchers found that compared to a waiting list control group, students reported reductions in psychological distress, perception of stress, and anxiety.

The authors’ study offered support for silent breath and mantra meditation to decrease feelings of dysphoria. In particular, one female university student Nadine, who self-identified as living with a mental illness, explained:

With my week things had gotten pretty heavy for the first half of the week and I was kinda feeling like I was drowning and then there was a shift, I guess, on Wednesday where, I acknowledged that I needed to take time to take care of myself and I did start doing meditation and breathing exercises a lot more. Since then I’ve noticed quite an improvement in my mood . . .

Nadine changed her awareness when she began changing her focus from overwhelming worry to meditation and the breath. She became more self-aware, noticed a positive change in mood, and reported feeling more in control of her emotions. Broderick (2005) also studied the potential of mindfulness meditation as an intervention with dysphoric moods in undergraduate students and found that meditation decreased dysphoria and was more successful than distraction as an intervention.

## CONCEPTUALIZATION OF VISUALIZATION

Visualization is the practice of conscious control of mental imagery. “Mental imagery refers to the perceptual information that is brought to the mind from memory and imagination, rather than arising from activation of the sense organs” (Serruya & Grant, 2009, p. 792). Images have played a significant role in the development of humanity. Korn (1994) discusses evidence, based on the way children think, that images preceded language and are in fact, foundational to language. Jung (n.d.) states that “all the works of man have their origin in creative imagination . . . image *is* psyche and if the psyche creates reality, then what creates reality is the image” (as cited in Adams, 2004, p. 5). The image often plays a foundational role in not only the experience of reality, but in the creation of it.

Guided imagery is the form of visualization most studied and practiced in relation to health and wellness in recent years. Its aim is to employ the mind’s language to communicate with the self and make sense of both inner and outer experiences (Kabat-Zinn, 1990). Imagery rescripting is a specific type of guided imagery that has been used as an intervention in response to various clinical mental health disorders such as: posttraumatic stress disorder, depression, psychotic delusions, and social phobia (Holmes, Arntz, & Smucker, 2007; Serruya & Grant, 2009; Wild, Hackman, & Clark, 2008). Imagery rescripting uses visualization techniques to either transform a preexisting negative mental image to be understood as more benign, or to construct a completely new positive image in order to counteract the negative one. Holmes et al. (2007) argued that “imagery has a more powerful impact on positive emotion than verbal processing, and therefore cognitive behavioural techniques used to promote positive change should always employ imagery” (p. 300).

Combining the above concepts of guided imagery, and imagery rescripting, the authors of this paper utilized creative visualization as the guiding technique for their pilot study. Creative visualization is based on the notion that thought, when under the conscious control of an individual, can create reality (Herbert, 1985; Sen, 2005). Creative visualization invites an individual to imagine the unfolding of an aspect of one’s desired life, as if watching a movie in the mind. This conscious imagining, honed through meditation,

can lead to the creation of desired circumstances because, according to Herbert (1985) the universe is alive and entirely interconnected at a quantum level. This interconnected atmosphere responds to human consciousness, where observation (through thought and decision) define matter into concrete attributes of an object. The authors pursue this research in an attempt to explore and document the theory that the images in peoples' minds can manifest into actuality. Gawain (2008) proposed that form can result from thought. Brehrend (2006) and Sen (2005) likened the process of bringing one's internal images into physical form to the process that initially brought matter into the universe. The power that macrocosmically creates in nature is the same power that humans can access within ourselves to microcosmically create in our own lives. They postulated that there is only one kind of power and suggested that working from the center of the mind, individuals can transfer the universal to the specific.

Sen (2005) suggests that human consciousness, defined as both creative power and awareness, is like a mirror that reflects any thought placed before it. First, the experience occurs in the thought or image and then, as a reflection, in the life of a person. Margolin (2009) asserts, "Humans not only have the seed of an unlimited capacity for creativity, but we are the seed . . . In the centre of my Self, I create. In the centre of creation, I am my Self" (p. 24–25).

