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Spirituality Within Reach: A Pathway through Meditation

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SPIRITUALITY WITHIN REACH: A PATHWAY THROUGH MEDITATION

A dissertation presented to the faculty of
ANTIOCH UNIVERSITY SANTA BARBARA

in partial fulfillment of
the requirements for the
degree of

DOCTOR OF PSYCHOLOGY
in
CLINICAL PSYCHOLOGY

By

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September 2017

SPIRITUALITY WITHIN REACH: A PATHWAY THROUGH MEDITATION

This dissertation, by Serena Cyr, M.A. has been approved by the committee members signed below who recommend that it be accepted by the faculty of Antioch University Santa Barbara in partial fulfillment of requirements for the degree of

DOCTOR OF
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Abstract

Meditation is an ancient spiritual practice that has been demonstrated to be beneficial in reducing chronic pain, substance use, and eating disorders, as well as aiding in the treatment of sleep disorders, cancer, and psychological distress. In an effort to enhance the benefits, many contemporary meditation practices have been secularized, focusing on the cognitive, the psychological, and the emotional components, while de-emphasizing the spiritual aspects of meditation. However, spiritual meditation practices also demonstrate benefits, including stress reduction, improved emotional wellbeing, increases in pain tolerance, reductions in mental health symptoms, and increased faith. However, little is known regarding the effects of different types of meditation on the reported achievement of a sense of “spiritual height.” Further, it is unclear whether age, gender, or months of meditation practice might be related to achieving spiritual height. The present study was specifically designed to determine whether meditation results in achieving spiritual height, and whether the rates of reportedly achieving spiritual height “many times” or “almost always” might significantly differ by various meditation types, including Transcendental Meditation (TM), Relaxation Response (RR), Mindfulness Meditation (MM), Mindfulness Based Stress Reduction (MBSR), Christian Devotion Meditation (CDM) and “Other” types of meditation that do not fit into these categories by analyzing an international database of meditators. Survey data (N = 965) were tested using t-tests, chi square, and logistic regression statistics at the $p < .05$ threshold for statistical significance. Overall, 53% of the total sample reported achieving spiritual height “many times” or “almost always” during meditation, with 62% of MM

practitioners reporting experiencing spiritual height “many times” or “almost always.” Additionally, one third or more of secular meditation (MBSR and RR) practitioners reported achieving spiritual height “many times” or “almost always.” Combined, these findings indicate that the clinical community needs to be aware that meditation is a viable strategy to achieve spiritual height in clients, even if the meditation is secular in nature, and that MM may provide the best odds of experiencing spiritual height during meditation. This Dissertation is available in Open Access at AURA: Antioch University Repository and Archive, <http://aura.antioch.edu> and OhioLink ETD Center, <http://www.ohiolink.edu/etd>.

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Chapter I: Introduction

Overview of the Study

Meditation as a contemporary practice is an amalgamation of many traditions. The word meditation is derived from the word *dhyana*, originally from Sanskrit, a traditional, sacred, Indian language; it means attention and contemplation (Sampaio, Lima, & Ladeia, 2016). Meditation has traversed hundreds of cultures all over the world through a variety of religious, spiritual, and more recently, secular traditions to become the complex practice it is today (Benson, 1983; Thomas, 2014).

Over the last several decades in the West, meditation has transitioned from a fringe ritual associated with religious or spiritual communities to a familiar endeavour, generally understood as a healthy practice for one's overall wellbeing (Baer, 2003; Kabat-Zinn, 2013). In its modern form, it has combined Eastern and Western practices; it is practiced in both individual and *sangha* (community) settings; it can be secular or religious. Contemporary meditation is used as a spiritual practice as well as a mind-body therapeutic intervention. Meditation can be used to describe a multitude of techniques used to achieve a variety of goals for effects on physical, emotional, spiritual, and mental wellbeing (Ospina, 2007; Sampaio, Lima, Ladeia, 2016).

Once intertwined, meditation, religion, and spirituality have in recent times been teased apart as separate entities, with meditation in particular being conceptualized and practiced in isolation from its sacred roots. Several factors contribute to the secularization of contemporary meditation. The primary rationale appears to be an effort to make meditation accessible to as many people as possible. With religion and spirituality removed, the practice becomes more approachable and less murky with the dogma that

may be involved with religious customs. An increasingly negative view of religion in the recent past may have led to the belief that a meditation practice removed from religion would be more palatable to the general public. Today, religion is often looked at through a narrow lens as an institutionally based set of beliefs and practices that are restrictive and negative in character (Falb & Pargament, 2014). This is a barrier to deeper investigation in the field of meditation within religious practices (Falb & Pargament, 2014).

For the purposes of this research, *religion* is defined as, “A system of beliefs and practices observed by a community, supported by rituals that acknowledge, worship, communicate with, or approach the Sacred, the Divine, God (in Western cultures), or Ultimate Truth, Reality, or nirvana (in Eastern cultures)” (Koenig, 2008, p. 11).

Spirituality is understood as, “The way individuals seek and express meaning and purpose and the way they experience their connectedness to the moment, to self, to others, to nature, and to the significant or sacred” (Puchalski et al., 2009, p. 887).

Secular is used to describe a religious and spiritual worldview that is absent or intentionally removed (Stratton, 2015). Taylor (2007) noted that a secular view is not necessarily an attack on the religious and/or spiritual, but for many in Western culture, it has become a worldview option that need not reference the transcendent

There are meditative practices in cultures all over the world. For the purpose of this paper, meditation will be discussed in terms of practices that are familiar to individuals in the West and are most often associated with the term “meditation.” Such practices would include, for example, transcending, breathing, body scan, contemplative

prayer, mantra repetition, open awareness, and visualization, rather than more commonly understood moving meditations such as yoga, tai chi, or qi gong.

In modern parlance, *meditation* can be described simply as “intentional self-regulation of attention from moment to moment” (Baer, 2003, p. 125). A report for the US Department of Health and Human Services used a panel of experts to try to create a possible operational definition which ended up including specific criteria: relaxation, self-induced state, concentration, an altered state of awareness, suspension of logical processes, spiritual, religious or philosophical context, and maintenance of self-observing attitude (Ospina et al., 2007).

The limited research examining meditation practices with spiritual and/or religious components has found a multitude of benefits, including stress reduction (Ferguson et al., 2010), enhanced ability to cope with worry and to improve emotional wellbeing (Fredrick & White, 2015), increased faith (Johnson et al., 2009), more frequent spiritual experiences, and improved existential well being (Wachholtz & Pargament, 2004; 2008), in addition to reductions in the frequency of migraine headaches, significantly lower anxiety, more positive moods, and increases in pain tolerance (Wachholtz & Pargament, 2004; 2008). The present study was designed to take a deeper look at spiritual experiences during meditation by investigating the frequency of achieving “spiritual height” during different types of meditation.

“Spiritual height” is term originally used as part of the Mystical Experiences Questionnaire (MEQ, Pahnke et al., 1969) to investigate mystical experiences after being administered psilocybin (MacLean et al., 2012). The MEQ examines seven domains of mystical experiences: Internal Unity; External Unity; Transcendence of Time and Space;

Ineffability and Paradoxicality; Noetic Quality; Deeply-Felt Positive Mood; and Sense of Sacredness. This Sense of Sacredness scale has subsequently been adapted for mediation research (Vieten et al., 2017; Vieten & DeLorme, 2014). For example, The Future of Meditation Research: A Call to Expand the Science of Contemplative Practice (FOMR) task force asked an international pool of meditators to rate the frequency of MEQ items, including experiencing a sense of being at a spiritual height during meditation (Vieten et al., 2017; Vieten & DeLorme, 2014), which is crucial to the present line of investigation because the spiritual elements and origins of meditation that have been eliminated from many forms of contemporary Western meditation. And because a study by the MEQ developer (Pahnke, et al., 1969) found that spiritual experiences have been played a key role in positive therapeutic outcomes. The term “spiritual height” may encompass broad range of individual meditation experiences, including “feelings of awe, feelings of inner peace, perceiving higher levels of meaning, experiencing a sense of unity, engaging in the sacred, or the spontaneous flowing of compassion and altruistic love” (Kristeller 2010, p. 158).

As clinicians have become increasingly aware of the positive influence of spirituality on physical and mental wellness, practitioners who were formerly discreet about their interests in the spiritual domain are now more open to the connection between spirituality and positive mental health (Daily, Robertson, & Gill, 2015). Research on the connection between an individual’s spiritual and mental wellness has grown rapidly (Nichols & Hunt, 2011) and spirituality has been linked to improvements in mental health (Gill, Barrio Minton, & Myers, 2010), physical health (Lloyd & Dunn, 2007), increased quality of life (Greeson et al., 2011), protective factors for negative life events (Lindgren

& Coursey, 1995), and coping with chronic illness (Robertson, Smith, Ray, & Jones, 2009). For these reasons, it is important to determine which types of meditation are more or less likely to foster achieving spiritual height.

Statement of the Problem

Humans have been utilizing meditation as a healing practice for millennia. Its origins were in religious and spiritual traditions in Hinduism, Buddhism, Judaism, Islam, Christianity, and others. Certain contemporary forms of meditation have become secularized for a variety of reasons. Some speculate that this transition evolved as religion became more narrowly and negatively viewed (Falb & Pargament, 2014), but more surmise it is an attempt to make this healing practice more accessible to larger groups of people (Baer, 2003; Kabat-Zinn, 2003; Monteiro, Musten, & Compson, 2015).

The majority of studies support the effectiveness of meditation as a practice that provides psychological, spiritual, and mental health functioning. Few studies have investigated the direct effect of meditation on spirituality and even fewer have explored spirituality's mediating role in functional benefits that result from meditation practice (Kristeller, 2010).

Statement of Purpose

Seven in 10 adults in the United States express a desire to experience spiritual growth (Gallup & Johnson, 2003). The purpose of this project is to identify possible benefits of meditation in the context of spiritual, religious and secular practices, as well as explore spirituality as a possible mechanism of change, in order to expand the breadth of possible advantages gleaned from meditation.

Research demonstrates that increased spirituality is not only a valuable outcome of meditation training but may also be a key mechanism by which traditionally secular meditation practices produce mental and physical health outcomes (Wachholtz & Pargament, 2008). Furthermore, the strong relationship between increases in spirituality and reductions in reported physical and mental health symptoms adds to the emerging view that spirituality may be related to health, independent of religious or spiritual association (Koenig, George, & Titus, 2004). With massive secular adoption of meditation, large quantitative studies can provide evidence of whether reaching “a sense of being at a spiritual height,” which has been assumed to be a critical part of its benefit, is central to the practice, and can also be reached by non-religious and non-spiritual meditators.

Description of Study

A task force of 24 meditation researchers and educators from various US universities and institutions gathered to develop recommendations for expanding the field of meditation to include currently understudied or neglected areas in meditation research (Vieten et al., 2017). The group noticed the majority of existing literature on meditation focuses on “evaluating the clinical effectiveness of mindfulness-based interventions, neural and other physiological correlates of meditation, and individual cognitive and emotional aspects of meditation” but that “Far less research has been conducted on what may be perceived as more difficult domains to measure – group or relational, transpersonal and mystical, anomalous or extraordinary phenomena, postconventional stages of development, or difficult aspects of meditation” (p. 3).

The group collaborated through a series of four, three-day meetings starting in spring 2013 and ending in fall 2015. The Institute of Noetic Sciences (IONS), the Esalen Institute Center for Theory and Research, the Fetzer Memorial Trust, the Mental Insight Foundation, and the David Lynch Foundation sponsored the meetings (Vieten & DeLorme, 2014). The group initially gathered at Esalen then at IONS, which provided oversight for the research and IRB approval.

The task force examined the current state of meditation research and evaluated how to expand the types of constructs being studied in order to better integrate areas that are currently understudied (Vieten et al., 2017). The collaborators ultimately identified six domains that future researchers could fruitfully pursue. These included: 1) mystical, transcendent, or transformative experiences, 2) social and relational aspects of meditation, 3) contextual aspects of meditation practice, 4) anomalous physical phenomena related to meditation, 5) extended human capacities, and 6) difficult states and stages of meditation practice (Vieten et al., 2017). In order to identify these domains, they created a cross-sectional survey of meditation practitioners to investigate the “prevalence and perceived significance” of these experiences (Vieten et al., 2017, p. 8).

The survey was administered between November 10, 2014 and February 3, 2015. In addition to the work of many meditation researchers and teachers, the ongoing collaboration was supported the David Lynch Foundation, the Mental Insight Foundation, the Esalen Institute Center for Theory and Research, Learnist, and the Institute of Noetic Sciences. For this dissertation, a portion of the dataset was used to more closely examine aspects of mystical, transcendent, or transformative experiences by investigating the occurrence of individuals reaching “a spiritual height” during meditation.

Demographic information utilized for this project included age and gender. The quantitative analysis examined how participants' meditation experience (duration of meditation) and type of meditation (Transcendental Meditation-TM, relaxation response-RR, mindfulness meditation-MM, mindfulness-based stress reduction-MBSR, and Christian devotion meditation-CDM) were correlated with the frequency with which they reported a "sense of being at a spiritual height." Meditation types are further distinguished as secular (MBSR and RR), religious (CDM and MM), and spiritual or secular (TM, with research showing this method used in both spiritual and secular manner).

Research Questions

This research was designed to answer the following research questions (RQs) using an international database of meditators.

RQ1: Do the majority meditators frequently (many times or almost always) achieve spiritual height?

RQ2: Are the demographics of age, gender, and months meditating significantly associated with achieving spiritual height?

RQ3: What are the odds of achieving spiritual height many times or almost always among types (TM, RR, MM, MBSR, CDM, Other) of meditation, in isolation and after accounting for demographics?

RQ4: Does achieving spiritual height many times or almost always significantly differ by types (TM, RR, MM, MBSR, CDM, Other) of meditation?

Hypothesis

The following hypotheses were tested in the present study:

H1: The majority of meditators report achieving spiritual height frequently (many times or almost always) during meditation.

H2: The demographics of age, gender, and months meditating are associated with achieving spiritual height many times or almost always during meditation.

H3: The odds of achieving spiritual height among types (TM, RR, MM, MBSR, CDM, Other) of meditation, in isolation and after accounting for demographics, will be statistically significant.

H4: Achieving spiritual height many times or almost always will significantly differ by types (TM, RR, MM, MBSR, CDM, Other) of meditation.

Chapter II: Literature Review

Meditation crosses cultural customs evolved from many of the world's religions, including Christianity, Judaism, and Islam, while the millennia-old practice is most often traced back to Eastern spiritual traditions with Vedic, then Hindu, practices in India, and Buddhist processes in Tibet, China, and Japan (Thomas & Cohen, 2014). Meditation has morphed from an activity with a primarily spiritual objective to a secular method in certain contemporary practices.

The empirical study of the benefits of meditation is relatively new, yet interest is growing, as indicated by its popularity in both research and practice. Between 2002 and 2012 there was a 1,000% increase in the annual number of scientific papers published concerning mindfulness and meditation (Shonin, Van Gordon, & Griffiths, 2014). Its efficacy has been explored in a variety of contexts, with results indicating positive effects on physical and mental functioning in individuals diagnosed with depression, anxiety, stress, pain, insomnia, and chronic illness (Chan & Larson, 2015; Chiesa & Serretti, 2009; Grossman, Niemann, Schmidt, & Walach, 2004; Hülshager et al., 2014).

Meditation has entered the mainstream, as evidenced by the use of meditation training in a multitude of settings, including schools -- elementary through graduate (Christopher, 2010; Zenner, Herrnleben-Kurz, & Walach, 2014); hospitals and medical clinics (Kabat-Zinn, 2003); mental health clinics and rehabilitation centers (Shorey, Brasfield, Anderson, & Stuart, 2015); offices (Shonin, Van Gordon, Dunn, Singh, & Griffiths, 2014); prisons (Shonin, Van Gordon, Slade, & Griffiths, 2013); and the military (Brewer, 2014).

Due to variance in origins, histories, methods, goals, and individual practices, it has been a challenge to come to a consensus about a single definition for meditation that encompasses everyone's experience. Despite extensive interest in both popular and scientific domains, meditation still lacks a precise definition within contemporary research. However, there are some basic tenets that can help to understand the evolving practice.

Cardoso, de Souza, Camano, and Leite, (2004) worked to establish a possible operational definition in order to create a set of criteria for the conceptualization and study of meditation. They used a systematic approach based on consensus techniques and came up with five criteria. These included: (1) use of a clearly defined and regularly practiced technique; (2) psychophysical relaxation; (3) logic relaxation; i.e., there is no intention to analyze, judge, or create expectations for the process; (4) self-application (the method for meditation can be taught by an instructor but also practiced independently); and (5) use of a self-focus skill or "anchor" to maintain attention in the present moment (e.g. the breath or a mantra- repeated word). Due to the extensive history of meditation, the complex nature of meditation, and the diversity of practices, Bond et al. (2009), in collaboration with a panel of experts with meditation practices in health care, used the Delphi method to elaborate on the work of Cardoso et al. (2004). They came up with three more criteria: (6) involves an altered state or mode of consciousness, mystic experience, and enlightenment; (7) is rooted in a religious, spiritual or philosophical context; (8) involves an experience of mental silence.

Baer (2003) used a simpler explanation to describe meditation: "intentional self-regulation of attention from moment to moment" (p. 125). In a similar context,

meditation emphasizes meticulous attention to present-moment experiences in order to develop qualities of curiosity, acceptance, and detachment (Bishop et al., 2004). From a cognitive and psychological lens, it may be described as a group of goal-directed, self-regulatory actions that aim to bring mental processes under control through skills in attention and awareness (Ireland, 2012; Walsh & Shapiro, 2006). In behavioral terms, meditation occurs when “the focus of a person’s attention is open to admit whatever enters experience, while at the same time, a stance of kindly curiosity allows the person to investigate whatever appears, without falling prey to automatic judgments or reactivity” (Segal, Williams, & Teasdale, 2013, pp. 322–323). Across most techniques, this development of meditation skills is accomplished through intentional, self-regulated behaviors involving self-manipulation and self-management of posture, movement, and states of consciousness (Ireland, 2012).

