Meta-Analysis of Mindfulness Research

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**Abstract**

A qualitative meta-analysis of the available qualitative and quantitative research is necessary to determine the best approach for future research on the effects of mindfulness in leadership development. There are multiple frameworks on mindfulness in both the western tradition, which includes the research of Langer and Kabat-Zinn (Hart, Ivtzan, & Hart, 2013), and eastern tradition, which includes Mahayana and Theravada schools of Buddhism (Smith, 1991). The focus of the meta-analysis will be on the Mahayana’s use of Loving-Kindness Meditation (LKM), Theravada’s use of vipassana, Langer’s use of Brief Mindfulness Interventions, and Kabat-Zinn’s use of Mindfulness-Based Stress Reduction (MBSR).

The literature review revealed mixed definitions of mindfulness as both a methodology and a way of being, and mindfulness is often used interchangeably in the literature with meditation. Additionally, the review of current research raises questions about the implications of teaching mindfulness without the ethical constructs of Buddhist teachings on the Four Noble Truths, Four Immeasurables, and the Eight-Fold Path. A qualitive meta-analysis of the existing research literature on the western and eastern mindfulness frameworks as well as the implication of ethical constructs will utilize method of agreement, method of difference, and coding to clarify the variables necessary for effective research on the effects of mindfulness on leadership development. Negative case method will be used to determine if anything is being omitted in the research.

*Keywords: Brief Mindfulness Interventions, Eight-Fold Path, Four Immeasurables, Four Noble Truths, Kabat-Zinn, Langer, Loving-Kindness Meditation, Mahayana, mindfulness, Mindfulness-Based Stress Reduction, Theravada, and vipassana*

Research Prospectus: Meta-Analysis of Mindfulness Research

**Literature Review**

Mindfulness has recently emerged in the last thirty years as a forefront of research in psychology, stress-reduction, chronic disease treatment, and leadership development. Mindfulness originated from Buddhist meditation practices and has been secularized by cognitive psychology, so the definition has developed multiple meanings in the literature (Dhiman, 2009). Much of the research on mindfulness uses inconsistent theoretical background and research, so further and more specific study is needed to truly understand the diverse viewpoints in the literature and determine where future leadership and mindfulness research should focus and how leadership research can improve on the challenges in methods used.

**Mindfulness Effects on Leadership**

Leadership development theory’s focus on mindfulness was to look at the ways leaders can grow through knowledge, skills, and capacities through its regular practice (Frizzell, Hoon, & Banner, 2016). Researchers contended that mindfulness practices are really about the development of seeing the nature of reality and letting go of a particular viewpoint or outcome (Frizzell, Hoon, & Banner 2016). Mindful leaders are awake, aware, and attentive to the needs of their organizations rather than immersed in their own standard thought patterns.

There is evidence that mindfulness increases leaders’ capacity for self-awareness. By letting go of attachments to a viewpoint, mindfulness decreases self-focused attention and increases self-compassion (Bellin, 2015). By being more self-aware, leaders are able to attend to the needs of a situation because they see reality more clearly (Dhiman, 2009). In a study of twenty mid-level to upper-level managers given mindfulness training, the researchers found that mindfulness produced the following self-reported outcomes: more integrated and balanced leadership, greater self-regulation, commitment to the practice, enhanced self-awareness, and improved work relationships (Frizzell, Hoon, & Banner, 2016). Additional benefits of mindfulness were that it helped emotional regulation (Teper, Segal, & Inzlict, 2013), reduced emotional exhaustion (Ward & Haase, 2016), and reduced anxiety and depression (Hofmann, Sawyer, Witt, & Oh, 2010).

**Definition of Theravada and Mahayana Frameworks**

There are two broad schools of Buddhism, and most of contemporary, western meditation practices on mindfulness comes from the Theravada tradition, which is the way of wisdom that is focused on the individual attainment of nirvana (Smith, 1991). The Mahayana school of Buddhism is far more difficult to find in the research literature. The Mahayana’s goal is to become bodhisattvas who are enlightened people compassionately showing others how to end their suffering (Smith, 1991). Mahayana practices such as Loving-Kindness Meditation (LKM) have an altruistic component that has not been studied as widely as vipassana or insight meditation popularized by Kabat-Zinn (Monteiro, Musten, & Compson, 2015).