## NEUROLOGICAL RESEARCH ON MEDITATION AND VISUALIZATION

Kabat-Zinn (2003) stated that meditation is a process to work with the mind's own plasticity. Studies in neuroscience have shown that meditation practices have the capacity not only to stimulate areas of the brain temporarily, but also create permanent changes. Williams (2010) reported that long-term meditation practices change the structure of the brain and only 8 weeks of mindfulness practice brings about changes in the way emotion is processed.

Newberg and Waldman (2009) reported, be it secular or religious, when an individual intensely and consistently focuses spiritual values and goals, the blood flow to the frontal lobes and anterior cingulate is increased, which causes the activity in the emotional areas of the brain to decrease. Newberg and Waldman (2009) suggested the frontal lobes, which are activated in meditation and visualization, are what make us uniquely human and "hold the secret to making our dreams come true" (p. 32). They suggest the frontal lobes host the neurological roots of reasoning and communication, compassion, motivation, and creativity and imagination.

Halsband, Mueller, Hinterberger, and Strickner (2009) found an enhanced capacity for selective attention in their neurological study of intensive meditation training. This enhanced selective attention capacity

is associated with an increased ability to focus on a desired goal while suppressing undesired ones, combined with an improvement in memory functions (Halsband et al., 2009; Newberg & Waldman, 2009). Goldin and Gross (2010) and Newberg and Waldman (2009) concluded that mindfulness meditation results in decreased activity in the amygdala which is a part of the brain that is associated with the generation of fear and anxiety. The pilot study highlighted in this paper found initial evidence for decreased fear and anxiety and enhanced selective attention capacity. Stephanie acknowledged, "I have the ability the mornings that I do meditate when I start becoming anxious about something and doing negative self-talk, I stop myself. I'm just more aware of what I'm doing. I can go on with my day." Additionally, Randy expressed:

The time I do actually meditate in the morning, I have like a stability a confidence for that day. And when I do get into emotional muddles, it's not a muddle, its just like "oh, it's a passing thing" Its not like chaos that just stays there and takes control.

Williams, Teasdale, Segal, and Kabat-Zinn (2007) claimed that, "Our reactions to unhappiness can transform what might otherwise be a brief, passing sadness into persistent dissatisfaction and unhappiness. The problem is never the emotion itself that comes to protect us but the mind's reaction to the emotion," (p. 34). Randy's report clearly points to a radical shift in thinking from an inner conflict that commonly results in both inner and outer chaos, and perceived lack of control to "a passing thing" in her day. Stephanie discussed the heightened awareness to "go on with [her] day." Both participants attribute their "ability" and "confidence" to beginning their days with meditation. This practice of altering one's reaction to unwanted emotion can transform one's relationship with anxiety, stress, and/or sadness from an overwhelming persistent experience to a fleeting feeling.

Visualization induces a variety of neurological responses. Doidge (2007) states:

One reason we can change our brains simply by imagining is that, from a neuroscientific point of view, imagining an act and doing it are not as different as they sound. When people close their eyes and visualize a simple object, such as the letter *a*, the primary visual cortex lights up, just as it would if the subjects were actually looking at the letter *a*. Brain scans show that in action and imagination many of the same parts of the brain are activated. (p. 203–204)

Wild et al. (2008), in response to participants' very quick reaction rate to imagery rescripting intervention, proposed that imagery works so immediately, because it is like having a concrete experience. Schnitzler,

Salenius, Salmelin, Jousmaki, and Hari (1997) found that the imagery of movement uses the same cortical circuitry and results in the same cortical activation as actual movement (as cited in Wild et al., 2008).

## POWER OF MIND ON BODY

When examining the effectiveness of meditation and visualization on mental health and wellness, it is important to examine the connection between the imagination and body. As legendary American author Mark Twain pointed out, “the power over which a man’s imagination has over his body to heal it or make it sick is a force which none of us are born without. The first man had it, the last one will possess it” (as cited in Pettus, 2006, p. 87). Fernros, Furhoff, and Wandell (2008), in their study of mind–body therapies, found that emotional health was correlated with self-assessed general health, which was correlated with health prognosis.