Meditation is a broad term used to describe a variety of practices that share distinct features, while they differ in significant ways according to purpose and practice (Ospina et al., 2007). Understanding specific features of a practice will help to navigate the depth and breadth of meditation across the plethora of practices. Meditation is generally classified according to certain characteristics: goal of practice (therapeutic or spiritual/religious [Ospina et al., 2007]), direction of the attention (focused attention [FA], open monitoring [OM] [Buttle, 2015]), the kind of anchor utilized (a word, breath, sound, object or sensation [Linehan, 2003; Kabat-Zinn, 2013]), and the posture used (motionless sitting or moving [Kabat-Zinn, 2013]). Oftentimes a combination of these can be used together; for example, a person can practice with the intention of both spiritual and religious benefits, with attention switching from FA (on the breath, then

perhaps moving to sound) then to OM, as a single meditation progresses. An individual may choose to move from a sitting posture to a walking meditation, all while practicing alone or in a group. Furthermore, meditation practices may incorporate other lifestyle choices including diet, movement, and values (e.g. Ayurveda, yoga, and mindfulness) (Goyal, 2014).

History of Meditation

When investigating meditation, it is helpful to know a bit of history about its origins and how it evolved within and across religions and cultures throughout different regions of the world. Meditation has been utilized as a spiritual and religious practice for more than 5000 years. The ancient practice of meditation was believed to originate in India around 3000 B.C. but was first mentioned in the Hindu Veda traditions of India in 1500 B.C. (Chow, 2015). Meditation is referenced in Ayurveda, an ancient Indian form of medicine, which indicates this practice was used not only in spiritual healing but also in medical procedures to aid in physical health (Sampaio, Lima, & Ladeia, 2016).

Around the sixth century B.C., other meditation forms were beginning to appear in Buddhist India and Taoist China. However, the exact origins of these practices – particularly Buddhist meditation -- continues to be debated (Chow, 2015; Santina, 1999). The most common of these practices are Vipassana and Zen, from which many contemporary meditation and mindfulness practices were derived. Between 400-100 B.C., the Bhagavad Gita was written, illustrating the philosophy of yoga, meditation, and the practice of living a spiritual life (Chow, 2015). This Hindu scripture is a synthesis of several different ideals. The Hindu practice of meditation was developed through the

Bhagavad-Gita as a systematic psycho-physical training in breathing, stretching, and mental concentration to develop control over the body and mind (Smith, 2005).

During the second century B.C., a form of mystic Judaism, or Merkabalism, utilized meditative practices to create an altered stated of consciousness (Benson, 1983). This process involved individuals sitting with their heads between their knees, whispering hymns and songs and mantra (a sound or word repeated to assist with concentration when meditating). Other Judaic traditions continued to use meditation along with spirituality; for example, in the mystical tradition of Kabbalah, meditative practices include mental visualization of supernatural realms the soul navigates (Wachholtz & Austin, 2013). Verman & Shapiro (1996) describe five most common forms of meditation in contemporary Judaism: meditation on oneness or on the name of God, meditation on breath, chanting holy letters in combination with the breath, imagery meditation with light visualized as the divine, and heart opening meditations. The Torah and Hebrew Bible also make reference to contemplative meditation (Wachholtz & Austin, 2013).

Christian meditation originated in monastic life as a form of prayer and evolved in both in the East and the West. In fourth century Egypt, groups of monks known as the Desert Fathers wrote about a means of connecting to God through the repetition of short prayer, similar to a mantra (Johnson, 2010). Out of this Eastern practice came the Jesus Prayer: *Lord Jesus Christ, Son of God, have mercy on me, a sinner*. It is noteworthy in its invocation of the name of Jesus; the request for mercy and sorrow for sin; the disciplined repetition and silent practice of Hesychast, or a mystical prayer where one retires inward to stillness (Johnson, 2010; Wachholtz & Austin 2013). In sixth century Italy, Saint Benedict was advocating Lectio Divina. It is a slow contemplative praying of scripture

and rosary meditations in a personal response to God, initially used by monks (Cunningham & Egan, 1996; Wachholtz & Austin 2013). Similarly, contemporary Western Christian meditative practices use a custom similar to a mantra, repeating a single word, phrase, or short prayer (Wachholtz & Austin, 2013).

Around eight or ninth century A.D., Islamic meditation, or Dhikr, was emerging as a means of becoming closer to God (Cunningham & Egan, 1996). According to Islamic Insights (2016), it “can be described as the development of the presence of body, heart, and mind in worship and religious contemplation. It is essential to spiritual development and acceptance of and benefit from prayers. Without meditation, Jihad Akbar (struggle against the self’s temptations to make wrong choices) cannot truly take place except in a most haphazard manner” (para. 5).

Like many religious meditation practices, Dhikr can be practiced in a variety of ways, with the goal of excluding distractions. In the Muslim tradition, meditative prayer is practiced five times a day. The intention of this meditative or peaceful prayer is to assist with guiding the individual through their day (Wachholtz & Austin, 2013). Sufism, a mystical Muslim tradition, may emphasize a concentration meditation technique, involving high-intensity and sharply focused introspection, while more famously incorporating music, dance, and whirling to bring on a state of ecstasy (Benson, 1983; Wachholtz & Austin, 2013). Meditation had a resurgence in the West in the 1970’s with the introduction of Transcendental Meditation (TM) along with Mindfulness Based Stress Reduction (MBSR). However, for the first time, rather than emphasizing spiritual growth, these secular meditation practices were utilized to promote relaxation and physical and mental health benefits.

Types of Meditation

Transcendental Meditation (TM)

Transcendental Meditation grew out of the Vedic tradition of India, where meditation is believed to originate (Alexander, 1994). It was developed by Maharishi Mahesh Yogi in the mid-1950s (Alexander, 1994; Ospina et al., 2007). Maharishi is often credited for bringing this “brand of Eastern mysticism to the West in the late 1950s, [attaining] a cult-like following by the end of the 1960s, when his message of peace resonated with a counterculture in bloom” (Woo, 2008, p. 2). By the mid-1970s, TM had an estimated 600,000 practitioners and by 2008, some TM leaders claimed more than 5 million practitioners in 130 countries (Woo, 2008).

Transcendental Meditation began to fall out of favor with a series of events. Maharishi introduced an advanced form of TM, called yogic flying, which enabled practitioners to levitate (Woo, 2008). However, he did not allow public demonstrations, which engendered skepticism. Additionally, prices for training increased from \$35 for a seminar to \$2,500 for a course (Woo, 2008). In 1986, he was sued by a follower for fraud, neglect, and emotional damages; several other practitioners presented with similar accounts, consequently moving away from TM (Woo, 2008). Still, TM continues to this day with international organizations and followers all seemingly attracted to Maharishi’s simple message: “The philosophy of life is this: Life is not a struggle, not a tension . . . Life is bliss. It is eternal wisdom, eternal existence” (Woo, 2008, p. 3).

Transcendental Meditation uses a repeated mantra until the mantra no longer consciously occurs and the mind transcends to a quiet state without thought. “In this silent, self-referral state of pure wakefulness, consciousness is fully awake to itself alone

with no objects of thought or perception,” ultimately leading the individual to reach his or her full potential (Alexander, 1994, p. 545). The Maharishi Mahesh Yogi created TM with a theoretical framework based on the nature of transcendental consciousness. However, some researchers (Alexander, 1994; Farrow & Herbert, 1982) state that the origin of the practice, along with any implications for spirituality, are not necessarily part of the practice of TM as changes in lifestyle or beliefs are not necessary. This secularization of meditation from spirituality was common at the time of introduction in the west, as demonstrated with Mindfulness Based Stress Reduction.

Ospina et al. (2007) describe the learning process of TM, as it occurs in the context of a relationship with a teacher who monitors the practitioner’s progression. TM is traditionally taught in a course, which includes five to six hours of instructions over the course of four days. The first session is 1.5-hours and is structured as an introductory lecture. The second session is 1-hour, providing more specific information about the practice. If interested in learning how to practice TM, individuals will meet with a teacher for a 5- to 10- minute interview. On a later date the practitioner will engage in a 1- to 1.5-hour session, which begins with a ceremony where the mantra is given and then the technique is taught. The following three sessions are 1.5-hours and the technique is taught in further detail. TM is practiced 15 to 20 minutes twice daily. The teacher and practitioner will check in for the first few months to make sure the practice is developing suitably (Alexander, 1994).

Relaxation Response (RR)

Herbert Benson developed RR at Harvard Medical School research laboratory in the 1970s (Buttle, 2015). He used the term relaxation response to describe the opposing

state of the stress response, or what is typically called “fight-or-flight” response, elicited when the nervous system becomes activated in reaction to stress or danger (Benson, 1982). His initial research was based on TM and hypertension, in which he took note of the fact that the relaxation response was not unique to TM; rather, all ancient meditation practices included shared elements capable of creating such a response (Benson, 1982). While Benson’s initial research stemmed from studying spiritual practitioners of Maharishi Mahesh Yogi, RR is conceptualized as secular without any requirement for spiritual orientation or belief system, often using “simple non-cultic technique” to describe the practice (Benson, 1982, p. 232; Buttle, 2015; Ospina et al., 2007).

The practice can be taught in five minutes or self-taught with four integral elements: (1) a quiet environment; (2) decreased muscle tone; (3) a mental device [i.e. mantra -- though he would not use that expression— a repeated sound, word, or phrase]; (4) a passive attitude. More specifically, an individual will sit quietly in comfortable position; generally with eyes closed, but eyes can also be open. Deep muscle relaxation begins at the feet then progresses to the face. The individual breathes through the nose, focuses on the breath, and with each exhale, says the word “one.” Benson (1982) recommends the word “one” for its neutral meaning and one syllable length. Practitioners maintain a positive attitude, without trying to achieve a goal of relaxation, allowing the process to happen at its own pace. It is recommended for 20 minutes once or twice a day (Benson, 1982).

Mindfulness Meditation (MM)

Oftentimes, mindfulness is confused with meditation (Dimidjian & Linehan, 2003). Mindfulness is a skill to be developed through practice, both formal and informal.

A formal mindfulness practice often involves a sitting meditation; however, they are not synonymous. Mindfulness meditation is the basis of several Buddhist meditation practices; most common are Vipassana and Zen Buddhist meditations (Ospina et al., 2007). While mindfulness originated in early Buddhist practices that were described as profound religious practices, here in the West it has, like meditation, grown and in doing so become more secular in its nature (Bishop, et al. 2004; Gunaratana, 1993); now several therapeutic mindfulness meditation processes have been developed without any spiritual or religious practices involved (Kabat-Zinn, 2013).

Within the last few decades, Western society, particularly in healthcare and academia, has generally adopted a definition of mindfulness offered by Kabat-Zinn (2003), as “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (p. 145). Others offer slight variations: “a process of relating openly with experience” (Bishop et al., 2004, p. 233) or, “the nonjudgmental observation of the ongoing stream of internal and external stimuli as they arise” (Baer, 2003, p. 125). These appear remarkably similar to definitions of meditation (as described earlier), which is why there may be confusion between the two. While mindfulness can be practiced in and out of formal meditation, these definitions describe the essential process of the mind while engaged in a formal sitting meditation.

Vipassana. Vipassana is believed to be the meditation practiced by Gautama the Buddha more than 2,500 years ago (Gunaratana, 1993; Ospina et al., 2007). In contemporary meditation practices, Vipassana is also called insight meditation or mindfulness meditation. With Vipassana meditation, practitioners learn how observe their

thoughts and inner working of their minds in a calm and nonjudgmental manner in order to gain insight into behavior and functioning (Gunaratana, 1993).

Gunaratana (1993) describes criteria for a Vipassana meditation practice: (1) Don't expect anything, (2) Don't strain, (3) Don't rush, (4) Don't cling to anything, reject anything, or fight with experiences, (5) Let go and relax, (6) Accept everything that arises, (7) Be gentle with yourself and who you are, (8) Investigate/question everything, (9) View all problems as challenges, (10) Don't try to figure it all out, and, (11) Don't dwell on differences, focus on similarities.

In MM, attention can be turned both externally and internally. Some meditations encourage individuals to attend to their internal experiences, such as physical sensations, thoughts, and emotions (Baer, 2003). Others may encourage attention to aspects of the environment, such as sounds, tastes, tactile sensations, or sights (Kabat-Zinn, 2003; Linehan, 2003). Sitting MM can be described as quietly sitting and observing one's experiences without creating or modifying them (Eberth & Sedlmeier, 2012). Other form of mindfulness meditation may encourage mental attunement while walking, eating, driving, or brushing one's teeth. Most often, Vipassana is practiced in a seated position, while focused on the breath; when attention wanders from the breath, the meditator brings it back and anchors it there (Gunaratana, 1993).

There are different recommendations for a fruitful Vipassana practice. Often the emphasis is on regularity rather than quantity; long term practitioners and teachers suggest a daily practice that happens at the same time of day. This should be anywhere from 10 minutes to an hour or more. Additionally, meditation retreats are part of regular

practices, ranging from weekends to 10-day courses – even longer for the veteran meditator.

Several contemporary therapeutic practices have been developed from Vipassana's ancient practices, identified as mindfulness-based interventions (MBIs), and classified as part of the third wave of (cognitive behavioral) psychology. Some of these therapies include Mindfulness Based Stress Reduction (MBSR), Mindfulness Based Cognitive Therapy (MBCT), Dialectical Behavioral Therapy (DBT), and Acceptance Based Therapy (ABT). Mindfulness Based Stress Reduction was the first to be introduced and the most widely researched. Meditation is intentionally integrated into the structure of the MBSR program. Some of the other modalities do not (i.e. ACT and DBT) and rather offer it as an optional intervention, not a necessity. MBCT requires meditation but does not span the same area of research as MBSR. For this reason, MBSR will be the only program described in this chapter.

Mindfulness Based Stress Reduction (MBSR)

The most highly studied MBI is MBSR. In 1979, Jon Kabat-Zinn began the MBSR program at University of Massachusetts Medical Center, while working with individuals with chronic pain. It was developed as a complementary treatment for patients who were receiving medical treatment but continued to experience physical or emotional symptoms, or both, arising from their condition (Baer, 2003).

Mindfulness based stress reduction is a structured 8- to 10-week program with groups of up to 30 participants. Groups can target a population with a specific disorder or problem, or may be open and include members of the general community. Weekly sessions are typically 2.5 hours, and there is an additional, single, all-day session per

course on a weekend day, around the sixth week. Each session covers particular exercises and topics that are examined within the context of mindfulness, together with the discussion of stress, coping, and homework assignments. These include different forms of mindfulness meditation practice, mindful awareness during yoga postures, and mindfulness during stressful situations and social interactions. Participants are encouraged to practice for 45 minutes a day, six days a week, with the understanding that mindfulness is established upon regular and repeated practice (Baer, 2003; Grossman, 2004).

Mindfulness-based stress reduction has grown tremendously since its inception in 1979. In 2015, the Center for Mindfulness (CFM) located at UMass, where MBSR began, provided the following statistics: more than 20,000 individuals have graduated the 8-week MBSR program; more than 14,000 healthcare professionals from six continents and 80 countries have participated in intensive MBSR teacher trainings; more than 740 MBSR programs are established world-wide, and more than 500 MBSR clinics exist around the world. This intervention has grown from use in medical models or mental health clinics to a multitude of settings including community hospitals, schools, workplaces, corporate offices, law schools, adult and juvenile prisons, inner city health centers, and a range of other venues (Kabat-Zinn, 2003).

Formal practices of MBSR include the body scan (designed to systematically, region by region, cultivate awareness of the body), sitting meditation (traditional image of meditation, cultivating awareness of breath, body, and sound), and mindful movement (gentle hatha yoga and walking meditation with mindful awareness of the body) (Cullen, 2011).

Christian Devotion Meditation (CDM)

Within Christian tradition there is a broad process for meditation or meditative prayer called Christian Devotion Meditation (CDM). Christian devotion meditation refers to a plethora of strategies, often derived from spiritual formation exercises, intended to cultivate awareness and attention on God (Fredrick & White, 2015). “CDM is the broadest conceptualisation of Christian spiritual practices designed to foster relationship with God” (Fredrick & White, 2015, p. 850). This may include practices such as contemplative prayer (CP); Scripture Meditation; visualizations; reflections on music, art, and symbols; and self-analysis (Stratton, 2015). This combines the silence and focused attention of CDM with exploration and open attention allowing for reflection on a religious idea, reading, image, or memory (Stratton, 2015).

Contemplative Prayer (CP). In Christianity, the term “contemplation” is synonymous to the term “meditation” as it is used in contemporary Asian traditions (Kristeller, 2010). Contemplative prayer is a form of prayerful meditation and is the most widely studied of CDM (Fredrick & White, 2015). It can be described as giving “one’s full attention to relating to God in a passive, nondefensive, nondemanding, open way” (Finney and Maloney, 1985, p. 173). The practice may begin with a question or topic, a prayer, or repetition of a word in a mantra like fashion (Fox et al. 2016; Wachholtz & Austin, 2013). Contemplative prayer is practiced to open space for loving contemplation and communicating with God (Keating, 1994; Wachholtz & Austin, 2013).

Keating (1994) outlines the method for the centering prayer: “(1) Choose a sacred word as a symbol of your intention to consent to God’s presence and action within; (2) Sitting comfortably, and with eyes closed, settle briefly and silently introduce the sacred

word as the symbol of your consent to God's presence and action within; (3) When you become aware of thoughts, return ever so gently to the sacred word; (4) At the end of the prayer period, remain in silence with eyes closed for a couple of minutes" (p. 118).

Religion, Spirituality, and Meditation

Nearly all religious traditions have integrated components of meditative or contemplative practices (Kristeller, 2010). Most contemporary meditation practices have drawn on Eastern Asian traditions (i.e. transcendental meditation and mindfulness) while research is emerging on underlying similarities in experiences with other traditions such as Christian contemplative prayer, Jewish Hasidic prayers, and Sufi mystical traditions (Kristeller, 2010).