**Buddhist, Kabat Zinn and Langer Mindfulness Definitions**

To the Buddhist, mindfulness means “awareness of moment-to-moment changes that are taking place in our body and mind” (Dhiman, 2009, p. 65). Vipassan itself means to “cultivate” awareness (Hart et al., 2013). Part of why western researchers became interested in the practice is because it could be researched without having to adopt Buddhist teachings (Dhiman, 2009; Hanley, Abell, Osborn, Roehrig, & Canto, 2016). Many researchers have centered around the definition given by Jon Kabat-Zinn, founder of the Stress Reduction Clinic and the Center for Mindfulness in Medicine, Health Care, and Society, who popularized the term in western culture. Mindfulness, according to Kabat-Zinn (2002), was paying attention to the present moment and non-judgmentally attending it (Dhiman, 2009; Frizzell, Hart et al., 2013; Hoon, & Banner, 2016; Ward & Haase, 2016). Kabat-Zinn’s definition implied that mindfulness involved self-regulation of one’s own awareness, directing attention to both internal and external stimuli, introspection of one’s own thought processes, and adopting a non-judgmental attitude (Hart et al., 2013). One of the challenges of Kabat-Zinn’s research is the ambiguity in the use of terms of mindfulness and meditation as the research uses the terms interchangeably (Hart et al., 2013).

There is a second framework of western research being conducted by Ellen Langer, which defined mindfulness as an “active and effortful mode of conscious awareness characterized by ‘a heightened state of involvement and wakefulness’” (Hart et al., 2013, p. 454). Langer’s definition implies that mindfulness is a process of self-regulation of one’s attention, directing awareness to external stimuli (not internal stimuli), and engaging in a cognitive, creative way (Hart et al., 2013).

There are significant differences in approachs to mindfulness research between Langer and Kabat-Zinn. Langer’s Brief Mindfulness Interventions were short period of interrupting mindlessness while Kabat-Zinn’s research involved longer Mindfulness-Based Stress Reduction (MBSR) sessions secularized Theravada Buddhist practices (Hart et al., 2013). Langer’s research focused on the creative component of mindfulness and the external, while Kabat-Zinn’s approach focused on the internal aspects and cultivating acceptance (Hart et al., 2013).

Mindfulness in practice was typically discussed in the research literature as meditation (Dhiman, 2009; Hanley, Abell, Osborn, Roehrig, & Canto, 2016; Kabat-Zinn, 2002), which points to the interchanging of terminology between mindfulness and meditation. Mindfulness in itself can also mean an activity or a state of being (Hart et al., 2013). There are seven attitudinal qualities that emerge from mindfulness practices: non-judging, patience, beginner’s mind, trust, non-striving, acceptance, and letting go (Dhiman, 2009).

**Theravada and Mahayana Schools of Buddhism**

Each school of Buddhism follows the writing of the Buddha, but they developed into two distinct ways of practice. Both schools follow the writings of Four Noble Truths (Buddha’s teachings about suffering), the Eightfold Path (the way out of suffering), and the Four Immeasurables (cultivation of loving-kindness, compassion, empathic joy, and equanimity) as described by Buddha (Monteiro et al., 2015), but their applications of Buddha’s ideas differ from each other.

Theravada, The Way of the Elders, focuses on the individual’s path to enlightenment believing that it is a full-time path to follow the Buddha (Smith, 1991). Theravada believes that progress is dependent on the will of the individual, humanity is on its own in the universe, the primary attribute of enlightenment is wisdom (bodhi), and there is power in the Buddhist monastic order (sangha) (Smith, 1991, pp. 121-124). For the Theravadians, the ideal image (Arhat) was the lone disciple with an unwavering focus on reaching nirvana (Smith, 1991). Contemporary meditation and mindfulness practices have been secularized from the Theravada school of Buddhism because that was the foundation for Kabat-Zinn’s work (Monteiro et al., 2015).

The Mahayana school of Buddhism, or Big Raft, focuses on enlightenment differently because they believe that the journey to enlightenment comes with the development of compassion. Where Theravada believes in the monastic life, Mahayana believe that the lay person could also be on the Buddha’s path (Smith, 1991). Mahayana considers itself to be “Buddhism for the people” (Smith, 1991, p. 121). Mahayana believes that an individual’s faith is linked to all of life because there is a power or grace that draws people forward to understanding that Buddha exists in everything (Smith, 1991). To the Mahayana, compassion (karuna) is more important that wisdom, and that the ultimate goal is the bodhisattva who is “one who’s essence (sattva) is perfected wisdom (bodhi)” (Smith, 1991, p. 124). The bodhisattva is a person who has reached enlightenment, but returns to help others end their suffering (Monteiro et al., 2015).