One cause of psychopathology or mental illness is thought to be the overuse of the “doing mode” of the mind, which is a symbolic process employed by the brain in order to be effective at pursuing tasks, solving problems, and encountering situations (Williams, 2010). Mindfulness meditation is not about getting rid of these processes or just simply clearing the mind, but rather:

cultivating an alternative (“being”) mode . . . that teach(es) people how to pay open-hearted attention to objects in the exterior and interior world as they unfold moment by moment. Attention is paid not only to the objects themselves, but to our reactions to them, particularly reactions of wanting positive states to last, negative states to end and neutral states to be less boring. (Williams, 2010, p. 2)

Mindfulness is theorized to be the active agent in cognitive-behavior therapy, the treatment commonly used for clients with anxiety and depression (Broderick, 2005; Teasdale et al., 2000). Pettus (2006) emphasized that although there are differing “depths” of mindfulness which elicit varying neurobiological effects, there are no right or wrong ways to practice visualization or meditation. He proposed that “any attempt to examine your life more fully, regardless of how it is achieved, has healing value” (p. 276).

## RESEARCH ON MEDITATION AND MENTAL HEALTH

Research on mindfulness and meditation is expanding in clinical science, social-cognitive-affective neuroscience, and clinical interventions for anxiety and depression disorders (Goldin & Gross, 2010). Starks (2006) conducted

research in Northern Canada documenting the effects MBSR on the mental health of adults in the Yukon. She found that MSBR employed as a practice of self-care, resulted in increased self and body awareness and increased ability of clients to cope with stressful situations.

Yunesian, Aslani, Vash, and Yazdi (2008) did a study on the use of transcendental meditation (TM) as a means of enhancing the mental health of an adult Muslim population in Iran. Results from a self-administered General Health Questionnaire (GHQ) (a tool used in Iran to measure anxiety, depression, somatization, and social dysfunction) were compared before and after a 12-week TM course. The overall score of the GHQ test improved significantly enough, after the intervention, to move the average from above to below the cut-off level for clinically discernable mental health distress. The study also found evidence for decreased anxiety in one participant with a self-disclosed diagnosed mental illness. Nadine stated, "My anxiety levels have gone down and [I'm] just starting to feel like I am breathing as opposed to having been holding my breath for a long time . . ." Although further research is required before claims can be substantiated, breath meditation seems to have an inverse relationship to anxiety.

## RESEARCH ON MEDITATION AND WELLNESS

Research on health and meditation emphasizes the need for a multidimensional approach to health and wellness and places such practices as meditation and visualization as elements of larger wellness programs that deal with a variety of elements including physical, emotional, behavioral, and spiritual. Chan, Chan and Ng (2006) discussed:

to heal bodily symptoms, Western medicine focuses on how to combat the disease, kill the bacteria, and cut out the defective body parts. In its traditional biomedical model, illness (including mental illness) is considered to be an evil object, a threat to life, and an enemy against which patients must fight in order to survive. (p. 20)

Although this style of medical treatment has its merits, it often neglects to take into consideration the mind body connection and the capacity of the mind for healing. Chan et al. (2006) found that individuals that suffer physical and emotional health issues, whether the issue is cancer or divorce, favor approaches that emphasize the body-mind-spirit connection as opposed to the Western medical model. They concluded that social work interventions to trauma, such as meditation, should take the approach of strengthening the client's whole system. Restoring balance between the physical, psychosocial, and spiritual dimensions of an individual is the ultimate goal.

The authors found that most of the female university students in their study suffered from anxiety concerning exams and feeling overwhelmed with coursework. Many chose to explore the effects of creative visualization on the psychological distress they were experiencing at university. Using creative visualization as a strategy, participants reported a newly found awareness in their ability to curb their performance-anxiety concerning university exams and coursework. Randy shared her experience of gaining control over her performance anxiety stating:

A couple of days before the midterm exam and then half an hour before the midterm, I'll start hyperventilating and start crying and just all of these bodily things that I don't have any control over but its obvious in my mind first. When I quickly read over what I had written about what I want to feel in my exam, I felt like "wow," I knew much more than I thought I knew. I think the fact that I was reading through and imagining that as opposed to being alone with my head actually just helped me not start crying and hyperventilating.

Implementing creative visualization altered not only this participant's experience of the exam process but the outcome as well, as her assessment was markedly improved. Creative visualization is an approach that focused on and integrated the physical, psychosocial, and spiritual dimensions of these students' lives.