Only in the last few decades has scientific literature investigated the interconnection between religion, spirituality, and personal wellbeing, both mental and physical. While research in this area is relatively new, there has often been a connection among the three. According to Shapiro (1994) the original religious purpose of meditation was as a "self liberation strategy to enhance spiritual growth and wisdom, and cultivate compassionate service" (p. 102). All modern faiths depend on these principles of spiritual development and kindness in helping others serve as a doctrine to guide people in ethical, moral, and spiritual behaviors.

Religious Meditation

Religion has been defined, understood, and interpreted in a variety of ways. In English since the sixteenth century, religion has been "widely understood as denoting (1) a particular system of faith and worship and/or (2) the human reverential recognition of a

higher or unseen power” (Oman, 2014, p. 26). Since the beginning of the twenty-first century, religion involved a set of very different criteria.

James (1961; 1902) describes religion as, “The feelings, acts, and experiences of individual men in their solitude, so far as they apprehend themselves to stand in relation to whatever they may consider the divine” (p. 42). A greater sense of community was integrated in the definition by Pratt (1920): “The serious and social attitude of individuals or communities toward the power or powers which they conceive as having ultimate control over their interests and destinies” (p. 2). Argyle and Beit-Hallahmi (1975) also explained religion as a relationship with a greater power when describing it as “*A system of beliefs* in a divine or superhuman power, and practices of worship or other rituals directed towards such power” (p. 1). Religion may also be defined as, “Whatever we as individuals do to come to grips personally with the questions that confront us because we are aware that we and others like us are alive and that we will die” (Baston, Schoenrade, & Ventis, 1993, p. 8). Koenig (2008) incorporated into the definition community practices: “A system of beliefs and practices observed by a community, supported by rituals that acknowledge, worship, communicate with, or approach the Sacred, the Divine, God (in Western cultures), or Ultimate Truth, Reality, or nirvana (in Eastern cultures)” (p. 11). These definitions illustrate a consistent pattern, that religion works to assist individuals and communities adopt rituals to facilitate relationships with the divine or higher power (Kristeller & Johnson, 2005).

Many have come to view religion in a negative light with damaging properties, ignoring the plethora of benefits. Conversely, others see religion as necessity to health and wellness negating the potentially hazardous consequences of faith, such as those that

arise for individuals who experience guilt or shame, utilize negative coping strategies, or experience spiritual challenges (Falb & Pargament, 2014; Goncalves, 2015). These polarizing opinions create taboos around religion and diminish opportunities for deeper examination of the topic, rather than fostering a research environment allowing for the investigation of possible benefits and negative consequences in an objective manner.

Views towards religion have not only become polarized in popular opinion, but also in the field of psychology, where psychologists show generally lower rates of religious affiliation than the general public (Gross & Simmons, 2009). This may be another contributor to meditation's largely secular position in psychological research and clinical interventions.

Spiritual Meditation

In early English, spirituality was used positively to describe a personal and emotional relationship with God. In seventeenth and eighteenth centuries, spirituality had negative connotations, when contrasted with “devotion, perfection, and piety because of its perceived associations with heresies or excessive emotionalism” (Oman, 2014, p. 27). The term spirituality became increasingly respectable in the later part of the twentieth century, when the topic was investigated in a growing number of scholarly books, journals, and professional societies (Oman, 2014).

A PsychINFO search of publications related to spirituality from the 1970s to the 2000s demonstrates a growing interest in the field of psychology, as scholarly articles on the topic increased 40-fold (Oman, 2014). While spirituality gains reputability and interest grows, there has yet to be an established operational definition. Instead, spirituality has been measured with varying approaches: (1) questions about religious

involvement; (2) questions about spirituality in general (with subjects defining spirituality); (3) questions about positive psychological states (e.g. meaning or purpose in life; connection with others; feelings of peace and fulfillment; personal values; positive character traits---i.e. forgiving, grateful, etc.; or nonspecific personal beliefs). This disparity demonstrates the challenge researchers have when no consistent definition or measure exists for spirituality (Koenig, King, & Carson, 2012).

However, there are several definitions that revolve around these common themes and help to give context to development of research on the subject. In 1965, von Balthasar defined spirituality as, “That basic practical or existential attitude of man which is the consequence and expression of the way in which he understands his religious---or more generally, his ethically committed existence” (p. 7). More simply stated, Doyle (1992) characterized spirituality as, “The search for existential meaning” (p. 302). While von Balthasar and Doyle focus on existential consequence, Tart (1975) placed emphasis on purpose when describing spirituality as, “That vast realm of human potential dealing with ultimate purposes, with higher entities, with God, with love, with compassion, with purpose” (p. 4). A relationship with God was similarly highlighted with this description, from Wuthnow (1998): “All the beliefs and activities by which individuals attempt to relate their lives to God or to a divine being or some other conception of a transcendent reality” (p. viii). There was a shift in focus from higher power to meaning in interconnectedness by Myers and Willard (2003) in illustrating spirituality as: “The capacity and tendency present in all human beings to find and construct meaning about life and existence and to move toward personal growth, responsibility, and relationship with others” (p. 149). Puchalski et al. (2009) also accentuated interconnectedness and the

sacred in their understanding of spirituality as, “The way individuals seek and express meaning and purpose and the way they experience their connectedness to the moment, to self, to others, to nature, and to the significant or sacred” (p. 887). While these definitions are similar or share common themes with religion (e.g. relationship to the divine or sacred) they are different in that the emphasis is on finding meaning and purpose, understanding existence, connection with others, personal values (i.e. psychological states), or as Kristeller and Johnson (2005) put it engagement with the sacred via experience of ...”ultimate reality” or “ultimate truth”” (157).

Traditional literature suggests meditation can provide an increased sense of spirituality through disengaging from a narrow self-focus and cultivating a deeper sense of interconnectedness through compassion and love, where one is ultimately understood as connected to others and the entire world (Kristeller & Johnson, 2005). In this way, the process of meditation has been described to produce transcendence (Alexander, 1994).

When individuals practice meditation an awakening process occurs (Alexander, 1994; Kabat-Zinn, 1999). From the Western psychological perspective, this is part of a developmental process where an individual realizes the relationship between different levels of experience: cognitive, emotional, physical, behavioral, social, and spiritual (Kristeller, 2007). Therefore, the process of learning and practicing meditation is expected to create a pattern of interconnected changes in physical, psychological, and spiritually related health factors (Greeson, 2011). Increasing research indicates that spiritual health is germane to one’s overall mental and physical wellbeing (Birnie et al., 2010; Greeson).

Function of secularization of meditation. The concept of secular meditation is a relatively new idea. Meditation has become a practice separate from religious or spiritual centers, where historically spirituality and religiosity were the emphasis of a meditation practice. Westernization and secularization of meditation were said to have occurred in large part with the MBSR practices introduced by Kabat-Zinn in the late 1970s in a medical clinic at UMass (Baer, 2003) and with Herbert Benson studying the relaxation response Harvard Medical School in the 1970s (Buttle, 2015). Kabat-Zinn noted that mindfulness practices might be helpful for many people in Western societies who may be unwilling to engage in Buddhist traditions but knew that academic and medical culture would be more familiar and consequently more accommodating (2003). Therefore, he introduced MBSR as a secular practice, in order to allow these skills to be accessed by a larger population in mainstream settings. The same was true for Benson, who wanted individuals to benefit from a calming of the nervous system through a “simple non-cultic technique” (Benson, 1982).

Western introduction of secular meditation, coupled with early studies, established positive effects on physiological measures (Benson, 1983; Kabat-Zinn, 2003). These changes encouraged and established a rebranding, creating less skepticism, and allowed for ongoing research in the area of meditation and its benefits (Baer, 2003; Dimidjian & Linehan, 2003). Researchers have relied on measurable and replicable aspects of meditation as opposed to religious trappings, which may appear esoteric and obscure, and certainly are more difficult to measure (Shapiro, 1997). Consequently, researchers and clinicians who use mindfulness and meditation practices in mental health

treatment often do so separate from the cultural traditions of their origins (Kabat-Zinn, 1982; Baer, 2003).

Dilemma of the absence of religion and spirituality from meditation. The recent divorce of religious or spiritual components from mindfulness, at least in clinical contexts, sought to make mindfulness treatment models and meditation accessible to the masses and measurable to scientists seeking to prove their efficacy. These goals have largely been met, since meditation is wildly popular and widespread across settings and its usefulness and efficacy has stood up to scientific muster. Meditation's prevalent acceptance can be indicated by prominent placement in mass media, for example the several magazine cover stories including *Time* (The Science of Meditation, with actress Heather Graham practicing transcendental meditation, August 2003; over 10 years later *The Mindfulness Revolution*, February 2014), *Newsweek* (Spirituality Now! July 2017), and *Oprah* (Spirituality Now! August 2016).

It is possible that a significant component or possible benefit is lost when meditation is separated from its spiritual or religious origins, as religion and spirituality can be powerful sources of strength and comfort for individuals. While positive psychological changes may be the primary goal of a meditation practice for some individuals, most specifically in secular practices and therapeutic settings, many meditators have spiritual growth as their primary motive, with physiological benefits as a secondary gain (Buttle, 2015).

Critics of contemporary mindfulness-based interventions, including meditation practices, believe that something important is lost when practices are decontextualized (Rosch, 2007; Monteiro, Musten, and Compson, 2015). Concerns have been raised about

appropriating meditation and mindful practices from Buddhism, with specific apprehension about “the impact of not explicitly including ethics as part of the teachings” (2015, p. 1). For example, when meditation is taught without practices such as “right action,” or wholesome behaviors, it can result in Wrong Mindfulness, defined as the use of mindfulness skills for dangerous and counterintuitive ends (Monteiro et al., 2015). For example, a sniper who is able to use bare attention and calm in order to kill someone is practicing Wrong Mindfulness, rather than right action (Monteiro et al., 2015).

Benefits of Meditation

“Meditation has a long spiritual past and a short secular history” (Moteiero, et al., 2015, p. 2). Increasing numbers of people are seeking holistic practices in addressing health and wellness (Sampaio et al., 2016). Meditation is a practice designed to incorporate mental, physical, and spiritual components of an individual. Currently, meditation is classified as a “complementary and integrative technique” in the area of health (Sampaio et al., 2016). Since its beginnings, meditation has been used to foster health and wellbeing in addition to expanding consciousness (Sampaio et al., 2016). To this day, studies continue to demonstrate meditation as a resource for healthy lifestyles and a treatment for physical and psychological conditions (Baer, 2003; Kabat-Zinn, 2003).

As mentioned earlier, there are a variety of meditation techniques, those that involve religious tradition, others that look for spirituality without a religious undertone, and those that are focused on cultivating mental and physical focus, with no intention of a spiritual engagement.

Initially, modern research on meditation studied human physiology (Wallace, 1970; Wallace, Benson, & Wilson, 1971). The first studies found that during meditation, a reduction occurred in heart rate and oxygen consumption, while skin resistance increased. This reflected physiologically distinct differences between meditation and commonly encountered states of consciousness, such as wakefulness, sleep and dreaming, along with altered states of consciousness such as hypnosis (Wallace, 1970). Additionally, electroencephalograms showed a predominance of alpha waves during meditation, demonstrating these physiological changes were compatible with changes in autonomic activity, indicative of a reduction in sympathetic activities. These findings suggested meditation could have applications in clinical medicine.

These studies helped to spur research that created the multitude of contemporary meditation practices and interventions. As the field body of research grows, meditation has demonstrated its efficacy in treating a range of physical, emotional, spiritual, and mental ailments, including sleeping problems (Black, O'Reilly, Olmstead, Breen, & Irwin, 2015; Hülshager et al., 2014; Van Gordon, Shonin, Dunn, Garcia-Campayo, & Griffiths, 2017), substance abuse (Bowen et al., 2014), eating disorders (Albertson, Neff, & Dill-Shackleford, 2015), mood and anxiety disorders (Black et al., 2017; Chiesa & Serretti, 2011; Kim, Kim, Ahn, Seo, & Kim, 2013), cancer (Kim et al., 2013), and chronic pain (Grossman et al., 2004; Van Gordon, et al., 2017). Meditation has also been used to facilitate training in a multitude of settings, including schools -- elementary through graduate (Christopher, 2010; Zenner, Herrnleben-Kurz, & Walach, 2014), hospitals and medical clinics (Kabat-Zinn, 2003), mental health clinics and rehabilitation centers (Shorey, Brasfield, Anderson, & Stuart, 2015), offices (Shonin, Van Gordon,

Dunn, Singh, & Griffiths, 2014), prisons (Shonin, Van Gordon, Slade, & Griffiths, 2013), and the military (Brewer, 2014).

Benefits of Integration: Meditation, Spirituality and Religion

Eighty two percent of Americans are reported to express a desire for greater spiritual growth (Thoresen & Harris, 2002). From 2007 to 2014 individuals in the US reported a growing sense of spiritual peace and well being indicated by an increase from 52% to 59% (Masci & Lipka, 2016). A study of MBSR, which is designed to be secular, found that 60% of participants identified with a spiritual or religious group; half took the MBSR course to explore or deepen their sense of spirituality; and 50% of participants reported deepening their sense of spirituality (Greeson et al., 2011). Meditation can encourage an increased sense of spirituality by removing self-focus and promoting a more encompassing view of interconnectedness other people, activities, and the world, often despite religious or spiritual components, within secular meditation practices (Wachholtz & Pargament, 2005).

Clinical studies have shown that MBSR, secular in nature, is associated with increased aspects of spirituality, including personal faith, meaning and peace, and a sense of engagement and closeness with some form of higher power or God (Astin, 1997; Birnie, Speca, & Carlson, 2010; Carmody, Reed, Kristeller, & Merriam, 2008; Greeson et al., 2011; Shapiro et al., 1998). Enhanced spirituality may be considered an important outcome in and of itself, yet spiritual experiences also may be related to greater quality of life and mental wellness (Greeson et al., 2011; Underwood and Teresi, 2002).

A study by Greeson et al. (2011) evaluated one aspect of increased spirituality: “ordinary spiritual experiences of transcendent awareness and connection in daily living,”

in order to determine if this may account for health-related quality of life outcomes within a MBSR program (p. 509). Participants engaging in the MBSR program, “a secular behavioral medicine intervention that focuses on intensive training in mindfulness meditation,” found that positive changes in spirituality might partially explain the mental health benefits that were achieved. The study showed, in looking at a relatively large group (N=279) of apparently healthy but mentally stressed adults, increases in daily spiritual experiences were directly related to increases in mindfulness, which were in turn associated with improved mental health related quality of life.

Birnie et al. (2010) investigated the impact of MBSR on self-compassion, empathy, spirituality, mindfulness, symptoms of stress, and mood disturbance. They found significant reductions in symptoms of stress and mood disturbance, as well as increases in spirituality, mindfulness, and self-compassion among individuals who completed the program. Another study examining impacts of MBSR meditation found significant increases in both spirituality and state and trait mindfulness, noting both were associated with improvements in anxiety, depression, and range of medical symptoms as identified on the Medical Symptom Checklist (Carmody et al., 2008). These data demonstrate that increased spirituality is not only a valuable outcome of mindfulness meditation training but additionally may be a key mechanism by which MBSR produces mental and physical health outcomes.

Researchers have examined meditation practices with spiritual and/or religious components, for example CDM, to investigate the spectrum of benefits one may experience through such practices. One study specifically examined the benefits of mindfulness techniques that include centering prayers and found that surrendering to God

increased participants' ability to cope with worry (Fredrick & White, 2015). Carlson, Bacaseta, and Simanton (1988) compared CDM and progressive relaxation on stress, finding the CDM group had significantly less anxiety, anger, and muscle tension, than did the progressive relaxation or control group. In a study on centering prayer and quality of life among ovarian cancer patients, Johnson et al. (2009) found that emotional wellbeing, depression, anxiety, and faith all improved. Ferguson et al. (2010) looked at the use of centering prayer as a means to enhance stress reduction and increase communication with God. Individuals in the study noted increased collaboration with the divine: the ability to decrease stress through the improved relationship with God, demonstrated by increased awareness and positive coping. Ultimately the study led to development of a program to integrate spirituality with wellness, yielding psychological benefits of stress and anxiety reduction while achieving the main goal of creating a deeper connection with the divine.

Wachholtz and Pargament (2005, 2008) completed two studies comparing secular and spiritual meditation practices. The first study examined how the addition of a spiritual component to meditation would impact affect, spirituality, and pain tolerance (2005). Researchers found that those in the spiritual meditation group reported lower anxiety, more positive mood, greater spirituality, and the ability to withstand pain for longer periods of time. The second study (2008) looked at pain tolerance in the context of migraine symptoms, again using secular and spiritual meditation practices. Those who practiced spiritual meditation had greater reductions in the frequency of migraine headaches, significantly lower anxiety, and more positive moods, in addition to increases in pain tolerance, more daily spiritual experiences, and improved existential well being, compared to secular groups.

Of note, in both studies by Wachholtz and Pargament (2005, 2008), the participants in the secular practices also developed increases in daily spiritual experiences, although the meditation practices taught had no overt religious or spiritual content. Wachholtz and Pargament (2008) stated, “While the improvements were more modest than those observed in the spiritual meditation group, it raises the question as to why spiritual improvements were found at all among practitioners of ostensibly secular tasks” (p. 363). They found in the earlier study that secular meditation encouraged individuals to set aside time to reduce the external noise of daily life and focus on quieting and calming the mind, consequently enhancing spiritual wellbeing (2005). Since secular meditation grew out of spiritual traditions, it is not surprising that at least some of the beneficial effects may still be rooted in spirituality (Wachholtz & Pargament, 2005).

Both Eastern contemplative traditions and Western psychological theory support the concept that through enhanced attention to and awareness of the sacred, the transcendent, and interconnectedness of all things, greater mindfulness and mental health can be achieved (Wallace & Shapiro 2006). Consequently, mental health professionals have become more active in integrating spirituality and meditation into treatment of individuals with varying diagnosis.

With significant evidence that spiritual benefit is often derived from meditation, even within a secular format, Stratton (2015) questioned whether it is ethical to remove the potential for religious or spiritual effects from the description of meditation as a therapeutic technique.

Benefit of Achieving Spiritual Height

Spiritual experiences are a common element of religious traditions across history. Historical descriptions of spiritual experiences from a multitude of sources indicate common themes, signifying a shared experience that crosses cultures and religions (Stace, 1960). In a national survey, nearly half of participants (49%) said they have had a religious or mystical experience, defined as a “moment of sudden religious insight or awakening” (Pew Research Center, 2009). These spiritual or mystical experiences often occur spontaneously (Miller 2004), but can also be generated or elicited. For millennia, humans have used a variety of techniques, including meditation, prayer, fasting, and dance, in addition to naturally occurring substances (e.g. plants with psychoactive properties), towards having a mystical or spiritual experience (Guzmán 2008; Metzner 2004; Stamets 1996; Wasson 1980). Some researchers have attempted to elicit mystical-type phenomena using meditation due to the perceived benefits of these spiritual experiences (Beauregard, Courtemanche, and Paquette 2009; van der Lans 1987).

The Mystical Experience Questionnaire (MEQ) was developed by Pahnke (1969) as a tool for the evaluation of single mystical experiences occasioned by hallucinogens. Research towards development of MQE found that reaching “spiritual height” was an indicator of “a sense of sacredness,” which is a positive goal for many. The present study used a survey item from the MEQ to examine individual’s experiences reaching spiritual height during meditation rather than during psychedelic experiences. This is relevant because 8 out of 10 Americans endorse a desire for greater spiritual growth (Thoresen & Harris, 2002) even though contemporary meditation forms have eliminated spiritual components from their practice (Kabat-Zinn, 2013).

Summary of Reviewed Literature

This review of literature provided a history of meditation, including Transcendental Meditation (TM), Relaxation Response (RR), Mindfulness Meditations, Mindfulness Based Stress Reduction (MBSR), and Christian Devotion Meditation (CDM). An overview of religion, spirituality, and meditation was provided, including the benefits of integration: meditation, spirituality and religion. No published studies to date have explored whether the odds of reporting a sense of achieving “spiritual height” might be related to the type of meditation practiced, or to participant age, gender, or months spent meditating. The present study was specifically designed to fill this important gap in the literature so benefits of integration can be used to help both individuals and clinicians find meditation practices that will elicit the desired outcomes of spiritual heights. The following chapter details the methodology employed to test this intriguing relationship.

Chapter III: Method

Research Design

This study used archival data from a project titled The Future of Meditation Research: A Call to Expand the Science of Contemplative Practice (FOMR). A task force gathered with the original intention of creating recommendations for meditation studies investigating meditation-related experiences and outcomes outside of the current scientific status quo. In order to identify the prevalence and perceived importance of these experiences and outcomes, an online survey was developed. In addition to the online survey, the task force wrote a review paper and also intend to create a web resource and online course to guide people in their interest in these outlying areas of meditation research. For this study, a small portion of the data gathered in the extensive online survey was examined to predict the probability of participants experiencing “a sense of being at a spiritual height” during meditation. It was hypothesized that participants who practice secular forms of mediation would be as likely to report “a sense of being at a spiritual height” as those who do not practice secular meditation/practice spiritual or religious meditation.

Participants

This study conducted secondary analysis on an existing dataset. Participant data came from an archive of online survey results regarding meditation. Respondents were eligible to be included in the present study if they practiced meditation presently or in the past; those who answered “no” to the survey question “Have you ever practiced meditation?” were disqualified from the study. Further, respondents were only included if they had practiced meditation for at least three months, if they were at least 18 years of

age, and if their data were sufficiently complete for all study variables to be included in the analyses.

Measures

Survey. Study data came from an online survey that was developed by the FOMR task force. “Development of the online survey occurred during the third of four working group meetings. Several categories of under-studied but potentially important domains of meditation experience were identified, terms defined, existing measures identified, and items created for constructs without adequate measures to assess the prevalence of such experiences during, after, or related to meditation” (Vieten et al., 2017, p. 9). The areas of understudied and potentially important meditation experiences included 1) mystical, transcendent, or transformative experiences, 2) social and relational aspects of meditation, 3) contextual aspects of meditation practice, 4) anomalous physical phenomena related to meditation, 5) extended human capacities, and 6) difficult states and stages of meditation practice.

The Institute of Noetic Sciences (IONS) hosted the FOMR, and has a long history of conducting and supporting studies on meditation, including creating the Meditation Bibliography originally written by Michael Murphy and Steven Donovan and later updated and put online (<http://noetic.org/meditation-bibliography>). IONS describes itself as:

“a nonprofit organization dedicated to supporting individual and collective transformation through consciousness research, transformative learning, and engaging a global community in the realization of our human potential... we conduct, advance, and broaden the science of what connects us, reaching new understandings about the nature of reality and our extended capacities. From what we learn, we create real-world tools that empower people to apply conscious awareness in their personal lives, and in healthcare, education, and business. We host a vibrant community of explorers and change agents who are working

together to make a difference in the world. Our Goal [is] To create a shift in consciousness worldwide—where people recognize that we are all part of an interconnected whole and are inspired to take action to help humanity and the planet thrive.

<http://noetic.org/about/overview>

The Institute of Noetic Sciences' (IONS) Institutional Review Board (IRB) approved the online survey and study procedure. The first page of the survey was the consent form, which participants agreed to before continuing (Appendix A). Data were collected on demographics, current and past religious and spiritual experiences, meditation experience, and history of mental health diagnosis. However, not all of these variables were used in the present study.

“Participants were recruited through social media and email distribution, academic list-servs, and online directories of meditation teachers and practitioners. In recruitment materials, no mention was made of extraordinary, transcendent, or understudied aspects of meditation, to reduce the likelihood of interest in the topic biasing respondents. Instead, participants were told that the survey was designed to assess the prevalence of “personal experiences” during or related to meditation.” (Vieten et al., 2017, p. 9).

SurveyMonkey (<http://www.surveymonkey.com>) was used to administer the survey. It took approximately 40 minutes to complete. Administration took place between November 10, 2014 and February 3, 2015 (Vieten et al., 2017).

Outcome Variable. The outcome variable for this analysis was *Sense of Spiritual Height*, a single-item dichotomous variable scored as 1 (or yes) if a respondent reported having a sense of spiritual height “many times” or “almost always” during meditation and scored as 0 (or no) if a respondent reported having a sense of spiritual height *never, once,*

or 2-5 times. This split resulted in approximately half of the participants reporting that they achieved a *Sense of Spiritual Height* “many times” or “almost always” (53%) and half reporting they did not achieve a *Sense of Spiritual Height* often (47%), representing a good split of the data for statistical analysis.

Predictor Variables. The primary predictor variables for this study were types of meditation: Transcendental Meditation (TM); Relaxation Response (RR); Mindfulness Meditation (MM, which included Zen and Vipassana); Mindfulness-Based Stress Reduction (MBSR); and Christian Devotion Meditation (CDM), based on the criteria of Ospina et al. (2007). Table 1 displays the criteria of Ospina et al. (2007) for each type of meditation included in the present study. For example, to be categorized as Transcendental Meditation (TM), Mantra was a mandatory (M) element, Transcending was an option (O) element, and Breathing, Body Scan, Open Awareness, Contemplative Prayer, and Visualization were exclusionary (E) elements that excluded a participant from being categorized as a TM practitioner. That is, TM practitioners included mantra and perhaps transcending, but not Breathing, Body Scan, Open Awareness, Contemplative Prayer, or Visualization. Practitioners of RR use core components of breathing, mantra, and body scan, but not Open Awareness, Contemplative Prayer, and Visualization or Transcending. For MM, breathing and open awareness are necessary components, with visualization, body scan, and mantra as optional methods, but the inclusion of Body Scan, Contemplative Prayer, or Transcending excluded a participant from being categorized as MM. MBSR uses core components of breathing, body scan, and open awareness, with visualization and mantra as possible additional techniques, but not Mantra, Contemplative Prayer, Visualization, or Transcending. CDM practitioners

employ contemplative prayer as the foundational techniques, with mantra, visualization, and transcending as possible optional elements, but not Breathing, Body Scan, or Open Awareness methods (Ospina et al., 2007).

Table 1

Meditation Type Criteria

Element	Meditation Type				
	TM	RR	MM	MBSR	CDM
Mantra	M	M	O	E	O
Breathing	E	M	M	M	E
Body Scan	E	M	E	M	E
Open Awareness	E	E	M	M	E
Contemplative Prayer	E	E	E	E	M
Visualization	E	E	O	E	O
Transcending	O	E	E	E	O

Note. TM = Transcendental, RR = Relaxation Response, MM = Mindfulness, MBSR = Mindfulness-Based Stress Reduction, CDM = Christian Devotion; M = Mandatory Element, O = Optional Element, E = Exclusionary Element. Criteria are based on Ospina et al. (2007).

These rigorous and restrictive criteria were necessary to classify each of the meditation types because (a) rigorous operational definitions are crucial to making inference in scientific investigation (Creswell, 2014) and because (b) the seven elements could result in up to 127 different combinations (Howell, 2012), which would make interpretation untenable. For these reasons, any participant who reported a combination of elements that did not fit into the five target meditation types based on the criteria of Ospina et al. (2007) was included in the analysis in the category “Other.”

Control Variables. The control variables were the demographics of gender (coded female = 1, male = 0), total months meditating, and age in years.

Data Analysis

Data were screened for inclusion criteria and completeness prior to statistical analysis. The first research question (RQ1) was tested by determining the percentage of study participants who reported achieving spiritual height many times or almost always during meditation. If the percentage of study participants who reported achieving spiritual height many times or almost always during meditation exceeded 50%, then hypothesis 1 (H1) would be considered to be supported.

The second research question (RQ2) was tested by using t-test statistics to determine whether those who report achieving spiritual height many times or almost always might significantly differ from those who did not report achieving spiritual height many times or almost always in the demographics of years of age, gender, and months meditating. If those who reported achieving spiritual height many times or almost always significantly differed from those who did not report achieving spiritual height many times or almost always in the demographics of gender, years of age, or months meditating, this hypothesis (H2) would be considered to be supported.

For the third research question (RQ3), the associations between each type of meditation and experiencing a sense of spiritual height were assessed in two steps. In the first step, simple crosstabs were created and assessed using chi square (χ^2) analysis to determine whether a specific type of meditation was disproportionately associated with Sense of Spiritual Height in isolation from other variables. In the second step, logistic regression was used to assess whether a specific type of meditation was predictive of experiencing a Sense of Spiritual Height after accounting for gender, age, and total

months of meditation. Each type of meditation (TM, RR, MM, MBSR, and CDM) was assessed in parallel analyses.

For logistic regression, the presentation of results includes the coefficients table which displays the p-value for determining statistical significance and the odds ratio expressed as exponentiated beta [$\exp(b)$]. An odds ratio of 1.0 indicated no predictive value, while an odds ratio greater than 1 ($\exp(b) > 1$) indicated that a type of meditation was a positive predictor of experiencing a Sense of Spiritual Height. To calculate the increase or decrease in the likelihood of the outcome (achieving a Sense of Spiritual Height), the exponent of the log odds associated with the predictor was converted through exponentiation (converting it to the odds ratio). The value of 1 was subtracted from this odds ratio and the resulting value was then multiplied by 100%. This value then represented the percentage increase or decrease in the odds ratio of reporting to achieve a Sense of Spiritual Height that was associated with that particular predictor. For example, an $\exp(b)$ of 1.50 indicates 50% greater odds of achieving Sense of Spiritual Height; an $\exp(b)$ of 1.75 indicates 75% greater odds of achieving Sense of Spiritual Height; and an $\exp(b)$ of 2.25 indicates an increase of one 125% in the odds of achieving Sense of Spiritual Height compared to those who did not practice that type of meditation. An odds ratio of less than 1.0 indicates that a specific type of meditation is negatively associated with achieving Sense of Spiritual Height. For example, an $\exp(b)$ of .50 would indicate that this specific type of meditation was associated with a decrease in the odds of achieving Sense of Spiritual Height of 50%. If the odds ratios were found to be statistically significant, H3 would be considered to be supported.

For the fourth research question (RQ4), meditation types (TM, RR, MM, MBSR, CDM, and Other) were contrasted with each other in reported achievement of spiritual height many times or almost always during meditation using χ^2 analysis. If the χ^2 value is statistically significant for the omnibus test or for individual pairwise comparisons, H4 would be considered to be supported.

Data descriptives are presented as frequencies and percentages, or as means, standard deviations, and ranges, as appropriate, in tables and in text. The presentation of crosstab results includes tables of frequencies and percentages, along with the p-value from χ^2 analysis to determine statistical significance. For statistically significant results, the odds ratio is also included. Data were analyzed using Statistical Package for Social Sciences (SPSS) software (Version 23, Armonk, NY: IBM Corp.).

Assumptions

Because all of the measures were self-report, it was necessary to assume that participants were honest and candid in responding. While it is possible that participants may have been susceptible to socially desirable responding, which can potentially result in an over-representation of socially desirable responses and an under-representation of social undesirable responses (Kaminska and Folusham, 2013; Krosnick, 1999), socially desirable responding is reduced when surveys are anonymous (Dodou and de Winter, 2014).

Compliance with Ethical Guidelines

This study complied with the ethical guidelines of Antioch University and the American Psychological Association (1992), and all study procedures were approved by the federally registered Institutional Review Board at the Institute of Noetic Sciences.

Participants provided informed consent before responding to survey items (Appendix A). Participant rights to anonymity, privacy, and confidentiality were fostered in that participation was anonymous, data were not shared beyond those directly involved in the research, and no names or other individuating information (email address, telephone numbers) were collected at any time. Alphanumeric codes were used to identify individual participant data. Approval for use of the archival data set was obtained from Dr. Cassandra Vieten of the Institute of Noetic Sciences, and lead on the FOMR Task force.

Chapter IV: Results

This chapter begins with participant demographics, in isolation and in relation to meditation groups and sense of spiritual height. The Hypotheses are then tested using simple and logistic regression analyses. This chapter ends with a summary of major findings.

Demographics

Of the 1,858 potential participants who began the survey, 1,787 responded “Yes” to having ever practiced meditation. Of these, 52% (n = 965) completed the entire survey, were 18 years of age or older, and had meditated for a minimum of three months. Of the 965 participants, 43 participated in Transcendental Meditation-TM (4%), 15 in Relaxation Response-RR (2%), 124 in Mindfulness Meditation-MM (13%), 50 in Mindfulness-Based Stress Reduction-MBSR (5%), 19 in Christian Devotion Meditation-CDM (2%), and 720 (74%) in participated in “Other” forms of meditation.

Gender

Of 965 participants, 555 were female (57%) and 410 were male (43%) ($p < .001$). Table 2 shows gender by group. Chi square analysis showed no significant disproportion in gender for TM, RR, or CDM groups. MM had significantly more females ($p < .04$) and MBSR trended towards more females ($p = .09$) compared to the overall sample.

Age

Participants averaged 46 years of age ($SD = 15$, range: 18-90). Table 3 shows that the TM group was the oldest ($M = 59$, $SD = 11$, range: 28-80) on average and the RR ($M = 41$, $SD = 16$, range: 20-60) and MM ($M = 41$, $SD = 15$, range: 18-75) groups were the youngest on average.

Table 2

Gender by Group

Group	Total	Males		Females	
Transcendental	43	17	40%	26	60%
Relaxation Response	15	5	33%	10	67%
Mindfulness	124	42	34%	82	66%
MSRB	50	27	54%	23	46%
Christian Devotion	19	5	26%	14	74%
Others	714	314	44%	400	56%
Total	965	410	43%	555	57%

Table 3

Age by Group

Group	Mean	SD	Min	Max
Transcendental	59	11	28	80
Relaxation Response	41	16	20	66
Mindfulness	41	14	18	75
MBSR	43	15	20	76
Christian Devotion	52	14	26	71
Others	47	15	18	91
Total	46	15	18	91

Months Meditating

Table 4 shows that participants averaged 149 total months meditating (SD = 159, range: 3-900). Table 4 also shows that the TM group averaged the highest number of months meditating (M = 219, SD = 186, range: 3-530) on average and the RR (M = 92, SD = 139, range: 3-480) averaged the fewest number of months meditating.

Table 4

Months Meditating by Group

Group	Mean	SD	Min	Max
Transcendental	219	186	3	530
Relaxation Response	92	139	3	480
Mindfulness	110	123	3	696
MBSR	113	132	4	600
Christian Devotion	177	149	14	600
Others	155	163	3	900
Total	149	159	3	900

Summary of Participant Demographics

Participants included males and females, a wide age range, and a wide range of months meditating. These data were therefore considered to be sufficient to proceed with hypothesis testing.

Hypothesis Testing

Four hypotheses (Hs) were tested, corresponding to the four research questions (RQs). For research question, the hypothesis is restated, then the results of hypothesis testing are provided.

RQ1: Meditation and Spiritual Height

Hypothesis 1 proffered that “The majority of meditators report achieving spiritual height frequently (many times or almost always) during meditation.”

Overall, 53% of participants reported achieving spiritual height many times or almost always during meditation. Because the majority of participants reported achieving spiritual height many times or almost always during meditation, this hypothesis was supported.

RQ2: Demographics and Spiritual Height

Hypothesis 2 proffered that “The demographics of age, gender, and months meditating are associated with achieving spiritual height many times or almost always during meditation.”

Gender and Spiritual Height. Figure 1 shows that females (57%) were significantly more likely than males (47%) to report achieving spiritual height “many times” or “almost always,” $\chi^2(965, df = 1) = 8.77, p < .003$. Because significant gender differences were found in reported achieving spiritual height, this finding supported H2.