Meditation can bring an increased wisdom and compassion to the relationships between social workers and clients. The authors, also social workers, found that working with participants in a spiritually oriented manner encouraged personal self-care, awareness, and brought about deepened relationships within the research group. They correlated their ability to be aware and present with participants as directly related to the group meditation practice. Brenner (2009) also pointed out that awareness permitted social workers to avoid distinctions between self and other, which thereby allowed workers to be fully present with the client.

## RESEARCH ON VISUALIZATION AND HEALTH

Trackhtenberg (2008) did a critical review on the research on visualization and the immune system and found that guided imagery interventions can reduce stress, which allows the immune system to most effectively function. Donaldson (2000) showed that negative images can produce physiological outcomes, such as subtle muscle movements, changes in respiration and blood flow, and changes in the brain waves, that move an individual towards the "fight or flight" response that leads to negative stress stimulus. Intentional

visualization of positive images, on the other hand, can counteract this response and enhance an individual's immune system.

## RESEARCH ON VISUALIZATION AND MENTAL HEALTH

Psychosocial and psychiatric health is particularly difficult to maintain during periods of physical illness. Mental health and quality of life are extremely important for patients suffering from chronic illness such as cancer. Walker et al. (1999) studied the effects of relaxation combined with the visualization of defenses destroying tumor cells on women with newly diagnosed, locally advanced breast cancer. They found that women who participated in relaxation and visualization were more relaxed and easy going, had few psychological symptoms, and had a self-reported higher quality of life.

Visualization techniques have been shown to offer relief with mental health and psychiatric disorders. Russinova, Wewiorski, and Cash (2002), in a purposive sample of adults in the United States, found that alternative health care practices, especially guided imagery, assisted patients to cope with serious mental illness. Serruya and Grant (2009) conducted a study on the use of mental imagery as an intervention to treat clients who are suffering from delusions as a result of a psychotic disorder. They identified, "because negative images stir up more affect than verbalizations of the same content, patients tend to find the images particularly distressing, making the images the central players in psychopathology of anxiety" (p. 792). Serruya and Grant (2009) conducted a case study with a 25-year-old individual who was suffering from paranoid delusions. After a number of guided imagery sessions, the client was able to engender new ways of thinking and enabled him to return to school. One participant of the authors' study self-identified with a mental illness. She normally found group work and social gatherings extremely anxiety provoking (claustrophobic tendencies) and outside her ability to function. For this reason, she was uncertain whether she could complete the 8-week pilot study. After 1 week of participating in guided group meditation, she noted the following: "I like how the room expanded. I felt the walls vanish" and subsequently completed all 8 weeks of the project.

Wild et al. (2008) studied the use of image rescripting interventions in the treatment of social phobia. They hypothesized that, because images prevalent in those who suffer from social phobia are linked to memories of unpleasant social experiences, the use of image rescripting techniques would reduce the participant's negative self-beliefs and anxiety surrounding social situations and decrease distress caused by recurrent images. They found that imagery rescripting did, in fact, reduce anxiety surrounding feared social situations for those with social phobia disorder. They also found that although there were no changes in the frequency of recurrent images of memories, there was a decrease in the distress associated with them.

## Increased Self Awareness

Adams (2004) argued that the development and interpretation of imagination could lead to an increase in consciousness. Below is an example from the authors' study in which Joy revealed her increased self-awareness after one month of visioning:

Whenever I got upset at somebody or angry or sad in general I'd sort of realize that I had envisioned myself being sad and getting sadder . . . When I realized that . . . I tried to change the vision, to see myself as being happier, forgiving this person or making up and it helped a lot actually. Once I realized that I wanted to be happy I tried to work towards that instead of working towards being sad.

Joy connected her moods and relational interactions with her thoughts by contemplating and visualizing how she wanted to feel. She realized that thoughts (images) of herself as sad or angry preceded events that played out in her life and resembled previously held images in her mind. By linking past thought-images with future feelings and life events, Joy recognized she was unintentionally thinking and thus, observing/creating herself as sad and angry. This recognition motivated her to change the internal images she had of herself from unintentional negative images to intentional positive images. Through the continuous practice of intentional desired self-observation, Joy was transforming herself from a woman controlled by an unwanted self-image to one who can consciously choose who she wants to be. Creative visualization holds promise that everything that can be imagined is possible.