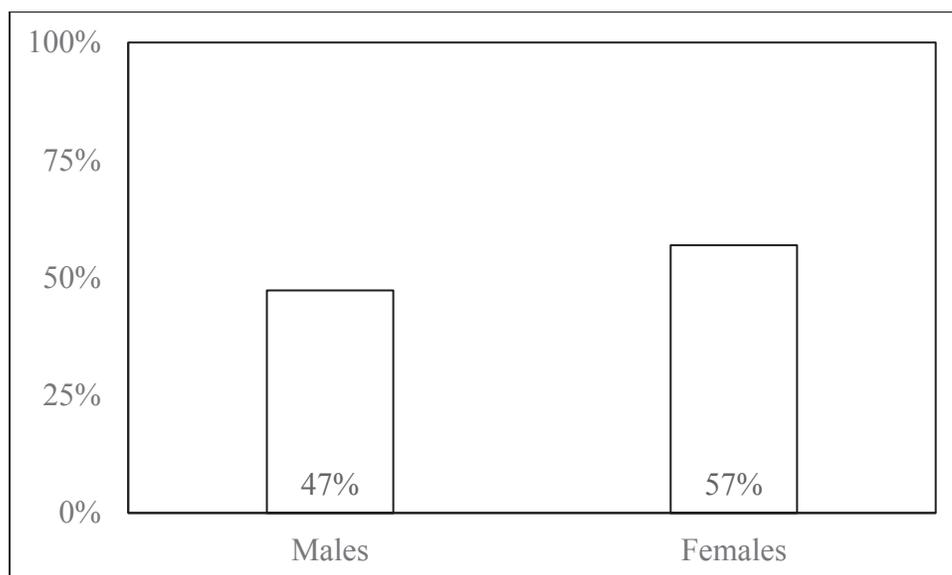


Figure 1 Reaching Spiritual Height by Gender “many times” or “almost always.”

Age and Spiritual Height. Those that reported achieving spiritual height “many times” or “almost always” were significantly younger ($M = 45, SD = 15, \text{range: } 18\text{-}91$) than those who did not report experiencing spiritual height “many times” or “almost always” ($M = 48, SD = 15, \text{range: } 18\text{-}90$), $t(965) = 2.42, p < .02$ (Figure 2). Because significant differences in age were found in reported achieving spiritual height, this finding supported H2.

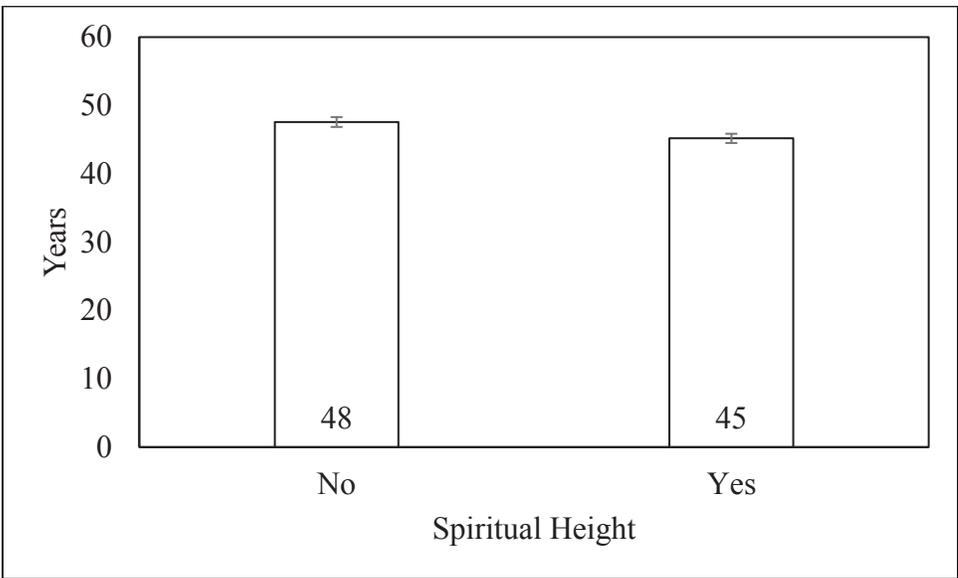


Figure 2. Years of Age by Reaching Spiritual Height “many times” or “almost always.”

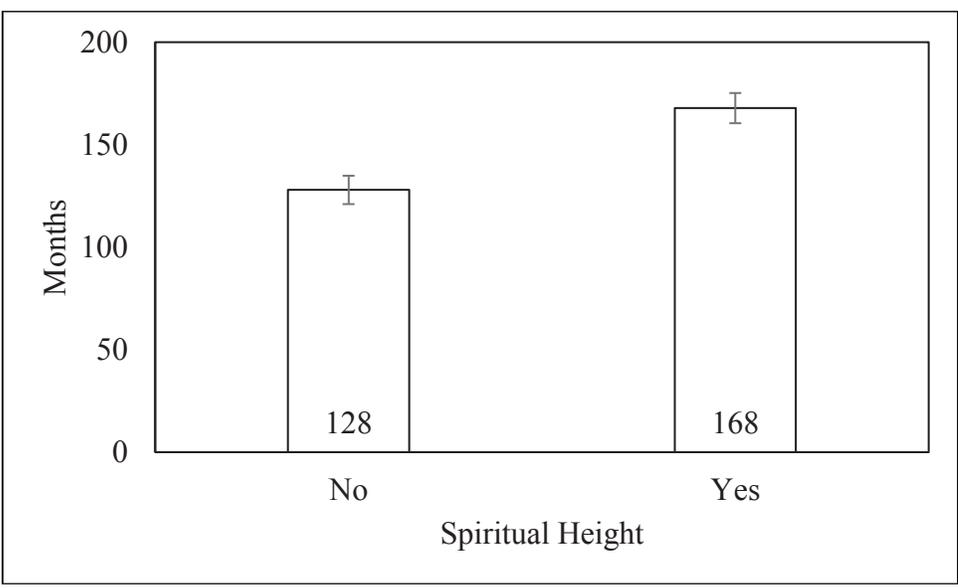


Figure 3. Months of Meditation by Reaching Spiritual Height “many times” or “almost always.”

Months Meditating and Spiritual Height. Those that reported experiencing spiritual height “many times” or “almost always” had a history of significantly more months meditating ($M = 168$, $SD = 166$, range: 3-792) than those who did not report

achieving spiritual height “many times” or “almost always” ($M = 128$, $SD = 147$, range: 3-900), $t(1007) = 2.63$, $p < .01$ (Figure 3, above). Because significant differences in months of meditating were found in reported achieving spiritual height, this finding supported H2.

Summary of Demographics and Spiritual Height. Gender, age, and months meditating were each significantly associated with reported experiencing spiritual height “many times” or “almost always,” consistent with H2. Further, because these demographics were significantly related to the reported experiencing of spiritual height “many times” or “almost always,” these demographics were included as control variables in testing H3.

RQ3: Meditation Type and Spiritual Height

Hypothesis 3 proffered that “The odds of achieving spiritual height among types (TM, RR, MM, MBSR, CDM, and Other) of meditation, in isolation and after accounting for demographics, will be statistically significant.”

For each type of meditation, data were analyzed in isolation using chi-square and analysis, followed by logistic regression so that the relationship between meditation type and spiritual height can be assessed after accounting for age, gender, and months of meditation practice. Each statistical comparison was evaluated at the $p < .05$ threshold for statistical significance.

Transcendental Meditation.

Chi Square. Transcendental meditation was not significantly associated with reporting achieving spiritual height “many times” or “almost always.” Table 5 shows that 51% of the transcendental meditation group reported achieving spiritual height “many

times” or “almost always” compared to 53% of those who did not practice transcendental meditation, $\chi^2 (965, df = 1) = 0.05, p = .81$. This finding did not support H3.

Table 5

Spiritual Height by Transcendental Meditation

Transcendental	Spiritual Height		Total
	No	Yes	
No	434 47%	488 53%	922 96%
Yes	21 49%	22 51%	43 4%
Total	455 47%	510 53%	965 100%

Logistic regression. Table 6 shows that transcendental meditation was not significantly predictive of reporting achieving spiritual height “many times” or “almost always” ($p = .80$). This finding did not support H3. Months Meditating and being female were positive predictors of reporting experiencing spiritual height “many times” or “almost always,” while age was a significant negative predictor of reporting reaching spiritual height “many times” or “almost always” (each $p < .001$).

Table 6

Logistic Regression Coefficients: Spiritual Height by Transcendental Meditation

Variable	B	S.E.	Wald	Df	Sig.	Exp(B)
Months Meditating	.004	.001	42.60	1	<.001	1.004
Age	-.033	.006	36.19	1	<.001	.967
Female	.501	.137	13.47	1	<.001	1.651
Transcendental	.086	.332	0.07	1	.80	1.089
Constant	.851	.228	13.90	1	<.001	2.341

Because the odds ratios for Transcendental Meditation were not statistically significant in isolation or in logistic regression accounting for age, gender, and months of meditation, these findings did not support H3.

Relaxation Response.

Chi Square. Relaxation response was not significantly associated with reporting experiencing spiritual height “many times” or “almost always.” Table 7 shows that 33% of the relaxation response group reported achieving spiritual height “many times” or “almost always” compared to 53% of those who did not practice meditation with relaxation response, χ^2 (965, df = 1) = 2.24, $p = .13$. This finding did not support H3.

Table 7

Spiritual Height by Relaxation Response

Relaxation	Spiritual Height		Total
	No	Yes	
No	445 47%	505 53%	950 98%
Yes	10 67%	5 33%	15 2%
Total	455 47%	510 53%	965 100%

Logistic regression. Table 8 shows that relaxation response was not significantly predictive of reporting achieving spiritual height “many times” or “almost always” ($p = .12$). This finding did not support H3. Months meditating and being female were positive predictors of reporting experiencing spiritual height “many times” or “almost always,” while age was a significant negative predictor of reporting achieving spiritual height “many times” or “almost always” (each $p < .001$).

Table 8

Logistic Regression Coefficients: Spiritual Height by Relaxation Response

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Months Meditating	.004	.001	42.24	1	<.001	1.004
Age	-.034	.006	36.93	1	<.001	.967
Female	.509	.137	13.82	1	<.001	1.663
Relaxation	-.901	.573	2.47	1	.12	.406
Constant	.870	.228	14.54	1	<.001	2.386

Because the odds ratios for relaxation response were not statistically significant in isolation or in logistic regression accounting for age, gender, and months of meditation, these findings did not support H3.

Mindfulness Meditation.

Chi Square. Mindfulness meditation was significantly associated with reporting achieving spiritual height “many times” or “almost always”. Table 9 shows that 62% of the MM group reported achieving spiritual height “many times” or “almost always” compared to 51% of those who practiced other forms of meditation, $\chi^2 (965, df = 1) = 4.88, p < .03$. The odds ratio of 1.54 indicated that those who practiced mindfulness meditation were 54% more likely to report achieving spiritual height “many times” or “almost always” compared to those who did not practice mindfulness meditation. Because the odds ratio for mindfulness meditation was statistically significant in isolation, this finding supported H3.

Table 9

Spiritual Height by Mindfulness Meditation

Mindfulness	Spiritual Height		Total
	No	Yes	
No	408 49%	433 51%	841 87%
Yes	47 38%	77 62%	124 13%
Total	455 47%	510 53%	965 100%

Logistic regression. Table 10 shows a trend of mindfulness meditation being predictive of experiencing spiritual height “many times” or “almost always,” but this relationship did not achieve statistical significance ($p = .07$). This finding did not fully support H3. The odds ratio (exponentiated beta) of 1.445 indicated that those who practiced mindfulness meditation were roughly 45% more likely to report achieving spiritual height “many times” or “almost always” compared to those practicing another form of meditation, when age, gender, and months meditating were accounted for.

Table 10

Logistic Regression Coefficients: Spiritual Height by Mindfulness Meditation

Variable	B	S.E.	Wald	Df	Sig.	Exp(B)
Months Meditating	.004	.001	43.02	1	<.001	1.004
Age	-.032	.006	34.11	1	<.001	.968
Female	.482	.137	12.34	1	<.001	1.619
Mindfulness	.368	.204	3.26	1	.07	1.445
Constant	.764	.232	10.87	1	<.001	2.147

Months meditating and being female were positive predictors of reporting achieving spiritual height “many times” or “almost always”, while age was a significant

negative predictor of reporting achieving spiritual height “many times” or “almost always” (each $p < .001$). Because the odds ratio for mindfulness meditation was statistically significant in isolation and trended ($p = .07$) in logistic regression analysis, these finding partially supported H3.

Mindfulness Based Stress Reduction (MBSR).

Chi Square. Mindfulness-based stress reduction meditation was significantly associated with reporting achieving spiritual height “many times” or “almost always” in a negative direction, such that those who practiced MBSR were less likely to report experiencing spiritual height “many times” or “almost always” than those who did not practice MBSR. Table 11 shows that 34% of the MBSR group reported achieving spiritual height “many times” or “almost always” compared to 54% of those who did not practice MBSR, $\chi^2 (965, df = 1) = 7.52, p < .006$. The odds ratio of .44 indicated that those who practiced MBSR were 44% as likely to report achieving spiritual height “many times” or “almost always” compared to those who did not practice MBSR.

Table 11

Spiritual Height by MBSR Meditation

MBSR	Spiritual Height		Total
	No	Yes	
No	422 46%	493 54%	915 95%
Yes	33 66%	17 34%	50 5%
Total	455 47%	510 53%	965 100%

Otherwise stated, compared to those who practiced MBSR, those who did not practice MBSR were 2.27 ($1 / .44 = 2.27$) times more likely to report achieving spiritual

height “many times” or “almost always.” Because the odds ratio for MBSR was statistically significant in isolation, this finding supported H3.

Logistic regression. Table 12 shows that MBSR was negatively predictive of reporting experiencing spiritual height “many times” or “almost always” ($p < .01$). This finding supported H3. The exponentiated beta of .460 indicated that those who practiced MBSR were 46% as likely to report achieving spiritual height “many times” or “almost always” compared to those who did not practice MBSR. The odds ratio was 2.18 ($1 / .460 = 2.18$), indicating that those who did not practice MBSR were more than twice as likely than those who practiced MBSR to report achieving spiritual height “many times” or “almost always.” Months meditating and being female were positive predictors of reporting achieving spiritual height “many times” or “almost always,” while age was a significant negative predictor of reporting achieving spiritual height “many times” or “almost always” (each $p < .001$).

Table 12

Logistic Regression Coefficients: Spiritual Height by MBSR Meditation

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Months Meditating	.003	.001	41.67	1	<.001	1.003
Age	-.034	.006	36.89	1	<.001	.967
Female	.487	.137	12.61	1	<.001	1.627
MBSR	-.777	.315	6.08	1	.01	.460
Constant	.913	.230	15.77	1	<.001	2.492

Because the odds ratio for MBSR was statistically significant in isolation and in logistic regression analysis that accounted for age, gender, and months of meditation, this finding supported H3.

Christian Devotion Meditation (CDM)

Chi Square. CDM was not significantly associated with reporting achieving spiritual height “many times” or “almost always.” Table 13 shows that 42% of the Christian devotion meditation group reported achieving spiritual height “many times” or “almost always” compared to 53% of those who did not practice Christian devotion meditation, χ^2 (965, df = 1) = 0.89, $p = .34$. This finding did not support H3.

Table 13

Spiritual Height by Christian Devotion Meditation

CDM	Spiritual Height		Total
	No	Yes	
No	444 47%	502 53%	946 98%
Yes	11 58%	8 42%	19 2%
Total	455 47%	510 53%	965 100%

Logistic regression. Table 14 shows that CDM was not significantly predictive of reporting achieving spiritual height “many times” or “almost always” ($p = .34$). This finding did not support H3. Months meditating and being female were positive predictors of reporting achieving spiritual height “many times” or “almost always,” while age was a significant negative predictor of reporting achieving spiritual height “many times” or “almost always” (each $p < .001$).

Table 14

Logistic Regression Coefficients: Spiritual Height by Christian Devotion Meditation

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Months Meditating	.004	.001	42.57	1	.000	1.004
Age	-.033	.006	36.00	1	.000	.967
Female	.506	.137	13.72	1	.000	1.659
CDM	-.463	.484	0.92	1	.34	.630
Constant	.843	.227	13.76	1	<.001	2.324

Summary of Meditation Type and Spiritual Height. H3 received mixed support. Mindfulness meditation was a significant, positive predictor of reported achieving spiritual height “many times” or “almost always” in isolation, while MBSR was a significant, negative predictor of reported achieving spiritual height “many times” or “almost always” in isolation and in logistic regression analysis that accounted for age, gender, and months of meditation practice. TM, RR, and CDM were not significant predictors of reported achieving spiritual height “many times” or “almost always.”

RQ4: Contrast of Meditation Types in Achieving Spiritual Height

H4 proffered that “Achieving spiritual height many times or almost always will significantly differ by types (TM, RR, MM, MBSR, CDM, and Other) of meditation” Meditation types were contrasted with each other in percentage reported achieving spiritual height using chi square (χ^2) analysis. The omnibus analysis revealed that there were significant differences among the meditation types, χ^2 (965, df = 5) = 14.68, $p < .02$.

Table 15 displays pairwise crosstab analyses of meditation types in reporting achieving spiritual height, with table values reflecting χ^2 on one degree of freedom and with p-values in parentheses. Table 16 summarizes study findings, including percent of

participants reporting achieving Spiritual Height and statistically significant differences between meditation types in percent experiencing Spiritual Height.

Table 15

Contrast of Meditation Types by Spiritual Height

	Other	TM	RR	MM	MSBR
TM	0.08 (.77)				
RR	2.37 (.12)	1.42 (.23)			
MM	3.25 (.07)	1.58 (.21)	4.58 (.03*)		
MSBR	7.02 (.008*)	2.80 (.09)	0.002 (.96)	11.32 (.001*)	
CDM	2.18 (.14)	0.43 (.51)	0.27 (.60)	2.71 (.10)	0.39 (.53)

Note. Values reflect chi square in 1 degree of freedom, p-values in (parentheses); * = statistically significant, $p < .05$.

Table 16

Summary of Results Contrasting Types of Meditation by Achieving Spiritual Height

Type	% Spiritual Height	Significant Differences
TM	51%	
RR	33%	<MM
MM	62%	>RR, MBSR
MBSR	34%	<MM, Other
CDM	42%	
Other	53%	>MBSR

Table 15 and Table 16 show that the percentage of participants who reported achieving spiritual height “many times” or “almost always” was significantly higher for Mindfulness meditation than for RR and MBST, while MBSR was significantly lower in the percent of participants who reported achieving spiritual height “many times” or “almost always” than the “Other” category representing forms of meditation that were not included in the target types. Combined, these findings were consistent with H4.

Summary of Results

This study of 965 meditators revealed that the majority of participants reported achieving spiritual height “many times” or “almost always,” consistent with hypothesis 1. The demographics of age, gender, and years of meditation were significantly associated with reported achieving spiritual height “many times” or “almost always,” such that achieving spiritual height was associated with being female, being younger, and with more months practicing meditation. These findings were consistent with hypothesis 2.

Mindfulness meditation was significantly associated with reporting achieving spiritual height “many times” or “almost always” in simple chi-square analysis, such that those who practiced mindfulness meditation were 54% more likely to report achieving spiritual height “many times” or “almost always” compared to those who practiced other forms of meditation. When age, gender, and months practicing meditation were accounted for through logistic regression, mindfulness meditation trended towards being a predictor of reporting achieving spiritual height “many times” or “almost always” ($p = .07$). The odds ratio indicated that mindfulness meditation practitioners were 45% more likely to report achieving spiritual height “many times” or “almost always” when age, gender, and months meditating were accounted for.

In contrast, those who practiced mindfulness based stress reduction were significantly less likely to report achieving spiritual height “many times” or “almost always” compared to those who practiced other forms of meditation. This relationship was apparent in both simple chi square analysis and when age, gender, and months meditating were accounted for using logistic regression. The odds ratios demonstrated that those who did not practice MBSR were more than twice as likely to report achieving

spiritual height “many times” or “almost always” compared to those who practiced MBSR. Transcendental meditation, relaxation response, and Christian devotion meditation were not significantly associated with reporting achieving spiritual height “many times” or “almost always,” whether in simple chi square analyses or when age, gender, and months meditating were accounted for in logistic regression.

Analyses contrasting meditation types (Table 16) revealed that mindfulness meditation (62%) was significantly higher than relaxation response (33%) and mindfulness based stress reduction (34%) in reporting to achieve spiritual height “many times” or “almost always.” Mindfulness based stress reduction was significantly lower than “Other” forms of meditation in reporting achieving spiritual height “many times” or “almost always.” These results are discussed in the following chapter.

Chapter V: Discussion

Meditation has been demonstrated to be beneficial in treating a range of physical, emotional and mental ailments including chronic pain (Van Gordon, et al., 2017), substance use (Bowen et al., 2014) and eating disorders (Albertson, et al., 2015), as well as aiding in the treatment of psychological distress (Black et al., 2017). However, little has been known regarding the effects of meditation on spirituality, and which forms of meditation are more strongly associated with achieving spiritual height. Further, it was unclear whether age, gender, and months of meditation practice might be related to achieving spiritual height. The present study was specifically designed to fill this gap in the literature by analyzing an international database of people who practice meditation.

This chapter begins with a discussion of present results in the context of published literature, followed by the implications of these findings. Limitations of the study are provided, along with recommendations for future research. The chapter ends with the study's conclusions.

Review of Findings in the Context of Published Literature

It was hypothesized that the majority of participants in a historical database would report achieving spiritual height “many times” or “always” during meditation, that the demographics of age, gender, and months of meditation would be significantly associated with reportedly achieving spiritual height “many times” or “almost always” during meditation, and that the percent of participants who reported achieving spiritual height “many times” or “always” during meditation would significantly differ by types (TM, RR, MM, MBSR, CDM, and Other) of meditation. These hypotheses were supported. The following sections provide a discussion of present results for each type of meditation

considered in the present study, followed by speculation towards reconciling the differences between meditation types in reported achievement of spiritual height.

Mindfulness Meditation (MM)

In the MM group, 62% reported achieving a spiritual height “many times” or “almost always” during meditation. The odds ratio of 1.54 indicated that the MM group was roughly 50% more likely to report spiritual height than other types of meditation. After accounting for age, gender, and number of months practicing meditations, the MM group still had almost 50% greater odds of achieving spiritual height than other types of meditation. The present findings were consistent with previous reports demonstrating mindfulness meditation can enhance certain aspects of spirituality (Astin 1997; Shapiro et al. 1998). It is possible that there is a reciprocal relationship between mindfulness and spirituality, wherein increased mindfulness creates increased spirituality and vice versa. The possibility that greater awareness of the divine, attention paid to the transcendent, and the interconnectedness of all things can create greater mindfulness and mental health, is consistent with both Eastern contemplative traditions and Western psychological theory (Wallace & Shapiro, 2006).

Overall, the present results suggest that meditation can promote spiritual height, and that, among the types of meditation studied here, mindfulness meditation provides the greatest odds of experiencing spiritual height. According to Monteiro et al (2015), the three basic components for cultivating well-being through mindfulness are spiritual and religious contemplative practices, understanding how to experience the flow of events through body and mind, and addressing the intention of the treatment process or a shift away from experiential avoidance.

Transcendental Meditation (TM)

Overall, 51% of those who practiced TM reported achieving spiritual height “many times” or “almost always” during meditation. While TM was not significantly predictive of reaching spiritual height compared to other forms of meditation, present findings demonstrate that spiritual height can be reported in TM practice.

While Merriam-Webster (2017) defines consciousness as, “the condition of being mentally awake and active,” Maharishi Yogi, the creator of TM, describes TM as transcendental consciousness (TC), a state of pure wakefulness, wherein consciousness is fully awake, without thought or perception (Forem, 1972). When transcendental consciousness is repeated, it is believed to lead to unfolding three higher states of consciousness: cosmic, God, and unity. When these higher states of consciousness are experienced, one’s full potential can be realized. In this way, TM appears to have a strong relationship to spirituality.

In the absence of spiritual terms, transcendental consciousness can alternatively be described as “the experience of perfect stillness, rest, stability, and order and by a complete absence of mental boundaries” (Farrow & Hebert, 1982, p. 133). Ferguson (1975) explained that TM “requires no alteration of life styles...being a technique rather than a philosophy or a religion, it does not require belief in the efficacy of the practice nor an understanding of the underlying theory or principals” (p.16). Therefore, it was unclear whether TM always includes spiritual implications as a fundamental part of the practice. Some practitioners state life changes and spiritual adjustments are basic parts of the practice (Alexander, 1994; Farrow & Herbert, 1982). However, Maharishi, who brought TM practice to the west, described the technique as a means of experiencing

transcendental consciousness, which he characterized as “eternal silence, which is pure wakefulness, absolute alertness, pure subjectivity, pure spirituality” (Maharishi Mahesh Yogi, 1995, p. 271). For this reason it could not be teased out in the present study. The finding that more than half of study participants who practiced TM reported achieving spiritual height “many times” or “almost always” during meditation suggests that, regardless of secular or non-secular definition, TM practice can be a viable strategy to achieving spiritual height.

Relaxation Response (RR)

Among participants in the RR group, 33% reported reaching spiritual height “many times” or “almost always” during meditation. While this was not significantly different than participants who did not practice RR, due at least in part to the fact that the RR group only had 15 participants, which limited statistical power, the 20% gap between the 33% rate spiritual height often or “almost always” during meditation for RR and the 53% rate for other forms of meditation is significantly lower in real world terms. However, it can also be stated that the secular RR technique can be effective in experiencing spiritual height “many times” or “almost always” for a third of participants in this study.

Relaxation response is universally considered to be a secular technique. The creator, Robert Benson (1982), described RR as “a simple non-cultic technique” (p. 232) that “can be elicited by non-religious or non-cultic techniques or by other methods which the patient might prefer” (p. 236). The focus of RR is on behavioral and thought patterns that elicit an innate physiological function or “the relaxation response.” One interpretation of the lower rates of experiencing spiritual height compared to other forms

of meditation is that participants using RR are intentionally more focused on physical functions and outcomes, as opposed to the spiritual, that other traditional practices (such as TM, which RR was developed from).

Christian Devotion Meditation (CDM)

In the CDM group, 42% reported reaching spiritual height “many times” or “almost always.” Although these numbers are not significantly predictive of attaining spiritual height compared to other meditators as a whole, this finding suggests CDM is a viable method for developing spiritual gains for some. These findings are consistent with research by Fox (2016), which investigated the effect of centering prayer on spirituality and religion discovering religious meditation did not report spiritual gains for participants. Fox (2016) found that, rather than supporting the hypothesis that centering prayer would increase spiritual transcendence, participants experienced notable tension in their relationship with God. However, empirical research has shown implications for spirituality development through centering prayer. For example, in a study using centering prayer with women undergoing chemotherapy for ovarian cancer, Johnson et al. (2009) found spiritual well-being improved significantly through the study and remained positive at the six- month follow-up. Johnson et al. (2009) also found significant development of experiences of spiritual peace and meaning.

The Dark Night of the Soul is a term used to describe intensely dark periods during individual’s religious contemplations or meditation when negative emotions arise, which may help to explain why absences in spirituality occur during some individuals’ religious meditations (Dura-Vila & Dein, 2009). Dura-Vila and Dein describe The Dark Night of the Soul as a metaphor to illustrate the “loneliness and desolation in one’s life

associated with a crisis of faith or with profound spiritual concerns about the relationship with God” (p. 544). While the expectation may be for religious meditations to increase spirituality, the heightened awareness and contemplation can lead to setbacks, disillusionment, but ultimately the expectation is for spiritual growth (Dura-Vila & Dein, 2009). The Dark Night of the Soul is not isolated to Christian experiences but occurs throughout most forms of meditation. Individuals using many meditation traditions have reported experiences of negative side effects or “disturbing conditions” that are considered signs of progress (Lindahl, Fisher, Cooper, Rosen, & Britton, 2017).

Mindfulness-Based Stress Reduction (MBSR)

Overall, 34% of participants practicing MBSR reported experiencing spiritual height “many times” or “almost always” during meditation, while individuals practicing another form of meditation were twice as likely to report experiencing spiritual height. However, other research has shown that MBSR is related to increased elements of spirituality, including personal faith, meaning and peace, and a sense of commitment and closeness with some form of higher power or God (Astin 1997; Birnie et al. 2010; Carmody et al. 2008; Greeson, 2011; Shapiro et al. 1998). A study by Greeson (2011) found preliminary evidence for changes in mindfulness as a mediating mechanism through which changes in spirituality may partially explain the mental health benefits of MBSR. It is important to note that the present study used a single item of spiritual height, which is not the same as entire construct of spirituality. While mental health outcomes are beyond the scope of this study, it is worth mentioning in that spirituality is a beneficial and often overlooked byproduct of many forms of contemporary meditation.

Towards Reconciling Differences between Meditation Types in Achieving Spiritual Height

Statistically significant differences were found between types of meditation in reported achieving spiritual height “many times” or “almost always.” Towards reconciling these differences, it is important to first review the origins of meditation. Meditation evolved from various spiritual traditions (Kabat-Zinn, 2013; Monteiro et al., 2015). The ability to create mindfulness is developed using various meditation techniques that originated in Buddhist spiritual practices (Salmon et al., 2004). Mindful Meditation is derived from an ancient spiritual practice. Therefore, not surprising that practitioners of MM may report achieving spiritual heights during their meditation.

In contrast, RR and MBSR are secular techniques, each of which was associated with lower rates of reportedly achieving spiritual height “many times” or “almost always.” The creator of RR, Robert Benson (1982), described RR as “a simple non-cultic technique” (p. 232) that “can be elicited by non-religious or non-cultic techniques or by other methods which the patient might prefer” (p. 236). The focus of RR is on behavioral and thought patterns that elicit an innate physiological function or “the relaxation response.” One interpretation of the lower rates of reporting to achieve spiritual height compared to other forms of meditation is that participants using RR are intentionally more focused on physical functions and outcomes, as opposed to the spiritual, that other traditional practices emphasize (such as TM, from which RR was developed). MBSR is also a secular modality, developed with the aim of receiving the benefits of mindfulness practices, for individuals who may be uninterested in traditional Buddhist customs. While it may be interesting to speculate further on why RR and MBSR had lower rates of

reportedly achieving spiritual height “many times” or “almost always” during meditation compared to MM, it is equally important to speculate as to why these secular meditation techniques can ever result in achieving spiritual height. Present results demonstrate that one-third or more of the participants in the present study reported achieving spiritual height “many times” or “almost always” using RR or MBSR techniques, which implies that secular meditation can produce spiritual effects even if the technique itself is secular in nature. Empirical evidence indicates that spirituality is important, given that nearly one in six Americans report having a deep sense of spiritual peace and well-being at least once a week (Lipka, 2015). It is therefore possible that some people seek spiritual gain through secular meditation techniques, an important area for future research.

TM remains an ambiguously part-secular part-spiritual form of mediation, with researchers overtly stating that TM can be both spiritual and secular (Alexander, 1994; Maharishi Mahesh Yogi, 1976). Consistent with this divide, roughly half of study participants reported achieving spiritual height “many times” or “almost always.” While this rate was somewhat lower than the 62% of MM participants who reported achieving spiritual height “many times” or “almost always,” the difference was not statistically significant, was essentially identical to the 53% overall rate for the study, and was considerably higher (though not significantly so from a statistical hypothesis testing perspective) than the 33% for RR and 34% for MBSR, which are unambiguously secular meditation techniques.

The findings regarding CDM were curious from the perspective of the spiritual-secular divide. CDM evolved from spiritual / religious traditions. However, participants engaged in CDM reported relatively low (42%) rates of experiencing spiritual height. Fox

(2016) found similar results with participants using centering prayer, noting Spiritual Transcendence decreased over the course of the study. This may be due to the process that occurs where difficult psychological material is revealed, a tension, emptiness, and hopelessness can occur in prayer (Keating, 2002). This period occurs in various meditation practices, and is specifically known as Dark Night of the Soul in Christian Faith, detailed above. Interestingly, Fox (2016) found that while a religious or spiritual struggle occurred, participant's faith significantly grew over the course of the study. This may suggest that those utilizing CDM may not be reaching spiritual heights, yet are accessing deeper levels of faith with their practice. It is also possible that the small sample size for the CDM (n = 19) group, which was much smaller than spiritual MM (n = 124) group, may have contributed to the present results. That is, small sample sizes are inherently noisy and may therefore not be representative of populations (Creswell, 2014, Howell, 2014). To emphasize this point, if 4 CDM participants changed their response to "many times" or "almost always," CDM would have been at 63% - even higher than the 62% of MM participants. For these reasons, it is important to replicate the present study with a larger sample of CDM practitioners, in addition to employing qualitative analysis of structured interviews to determine the relationship between CDM and reporting to achieve spiritual height.

Other Observations

Higher rates of reporting experiencing spiritual height "many times" or "almost always" were found for participants who were younger, female, and in those with more months meditating. These novel findings represent unique contributions to the literature on meditation and spiritual height.

Implications

The most important finding of the present study was that more than half (53%) of study participants reported achieving spiritual height “many times” or “almost always”. This result indicates that a sense of spiritual height can be reported through meditation. Meditation group members reported achieving spiritual height “many times” or “almost always” at rates ranging from 33% to 62% (Table 16), whether the meditation was secular or spiritual in nature. It is important to note that most secular forms of meditations grew out of traditionally spiritual practices, and therefore finding strains of spirituality in secular interventions may be expected (Wachholtz & Pargament, 2005). Therefore, meditation appears to be an intervention that can be potentially effective towards achieving spiritual height, which can lead to a variety of other benefits including mental wellness (Gill, Barrio Minton, & Myers, 2010); physical health (Lloyd & Dunn, 2007); improved quality of life (Greeson et al., 2011); and an ability to buffer negative life events (Lindgren & Coursey, 1995).

Mindfulness was the most effective meditation type in reaching spiritual height in this sample, with more than 60% of those engaging in mindfulness meditation reporting achieving a sense of being at spiritual height “many times” or “almost always.” The implication is that, if one’s goal is to experience spiritual height through the use of meditation practice, mindfulness may be the most effective meditation style to achieve that goal.

The MBSR and RR groups had relatively lower rates of reaching spiritual height during meditation, with other participants in the study being twice as likely to reach spiritual height. This makes sense because as a secular meditation practices, MBSR and

RR were developed in part to attract individuals interested in eliciting benefits of meditation without subscribing to traditional spiritual subsets (Baer, 2003; Benson, 1982). One might speculate that most individuals who engage in secular meditation have sought out a practice with the intention of non-spiritual or non-religious convention; so fewer MBSR and RR meditators might seek spiritual gains and therefore fail to attain spiritual benefits. However, one-third of participants using RR or MBSR reported experiencing spiritual height “many times” or “almost always,” so these may be viable options for clients seeking a secular approach to achieving spiritual height.

The number of months meditating was associated with greater odds of achieving spiritual height. The implication from this result is that practicing meditation over a longer duration may be required to optimize the odds of achieving spiritual height “many times” or “almost always” during meditation. Dedicating meditation time over an extended number of months may be necessary for clients to report achieving spiritual height “many times” or “almost always” during meditation.

Being female and being younger were statistically associated with reaching spiritual height through meditation. The implication of these results is that clinicians should be aware that achieving spiritual height may be more challenging for males and older meditators. However, it is important to note that the average age of those reporting that they experience spiritual height “many times” or “almost always” was 45 years of age in the present study, compared to an average of 48 years of age for those who did not report that they experience spiritual height “many times” or “almost always,” so this difference of three years may be statistically significant but practically unimportant clinically. Also, the females reported achieving spiritual height “many times” or “almost

always” at a rate of 57%, but the observation that the males reported experiencing spiritual height “many times” or “almost always” at a rate of 47% indicates that spiritual height may be easier to achieve for females, but males are also capable of experiencing spiritual height.