## Improved Self-Image

Recall that Doidge (2007) states, “. . . we can change our brains simply by imagining . . . Brain scans show that in action and imagination many of the same parts of the brain are activated” (pp. 203–204). Wilson and Dunn (2004) discuss that although the pursuit of self-knowledge is not always productive; the development of self-awareness can, in fact, help people to construct positive narratives and escape focusing on an incomplete understanding of self that facilitates the perpetuation of negative self-image. The awareness raised by the practice of meditation is one of nonjudgment, which can be helpful in taking people out of negative mind traps.

This may explain the research findings with one participant who experienced an improved sense of body image through visualization. Stephanie provides an example of improved self-image:

What worked about it is . . . my vision is that I am healthy and that I like my body, that's my vision. I live in a house that . . . all the closet

doors are mirrored so every time I walk by it's like 'ohhhh, here I am again.' My thighs are too big . . . It's just everywhere all the time, so every time I went; I was like "No. I am healthy, I look beautiful today" and just saying that was . . . a real switch in my brain . . . I felt better about myself all week.

Stephanie began the process of altering the way she perceives her physical self from a woman who does not fit within a normal range of feminine attractiveness to one who is healthy and beautiful. This perceptual shift, which required Stephanie to not believe in the messages her eyes send, ignited a change in behavior, including exercise and a healthy diet. Newberg and Waldman (2009) stated, "when you intensely meditate on a specific goal over an extended period of time, your brain begins to relate to your idea as if it were an actual object in the world by increasing activity in the thalamus, part of the reality making process of the brain" (p. 34).

In the preinterviews of the pilot study, participants expressed a common theme of continuous negative self-talk and self-blame resulting in recurrent feeling of anxiety and stress. For instance, three participants reported, "I blame myself for all of the silly mistakes," "Yes, I am critical of myself . . . I can be quite self-conscious," and "I have the ability sometimes but not the awareness immediately to stop whatever the negative thoughts are." Participants were guided in visualization activities focused on imagery rescripting by recalling unwanted thoughts and/or feelings about the self or an event. Once participants recalled their unwanted thought-images, they were guided to replace those images with intentional positive images they desire regardless of their belief in the possibility of those realities. Practice focused on the desired image/feeling resulted in mood and thought pattern changes for most participants. For instance, postinterview data analysis revealed the same participants quoted above experienced a reduction in negative self-talk, self-blame and resulting anxiety. In corresponding order to the above quotes, the first participant noted, "that visualization helps me to replace worries, and that I think that this is very important." The second participant noted, "I would say I am less self-critical than I would have been before the group started." The third participant noted, "I'm more aware of when I'm doing negative talk to myself, I don't think I realize how much I did that to myself." In addition to increased self-awareness, decreased anxiety and sadness, induced positive moods, and the ability to intentionally think-observe desired aspects of life, participants in this (2010) pilot study experienced an increased ability to sleep, reduction in performance anxiety in school, improved marks, and improved communication and outcomes in relationships. Six months after Phase I, the authors are about to commence Phase II of the pilot project with four of the original six participants. Follow up research will be facilitated with a comparative comprehensive analysis over the two phases of the project, including the artistic data collected, to

investigate the effects of the Sen meditation/creative visualization system with female university students experiencing stress, anxiety, and sadness.

## CONCLUSION

The literature revealed that various meditation and visualization practices have been successful in increasing immune functioning, inducing the Relaxation Response, improving sleep, and decreasing anxiety and stress among female university students. Research has also aided other populations to cope with dysphoric mood, mental illness, and stress related to physical illness. Further research, with more accurate data collection strategies and longitudinal designs, are required. The authors' study highlighted the need to continue further research on the Sen system as an intervention for stress, anxiety, and sadness, and will incorporate a longitudinal design. The authors' (2010) work deepens the literature, suggesting the power of the mind can directly set in motion a version of reality a client strives for, while diametrically opposing that which they fear. Alternatives practices to health and wellness, such as the Sen System, show promise to improve human quality of life.

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