Limitations

This study was limited by the sample. Participants were recruited through networks affiliated with authors and colleagues of the survey, which may have elicited responses from individuals who were already invested in the benefits of meditation. That is, the self-selection of participants may have biased results. Further, the RR group (n = 15) and the CDM group (n = 19) had small sample sizes, which limited statistical power and generalizability.

This study was limited by the measures. All study measures were self-report, with no objective measures. Further, the much of the survey instrument has not been formally validated, and survey assessments of meditation and spirituality risk oversimplifying these highly complex topics. The spirituality outcome was part of a validated scale (the Mystical Experience Scale), but focused on just a single item, experiencing a “sense of spiritual height.”

According to Grossman (2008), self-reports of mindfulness meditation may not provide accurate assessments, specifically for individuals with little meditation experience. The inclusion criteria for the present study required a minimum of three months of meditation. The present study examined total meditation history, but did not include the frequency or duration of meditation sessions, so participants may have meditated for minutes or hours at a time, daily or once a month. The linear approach to

this data may be overly simplistic, “Because traditional teachings and modern theories suggest that relationships between mindfulness meditation practice, spirituality, and health are complex and interdependent, investigators are encouraged to conceptualize and systematically compare more than one a priori model of the data” (Greeson, 2011, p. 516). Additionally, the present study did not include current assessments of physical or mental health or other factors that may affect meditation and spiritual height, such as significant life events, or previous psychological counseling.

This study was limited by the design. This research was cross-sectional in design, collecting observational data from participants at one point in time. This design precluded measuring progress or development, unlike a prospective, longitudinal design that collect and compare data over the course of time. Additionally, the design was quasi-experimental: there was no randomized assignment of participants into different meditation groups and there was no control group.

Areas for Further Research

A substantial proportion of study participants experienced spiritual height “many times” or “almost always” during meditation, including those who practiced spiritual meditation and those who practiced secular meditation. Therefore, the most important area for future research is replication of the present study using prospective controlled study designs, including random assignment of participants to different meditation groups. Additionally, a longitudinal design could be utilized to establish the effects of meditation on sense of spiritual height across time. The incorporation of structured interviews may provide a better understanding of why rates of experiencing spiritual height might differ by meditation technique.

It is also important to determine whether achieving spiritual height during meditation has a measurable positive impact on the lives of meditators. For example, is it possible to assess whether experiencing spiritual height during meditation can reduce depression in clinically depressed clients or reduce anxiety in clinically anxious clients.

Conclusion

The present study of 965 meditators found that a sense of spiritual height can be the product of both secular and non-secular meditation practices. Among types of meditation investigated, mindfulness meditation had the highest odds of reporting achieving spiritual height “many times” or “almost always,” while relaxation response and mindfulness-based stress reduction had the lowest odds of reporting achieving spiritual height “many times” or “almost always.” It is important to note however, that one-third of the RR and MBSR group members reported achieving spiritual height “many times” or “almost always.” Being younger, female and having more months of practice were associated with experiencing spiritual height “many times” or “almost always” during meditation. Combined, findings of the present study highlight the role of meditation practice in achieving spiritual height. Individuals will be better suited to develop a meditation practiced crafted to reach their goals, which may include a traditionally secular form of meditation, while still offering the possibility of reaching spiritual height.

References

- Albertson, E. R., Neff, K. D. & Dill-Shackleford, K. E. (2015). Self-Compassion and Body Dissatisfaction in Women: A Randomized Controlled Trial of a Brief Meditation Intervention. *Mindfulness* 6(3), 444-454. doi:10.1007/s12671-014-0277-3
- Aldwin, C. M., Park, C. L., Jeong, Y., & Nath, R. (2014). Differing pathways between religiousness, spirituality, and health: A self-regulation perspective. *Psychology of Religion and Spirituality*, 6(1), 9-21. doi:10.1037/a0034416
- Alexander, C. N. (1994). Transcendental meditation. In R. J. Corsini (Ed.), *Encyclopedia of psychology* (2nd ed., pp. 545-546). New York: John Wiley and Sons.
- American Psychological Association (APA). (1992). Ethical Principles of Psychologists and Code of Conduct. *American Psychologist*, 47, 1597-1611.
<http://www.apa.org/ethics>
- Argyle, M., & Beit-Hallahmi, B. (1975). *The social psychology of religion*. London: Routledge & Kegan Paul.
- Astin, J. A. (1997). Stress reduction through mindfulness meditation: Effects on psychological symptomatology, sense of control, and spiritual experiences. *Psychotherapy and Psychosomatics*, 66, 97-106. doi:10.1007/s10865-011-9332-x
- Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice*, 10(2), 125-143. doi:10.1093/clipsy.bpg015
- Batson, C. D., Schoenrade, P., & Ventis, W. L. (1993). *Religion and the individual: A social psychological perspective*. New York: Oxford University Press.

- Barnby, J. M., Bailey, N. W., Chambers, R., & Fitzgerald, P. B. (2015). How similar are the changes in neural activity resulting from mindfulness practice in contrast to spiritual practice? *Consciousness and Cognition: An International Journal*, *36*, 219-232. doi:10.1016/j.concog.2015.07.002
- Barnett, J. E., Shale, A. J., Elkins, G., & Fisher, W. (2014). Meditation. In J. E. Barnett, A. J. Shale, G. Elkins & W. Fisher (Eds.), *Complementary and alternative medicine for psychologists: An essential resource* (pp. 61-72). Washington, DC, US: American Psychological Association. doi:10.1037/14435-006
- Beauregard, M. (2012). Neuroimaging and spiritual practice. In L. J. Miller (Ed.), *The Oxford Handbook of Psychology and Spirituality* (pp. 500-513). New York, NY, US: Oxford University Press. doi:10.1093/oxfordhb/9780199729920.013.0032
- Benson, H. (1982). The relaxation response: History, psychological basis and clinical usefulness. *Acta Medica Scandinavica*, *660*, 231-237. doi:10.1111/j.0954-6820.1982.tb00378.x
- Benson, H. (1983). The relaxation response: Its subjective and objective historical precedents and physiology. *Trends in Neurosciences*, *6*(7), 281-284. doi: [http://dx.doi.org/10.1016/0166-2236\(83\)90120-0](http://dx.doi.org/10.1016/0166-2236(83)90120-0)
- Birnie, K., Speca, M., & Carlson, L. E. (2010). Exploring self-compassion and empathy in the context of mindfulness-based stress reduction (MBSR). *Stress and Health*, *26*, 359–371. doi: 10.1002/smi.1305
- Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., . . . Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice*, *11*(3), 230-241. doi:10.1093/clipsy/bph077

- Black, D. S., O'Reilly, G. A., Olmstead, R., Breen, E. C., & Irwin, M. R. (2015). Mindfulness Meditation and Improvement in Sleep Quality and Daytime Impairment Among Older Adults With Sleep Disturbances: A Randomized Clinical Trial. *JAMA Internal Medicine*, *175*(4):494-501.
doi:10.1001/jamainternmed.2014.8081
- Bond, K., Ospina, M. B., Hooton, N., Bialy, L., Dryden, D. M., Buscemi, N., . . . Carlson, L. E. (2009). Defining a complex intervention: The development of demarcation criteria for "meditation". *Psychology of Religion and Spirituality*, *1*(2), 129-137.
doi:10.1037/a0015736
- Bowen, S., Witkiewitz, K., Clifasefi, S. L., Grow, J., Chawla, N., Hsu, S. H., . . . Larimer, M. E. (2014). Relative efficacy of mindfulness-based relapse prevention, standard relapse prevention, and treatment as usual for substance use disorders: A randomized clinical trial. *JAMA Psychiatry*, *71*(5), 547-556.
doi:10.1001/jamapsychiatry.2013.4546
- Buttle, H. (2015). Measuring a journey without goal: Meditation, spirituality, and physiology. *BioMed Research International*, 2015, 1-8. doi:10.1155/2015/891671
- Cardoso, R., de Souza, E., Camano, L., & Leite, J. R. (2004). Meditation in health: An operational definition. *Brain Research Protocols*, *14*(1), 58-60.
doi:10.1080/10508619.2015.1042334
- Carmody, J., Reed, G., Kristeller, J., & Merriam, P. (2008). Mindfulness, spirituality, and health-related symptoms. *Journal of Psychosomatic Research*, *64*, 393-403.
doi:10.1016/j.jpsychores.2007.06.015

- Chan, R. R., & Larson, J. L. (2015). Meditation interventions for chronic disease populations: A systematic review. *Journal of Holistic Nursing* 33(4), 351-365. doi:0898010115570363
- Chiesa, A., & Serretti, A. (2011). Mindfulness based cognitive therapy for psychiatric disorders: A systematic review and meta-analysis. *Psychiatry Research*, 187, 441-453. doi: 10.1016/j.psychres.2010.08.011
- Chow, S. (2015, November 22). Meditation history. *News Medical Life Sciences*, Retrieved from <http://www.news-medical.net/health/Meditation-History.aspx>
- Christian, T., Beaujean, A. A., & Wright, W. (2016). Individual differences in affective states during meditation. *The International Journal for the Psychology of Religion*, 26(3), 268-282. doi:10.1080/10508619.2015.1042334
- Christopher, M. S., Charoensuk, S., Gilbert, B. D., Neary, T. J., & Pearce, K. L. (2009). Mindfulness in Thailand and the united states: A case of apples versus oranges? *Journal of Clinical Psychology*, 65(6), 590-612. doi:10.1002/jclp.20580
- Christopher, J. C. & Maris, J. A. (2010). Integrating mindfulness as self-care into counseling and psychotherapy training. *Counseling and Psychotherapy Research*, 10(2), 114-125. doi: 10.1080/14733141003750285
- Consciousness, (n.d.). In *Merriam-Webster online*. Retrieved from <https://www.merriam-webster.com/dictionary/consciousness>
- Cunningham, L. S., & Egan, K. J. (1996). *Christian spirituality: Themes from the tradition*. Mahwah, NJ: Paulist Press.
- Creswell, J. W. (2014) *Research design: Qualitative, quantitative and mixed method approaches* (4th ed.). Thousand Oaks, California: SAGE Publications.

- Dailey, S. F., Robertson, L. A., & Gill, C., S. (2015). Spiritual Competency scale: Further analysis. *Measurement and Evaluation in Counseling and Development*, 48(1) 15–29. doi: 10.1177/0748175614544688
- de Zoysa, P. (2016). When east meets west: Reflections on the use of Buddhist mindfulness practice in mindfulness-based interventions. *Mental Health, Religion & Culture*, 19(4), 362-370. doi:10.1080/13674676.2016.1200542
- Dimidjian, S. & Linehan, M. (2003). Defining an agenda for future research on the clinical application of mindfulness practice. *Clinical Psychology: Science and Practice*, 10(2), 166-171. doi: 10.1093/clipsy.bpg019
- Dodou, D., & de Winter, J. C. F. (2014). Social desirability is the same in offline, online, and paper surveys: A meta-analysis. *Computers in Human Behavior*, 36, 487–495. doi: 10.1016/j.chb.2014.04.005
- Doyle, D. (1992). Have we looked beyond the physical and psychosocial? *Journal of Pain and Symptom Management*, 7, 302-311. doi: [https://doi.org/10.1016/0885-3924\(92\)90063-N](https://doi.org/10.1016/0885-3924(92)90063-N)
- Dura-Vila, G. and Dein, S. (2009). The Dark Night of the Soul: spiritual distress and its psychiatric implications. *Mental Health, Religion & Culture*, 12(6), 543–559. doi: 10.1080/13674670902858800
- Falb, M. D., & Pargament, K. I. (2014). Religion, spirituality, and positive psychology: Strengthening well-being. In J. Teramoto Pedrotti & L.M. Edwards (Eds.), *Perspectives on the intersection of multiculturalism and positive psychology* (pp. 143-157). Dordrecht, Netherlands: Springer. doi:10.1007/978-94-017-8654-6_10

- Farrow, J. T., & Hebert, J. R. (1982). Breath suspension during the transcendental meditation technique. *Psychosomatic Medicine*, *44*(2), 133-53.
doi:10.1097/00006842-198205000-00001
- Ferguson, P. C. (1975). The psychobiology of transcendental meditation: A review. *Journal of Altered States of Consciousness*, *2*(1), 15-36.
- Ferguson, J., Willemsen, E., & Castañeto, M. (2010). Centering prayer as a healing response to everyday stress: A psychological and spiritual process. *Pastoral Psychology*, *59*(3), 305–329. doi:10.1007/s11089-009-0225-7
- Finney, J. R., & Maloney, H. N. (1985). Contemplative prayer and its use in psychotherapy: A theoretical model. *Journal of Psychology and Theology*, *13*, 172-181.
- Fox, J., Gutierrez, D., Haas, J., & Durnford, S. (2016). Centering prayer's effects on psycho-spiritual outcomes: A pilot outcome study. *Mental Health, Religion & Culture*, *19*(4), 379-392. <http://dx.doi.org/10.1080/13674676.2016.1203299>
- Frederick, T., & White, K., M. (2015) Mindfulness, Christian Devotion Meditation, surrender, and worry. *Mental Health, Religion & Culture*, *18*(10), 850-858, doi: 10.1080/13674676.2015.1107892
- Galanter, M., & Buckley, P. (1978). Evangelical religion and meditation: Psychotherapeutic effects. *The Journal of Nervous and Mental Disease*, *166*(10), 685-691.
- Gallup, G., & Johnson, B. R. (2003). New index tracks spiritual state of the union. Gallup Poll News Service.

- Gill, C. S., Barrio Minton, C. A., & Myers, J. E. (2010). Spirituality and religiosity: Factors affecting wellness among low income, rural women. *Journal of Counseling and Development, 88*, 293–302. doi: 10.1002/j.1556-6678.2010.tb00025.x
- Gonçalves, J., Lucchetti, G., Menezes, P., & Vallada, H. (2015). Religious and spiritual interventions in mental health care: A systematic review and meta-analysis of randomized controlled clinical trials. *Psychological Medicine, 45*(14), 2937-2949. doi:10.1017/S0033291715001166
- Greeson, J. M., Webber, D. M., Smoski, M. J., Brantley, J. G., Ekblad, A. G., Suarez, E. C., & Wolever, R. Q. (2011). Changes in spirituality partly explain health-related quality of life outcomes after mindfulness-based stress reduction. *Journal of Behavioral Medicine, 34*, 508-518. doi:10.1007/s10865-011-9332-x
- Gross, N., & Simmons, S. (2009). The religiosity of American college and university professors. *Sociology of Religion, 70*(2), 101-129. doi:10.1093/socrel/srp026
- Grossman, P. (2008). On measuring mindfulness in psychosomatic and psychological research. *Journal of Psychosomatic Research, 64*, 405–408.
- Grossman, P., & Van Dam, N. T. (2011). Mindfulness, by any other name...: Trials and tribulations of sati in western psychology and science. *Contemporary Buddhism, 12*(1), 219-239. doi:10.1080/14639947.2011.564841
- Gunaratana, H. (1993). *Mindfulness in plain English*. Boston: Wisdom Publications.
- Guzmán, G. (2008). Hallucinogenic mushrooms in Mexico: An overview. *Economic Botany, 62*(3), 404–12. doi: 10.1007/s12231-008-9033-8

- Hood, R. W., & Chen, Z. (2015). Mystical, spiritual, and religious experiences. In R. F. Paloutzian, & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (2nd ed., pp. 422-440). New York, NY: Guilford Publications.
- Holzel, B. K., Carmody, J., Vangel, M., Congleton, C., Yerramsetti, S. M., Gard, T., & Lazar, S. W. (2011). Mindfulness practice leads to increases in regional brain gray matter density. *Psychiatry Research*, *191*(1), 36–43. doi: <http://dx.doi.org/10.1016/j.psychresns.2010.08.006>
- Howell, D.C. (2012) *Statistical methods for psychology* (8th Ed.) Australia: Wadsworth, Cengage Learning.
- Hülshager, U. R., Lang, J. B., Depenbrock, F., Fehrmann, C., Zijlstra, F. H., & Alberts, H. M. (2014). The power of presence: The role of mindfulness at work for daily levels and change trajectories of psychological detachment and sleep quality. *Journal of Applied Psychology*, *99*(6), 1113-1128. doi:10.1037/a0037702
- Ireland, M. (2012). Meditation and psychological health and functioning: A descriptive and critical review. *The Scientific Review of Mental Health Practice: Objective Investigations of Controversial and Unorthodox Claims. Clinical Psychology, Psychiatry, and Social Work*, *9*(1), 4-19.
- Islamic Insights (2016). Meditation. Retrieved from <http://www.islamicinsights.com/religion/meditation.html>
- James, W. (1961). *The varieties of religious experience*. New York: Collier. (Original work published 1902).
- Johnson, C. L. (2010). *The globalization of Hesychasm and the Jesus prayer: Contesting contemplation*. London: Continuum.

- Johnson, M., Dose, A., Pipe, T., Petersen, W., Huschka, M., Gallenberg, M., & Frost, M. (2009). Centering prayer for women receiving chemotherapy for recurrent ovarian cancer: A pilot study. *Oncology Nursing Forum*, *36*(4), 421–428.
doi:10.1188/09.ONF.421-428
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*, *10*(2), 144-156. doi: 10.1093/clipsy.bpg016
- Kabat-Zinn, J. (2013). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. New York, NY: Delta trade.
- Kaminska, O. & Foulsham, T. (2013) ISER Working Paper Series: Understanding sources of social desirability bias in different modes: evidence from eye-tracking. Institute for Social and Economic Research, University of Esgender.
- Kato, H. (2016). The relationship between the psychology of religion and Buddhist psychology. *Japanese Psychological Research*, *58*(1), 70-84.
doi:10.1111/jpr.12121
- Keating, T. (1994). *Intimacy with god*. New York, NY: Cross Road.
- Keating, T. (2002). *Foundations for centering prayer and the Christian contemplative tradition*. New York, NY: Continuum International.
- Kim, Y. H., Kim, H. J., Ahn, S. D., Seo, Y. J., & Kim, S. H. (2013). Effects of meditation on anxiety, depression, fatigue, and quality of life of women undergoing radiation therapy for breast cancer. *Complementary Therapies in Medicine*, *21*, 379-387.
doi: 10.1016/j.ctim.2013.06.005

- Kornfield, J. (1993). *A path with heart: A guide through the perils and promises of spiritual life*. New York, NY: Bantam.
- Kristeller, J. L. (2007). Mindfulness meditation. In P. M. Lehrer, R. L. Woolfolk, W. E. Sime, & D. H. Barlow (Eds.), *Principles and practice of stress management* (3rd ed., pp. 393–427). New York, NY: The Guilford Press.
- Kristeller, J. (2010). Spiritual engagement as a mechanism of change in mindfulness- and acceptance-based therapies. In R. A. Baer (Ed.), *Assessing mindfulness & acceptance processes in clients: Illuminating the theory & practice of change* (pp. 155-184).
- Kristeller, J. L., & Johnson, T. (2005). Cultivating loving kindness: A two-stage model of the effects of meditation on empathy, compassion, and altruism. *Zygon*, 40, 391–408. doi: 10.1111/j.1467-9744.2005.00671.x
- Koenig, H. G. (2008). *Medicine, religion, and health: Where science and spirituality meet*. West Conshohocken, PA: Templeton Foundation Press.
- Koenig, H. G., George, L. K., & Titus, P. (2004). Religion, spirituality, and health in medically ill hospitalized older patients. *Journal of the American Geriatrics Society*, 52(4), 554–562. doi: 10.1111/j.1532-5415.2004.52161.x
- Koenig, H. G., King, D. E., & Carson, V. B. (Eds.) (2012). Definitions. In *Handbook of religion and health* (2nd ed.), (pp. 37-38). New York: Oxford University Press.
- Krosnick, J. A. (1999). Survey research. *Annual Review of Psychology*, 50, 537-567.
- Levenson, M. R., & Aldwin, C. M. (2015). Mindfulness in psychology and religion. In R. F. Paloutzian, & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (2nd ed., pp. 580-594). New York, NY: Guilford Publications.

- Lindahl, J. R., Fisher, N. E., Cooper, D. J., Rosen, R. K., and Britton, W. B. (2017). The varieties of contemplative experience: A mixed-methods study of meditation-related challenges in Western Buddhists. *PLoS ONE*, 12(5). Retrieved from <https://doi.org/10.1371/journal.pone.0176239>
- Lindgren, K. N., & Coursey, R. D. (1995). Spirituality and serious mental illness: A two-part study. *Psychosocial Rehabilitation Journal*, 18, 93–111. doi:
- Lipka, M. (2015). 5 key findings about religiosity in the U.S. – and how it’s changing. The Pew Research Center. Retrieved from <http://www.pewresearch.org/fact-tank/2015/11/03/5-key-findings-about-religiosity-in-the-u-s-and-how-its-changing/>
- Lloyd, L. F., & Dunn, L. R. (2007). Mind-body-spirit medicine: Interventions and resources. *Journal of the American Academy of Physician Assistants*, 20(10), 31–37.
- Lutz, A., Slagter, H. A., Dunne, J. D., & Davidson, R. J. (2008). Attention regulation and monitoring in meditation. *Trends in Cognitive Sciences*, 12(4), 163-169. doi:10.1016/j.tics.2008.01.005
- Lykins, E. L. (2014). Mindfulness, consciousness, spirituality, and well-being. In C. Kim-Preito (Ed.), *Religion and spirituality across cultures* (pp. 203-225). Dordrecht: Springer Netherlands.
- Maharishi Mahesh Yogi (1976). *Maharishi University Management: Wholeness on the move*. Vlodrop, the Netherlands: Maharishi Vedic University Press.

- Masci, D. & Lipka, M. (2016). Americans may be getting less religious, but feelings of spirituality are on the rise. The Pew Research Center. Retrieved from <http://www.pewresearch.org/fact-tank/2016/01/21/americans-spirituality/>
- Maex, E. (2011). The Buddhist roots of mindfulness training: A practitioners view. *Contemporary Buddhism*, 12(1), 165-175. doi:10.1080/14639947.2011.564835
- Maclean, K.A., Leoutsakos, J.M., Johnson, M.W., and Griffiths, R.R. (2012). Factor analysis of the Mystical Experience Questionnaire: A study of experiences occasioned by the hallucinogen psilocybin. *Journal for the Scientific Study of Religion*, 51(4), 721-737. doi: 10.1111/j.1468-5906.2012.01685.x.
- Metzner, R. (2004). *Teonanacatl: Sacred mushroom of visions*. El Verano, CA: Four Trees Press.
- Monteiro, L. M., Musten, R., & Compson, J. (2015). Traditional and contemporary mindfulness: Finding the middle path in the tangle of concerns. *Mindfulness*, 6(1), 1-13. doi:10.1007/s12671-014-0301-7
- Myers, J. E., & Willard, K. (2003). Integrating spirituality into counselor preparation: A developmental, wellness approach. *Counseling and Values*, 47, 142-155. doi: 10.1002/j.2161-007X.2003.tb00231.x
- Nichols, L., & Hunt, B. (2011). The significance of spirituality for individuals with chronic illness: Implications for mental health counseling. *Journal of Mental Health Counseling*, 33, 51–66. doi: <https://doi.org/10.17744/mehc.33.1.025544189523j738>

- Oman, D. (2014). Defining religion and spirituality. In R. F. Paloutzian, & C. L. Park (Eds.), *Handbook of the psychology of religion and Spirituality* (2nd ed., pp. 23-47). New York, NY: Guilford Publications.
- Ospina, M. B., Bond, K., Karkhaneh, M., Tjosvold, L., Vandermeer, B., Liang, Y., . . . Dryden, D. M. (2007). Meditation practices for health: State of the research. *Agency for Health Care Policy and Research*, 155(155), 1-263.
- Pahnke, W. N. (1969). Psychedelic drugs and mystical experience. *International Journal of Psychiatry in Clinical Practice*, 5(4), 149–162.
- Pargament, K. I. (1992). Of means and ends: Religion and the search for significance. *The International Journal for Psychology of Religion*, 2, 201-229. doi: 10.1207/s15327582ijpr0204_1
- Pew Research Center, Religion and Public Life (2009). Many Americans mix multiple faiths. *The Pew Research Center*. Retrieved from <http://www.pewforum.org/2009/12/09/many-americans-mix-multiple-faiths/>
- Phelan, J. P. (2010). Mindfulness as presence. *Mindfulness*, 2, 131–134. doi: 10.1007/s12671-010-0015-4
- Pickert, K. (2014). The Mindfulness Revolution. *Time*. Retrieved from: <http://time.com/1556/the-mindful-revolution>
- Pratt, J. B. (1920). *The religious consciousness: A psychological study*. New York: MacMillan.

- Puchalski, C. Ferrell, B., Virani, R., Otis-Green, S., Baird, P., Bull, J., ... Sulmasy, D. (2009). Improving the quality of spiritual care as a dimension of palliative care: The report of the consensus conference. *Journal of Palliative Medicine*, 12, 885-904. doi:10.1089/jpm.2009.0142.
- Robertson, L. A., Smith, H. L., Ray, S. L., & Jones, K. D. (2009). Counseling clients with chronic pain: A religiously oriented cognitive behavior framework. *Journal of Counseling and Development*, 87, 373-379. doi: 10.1002/j.1556-6678.2009.tb00120.x
- Rosch, E. (2007). More than mindfulness: When you have a tiger by the tail, let it eat you. *Psychological Inquiry*, 18(4), 258-264. doi:10.1080/10478400701598371
- Salmon, P., Sephton, S., Weissbecker, I., Hoover, K., Ulmer, C., & Studts, Jamie L. (2004). Mindfulness meditation in clinical practice. *Cognitive and Behavioral Practice*, 11(4), 434-46. doi: [https://doi.org/10.1016/S1077-7229\(04\)80060-9](https://doi.org/10.1016/S1077-7229(04)80060-9)
- Sampaio, C. V. S., Lima, M. G., & Ladeia, A. M. (2016). Meditation, health and scientific investigations: Review of the literature. *Journal of Religion and Health*, 56(2), 411-427. doi:10.1007/s10943-016-0211-1
- Sawatzky, R., Ratner, P. A., & Chiu, L. (2005). A meta-analysis of the relationship between spirituality and quality of life. *Social Indicators Research*, 72(2), 153-188. <http://dx.doi.org.antioch.idm.oclc.org/10.1007/s11205-004-5577-x>
- Schwartz, G. (2012). Consciousness, spirituality, and postmaterialist science: An empirical and experiential approach. In L. J. Miller (Ed.) *The Oxford handbook of psychology and spirituality* (pp. 1-26). New York, NY, US: Oxford University Press. doi: 10.1093/oxfordhb/9780199729920.013.0037

- Sedlmeier, P., Eberth, J., Schwarz, M., Zimmermann, D., Haarig, F., Jaeger, S., & Kunze, S. (2012). *The psychological effects of meditation: A meta-analysis*. *Psychological Bulletin*, *138*(Suppl.), 1139-1171.
doi:10.1037/A002816810.1037/A0028168.SUPP
- Segal, S. V., Williams, J. M., & Teasdale, J. D. (2013). *Mindfulness-based cognitive therapy for depression* (2nd ed.). New York, NY: Guilford.
- Shapiro, D. H. (1994). Examining the content and context of meditation: A challenge for psychology in the areas of stress management, psychotherapy, and Religion/Values. *Journal of Humanistic Psychology*, *34*(4), 101-135.
doi:10.1177/00221678940344008
- Shapiro, S. L., Schwartz, G. E., & Bonner, G. (1998). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of Behavioral Medicine*, *21*, 581–599. doi: 10.1023/A:1018700829825
- Shonin, E., Van Gordon, W., & Griffiths, M. D. (2014). The emerging role of Buddhism in clinical psychology: Toward effective integration. *Psychology of Religion and Spirituality*, *6*, 123–137. doi:10.1037/a0035859
- Shonin, E., Van Gordon, W., Dunn, T. J., Singh, N. N., & Griffiths, M. D. (2014). Meditation Awareness Training (MAT) for work-related wellbeing and job performance: A randomized controlled trial. *International Journal Of Mental Health And Addiction*, *12*(6), 806-823. doi:10.1007/s11469-014-9513-2
- Shonin, E., Van Gordon, W., Slade, K., & Griffiths, M. D. (2013). Mindfulness and other Buddhist-derived interventions in correctional settings: A systematic review. *Aggression And Violent Behavior*, *18*(3), 365-372. doi:10.1016/j.avb.2013.01.002

- Shorey, R. C., Brasfield, H., Anderson, S., & Stuart, G. L. (2015). The relation between trait mindfulness and early maladaptive schemas in men seeking substance use treatment. *Mindfulness*, 6(2), 348-355. doi:10.1007/s12671-013-0268-9
- Singh, N. N. (2010). Mindfulness: A finger pointing to the moon. *Mindfulness*, 1, 1–3. doi: 10.1002/pits.21695
- Smith, B. (2005). Yoga. In M. Horowitz (Ed.), *New Dictionary of the History of Ideas* (Vol. 6, pp. 2510–2512). Detroit: Charles Scribner's Sons.
- Stace, W. T. (1960). *Mysticism and philosophy*. New York: The MacMillan Press.
- Stamets, P. (1996). *Psilocybin mushrooms of the world: An identification guide*. Berkeley, CA: Ten Speed Press.
- Stratton, S. P. (2015). Mindfulness and contemplation: Secular and religious traditions in western context. *Counseling and Values*, 60(1), 100-118. doi:10.1002/j.2161-007X.2015.00063.x
- Stein, J. (2003). The science of meditation. *Time*. Retrieved from <http://content.time.com/time/magazine/article/0,9171,1005349,00.html>
- Tart, C. T. (1975). *Transpersonal psychologies*. New York: Harper & Row.
- Taylor, C. (2007). *A secular age*. Cambridge, MA: Harvard University Press.
- Thomas, J. W., & Cohen, M. (2014). A methodological review of meditation research. *Frontiers in Psychiatry*, 5, 74. doi:10.3389/fpsy.2014.00074
- Thoresen, C. E., & Harris, A. H. S. (2002). Spirituality and health: What's the evidence and what's needed? *Annals of Behavioral Medicine*, 24(1), 3-13. doi: 10.1207/S15324796ABM2401_02

- Underwood, L. G., & Teresi, J. A. (2002). The daily spiritual experience scale: Development, theoretical description, reliability, exploratory factor analysis, and preliminary construct validity using health-related data. *Annals of Behavioral Medicine*, 24, 22–33. doi: 10.1207/S15324796ABM2401_04
- Verman, M., & Shapiro, D. H. (1996). Jewish meditation: Context and content, historical background, types, and purpose. In Y. Haruki, Y. Ishii & M. Suzuki (Eds.), *Comparative and psychological study of meditation*. Netherlands: Eburon Publishers.
- Vieten, C., et al. (2017). The Future of Meditation Research: A Call to Expand the Science of Contemplative Practice. Manuscript in preparation.
- Vieten, C., & DeLorme, A. (2014). The Future of Meditation Research: Phase III; A Proposal Submitted to the Fetzer Memorial Trust; Institute of Noetic Sciences
- Vohra-Gupta, S., Russell, A., & Lo, E. (2007). Meditation: The adoption of eastern thought to western social practices. *Journal of Religion & Spirituality in Social Work: Social Thought*, 26(2), 49-61. doi:10.1300/J377v26n02_03
- Van Gordon, W., Shonin, E., Dunn, T. J., Garcia-Campayo, J., & Griffiths, M. D. (2017). Meditation awareness training for the treatment of fibromyalgia syndrome: A randomized controlled trial. *British Journal Of Health Psychology*, 22(1), 186-206. doi: 10.1111/bjhp.12224
- Various (2017). Spirituality now. *Newsweek*, Retrieved from <http://www.newsweek.com/topic/spiritual-living>
- Various Authors (2016). Spirituality now. *Oprah Magazine*, 83-99.

- von Balthasar, H. U. (1965). *The gospel as norm and test of all spirituality in the church. Concilium: Theology in the Age of Renewal [English edition]*, 9, 5-13.
- Wachholtz, A. B., & Austin, E. T. (2013). Contemporary spiritual meditation: Practices and outcomes. In K. I. Pargament, J. J. Exline & J. W. Jones (Eds.), *APA handbook of psychology, religion, and spirituality* (1st ed., pp. 311-327). Washington D.C.: American Psychological Association. doi:10.1037/14045-017
- Wachholtz, A. B., & Pargament, K. I. (2005). Is spirituality a critical ingredient of meditation? Comparing the effects of spiritual meditation, secular meditation, and relaxation on spiritual, psychological, cardiac, and pain outcomes. *Journal of Behavioral Medicine*, 28(4), 369-384. doi:10.1007/s10865-005-9008-5
- Wachholtz, A. B., & Pargament, K. I. (2008). Migraines and meditation: Does spirituality matter? *Journal of Behavioral Medicine*, 31(4), 351-366. doi:10.1007/s10865-008-9159-2
- Wallace, R. (1970). Physiological effects of transcendental meditation. *Science*, 167, 1751–1754. doi: 10.1126/science.167.3926.1751
- Wallace, R. K., Benson, H., & Wilson, A. F. (1971) A wakeful hypometabolic physiologic state. *American Journal of Physiology*, 221(3), 795-799.
- Wallace, B. A., & Shapiro, S. L. (2006). Mental balance and well-being. Building bridges between Buddhism and Western psychology. *American Psychologist*, 61, 690–701. doi: 10.1037/0003-066X.61.7.690
- Walsh, R., & Shapiro, S. L. (2006). The meeting of meditative disciplines and western psychology: A mutually enriching dialogue. *American Psychologist*, 61(3), 227-239. doi:10.1037/0003-066X.61.3.227

- Wasson, R. G. (1980). *The wondrous mushroom: Mycolatry in Mesoamerica*. New York: McGraw- Hill.
- West, M. (1979). Meditation. *The British Journal of Psychiatry*, 135(5), 457-467. doi: 10.1192/bjp.135.5.457
- Woo, E. (2008, February 6). Maharishi Mahesh Yogi; founded Transcendental Meditation movement. *LA Times*. Retrieved from <http://www.latimes.com/news/la-me-maharishi6feb06-story.html>
- Wuthnow, R. (1998). *After heaven: Spirituality in America since the 1950s*. Berkeley, CA: University of California Press.
- Zenner, C., Herrnleben-Kurz, S., & Walach, H. (2014). Mindfulness-based interventions in schools—A systematic review and meta-analysis. *Frontiers In Psychology*, 5. doi: <https://doi.org/10.3389/fpsyg.2014.00603>
- Zinnbauer, B. J., & Pargament, K. I. (2015). Religiousness and spirituality. In R. F. Paloutzian, & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (2nd ed., pp. 21-42). New York, NY: Guilford Publications.

Appendix A

Informed Consent for Meditation Insight Questionnaire

Introduction and Consent

Welcome to the Meditation Insight Questionnaire! Thank you for considering telling us about your meditation experience.

This survey asks about experiences you may have had during or related to meditation practice. The majority of questions are multiple choice and address the frequency, quality or intensity of experiences you have had during meditation. The survey takes about 10 to 20 minutes to complete depending on the number of experiences you have had and the depth of further information you provide.

We will use your responses on this survey as the first step in developing an expanded set of concepts to be measured in meditation research. We want to find out how often people report having these experiences as a part of their meditation practice.

We realize that surveys are limited in their capacity to reflect the breadth and depth of experience, and that some questions may be difficult to answer. Whenever possible, please choose the answer that most closely reflects your experience. Also, we recognize that some questions are similar.

Please be aware that completing this survey may cause you discomfort, either due to the time it takes to complete, or the questions themselves.

This survey is completely voluntary and anonymous. We will not collect any information that can be used to identify you unless you choose to give us that information. We will keep the information you provide strictly confidential.

Given the above information, do you agree to participate in this survey?

- Yes
- No