**Loving-Kindness Meditation/Metta Meditation**

Loving-Kindness Meditation (LKM), also known as metta, is a cultivation of connection and love for oneself and others (Hutcherson, Seppala, & Gross, 2008). LKM is found in both Mahayana and Theravada traditions of Buddhism, but in Mahayana there is a stronger emphasis on development of this aspect of the Four Immeasurables (Cheng, 2015). LKM has been shown to increase social connectedness by increasing positivity toward intended recipients and strangers (Hutcherson et al., 2008); social connectedness is a “subjective sense of connection and oneness with humanity” (Aspy & Proeve, 2017, p. 102).

In a study by Aspy and Proeve (2017), participants of mindfulness meditation and loving-kindness meditation showed significantly higher natural connectedness than participants given progressive muscle relaxation. In a study completed by Alba (2013), the data showed that avoidance, revenge, depression, and stress all decreased using LKM. Loving-kindness seeks to bring happiness to others and unconditional acceptance, and it creates an inclusive relationship with others (Cheng, 2015). Loving-kindness given to others also increases compassion toward oneself (Cheng, 2015). LKM is part of a deeper altruistic way of being that Mahayana Buddhism embodies.

**Issues in Mindfulness Research**

The research that has been conducted on mindfulness has its challenges as well. The term mindfulness has many different meanings. Even though the majority of research agrees with the definition of Kabat-Zinn (2002), mindfulness can also mean a state of being, a type of practice, or a type of therapeutic intervention (Davidson & Kaszniak, 2015)To further confuse the issues with research, there is a variety of practices that are considered mindfulness such as yoga, centering prayer, Zen Buddhism, tai chi, qigong, and mindfulness meditation (Hanley et al., 2016). Even when studies are done on the more generic mindfulness meditation, there is little saying if it is mindfulness meditation, mindfulness-based intervention, or even stating the exact method of practice used for the study (Davidson & Kasziak, 2015; Hanley et al., 2016). Davidson and Kasziak (2015) pointed out that first-person, second-person, or third-person perspective of the study makes a difference in the outcomes reported.

Finally, there are studies showing that there are cognitively adverse effects to mindfulness meditation because participants become aware of their own inner life away from the typical distractions of their normal life; the self-awareness can cause psychotic breaks in those with mental health issues as well as depression and anxiety in others (Hanley et al., 2016). These studies on the negative effects of mindfulness point out that Buddha did not intend meditation for stress relief but for awareness of the stress that is within (Hanley et al., 2016).

**Buddhist Framework and Ethical Context**

Much of the criticism of western, contemporary, secular use of Buddhist mindfulness practices stems from the lack of an overarching ethical context (Van Gordon, Shonin, Griffiths, & Singh, 2015). The focus of both traditional and contemporary mindfulness practices is creating right mindfulness. In Buddhism, what makes an action right is that it alleviates suffering (Monteiro et al., 2015). Without the ethical context of Buddha’s teaching on the Four Noble Truths, Four Immeasurables, and the Eight-Fold Path, there was a missing context because cultivation of attention and concentration through meditation is necessary but not sufficient in itself to create right mindfulness (Van Gordon et al., 2015). Merging techniques that come from differing frameworks such as Theravada, Mahayana, and even psychology, creates contradictions and confusions (Monteiro et al., 2015). The risk of stripping away the foundational context can unfortunately create wrong mindfulness, which is suffering (Monteiro et al., 2015). Additionally, there is deep concern for the quality of instruction in contemporary mindfulness with instructors receiving little training or deep experience in the emptiness (Monteiro et al., 2015; Van Gordon et al., 2015).

**Significance**

Mindfulness effects on leadership has been studied less frequently than mindfulness in relationship to mental and physical health. In order for accurate studies to be conducted for leadership research, a deeper understanding of the existing research is needed to determine whether a western or eastern approach would be most effective. It is unknow if there is a difference between vipassana (Theravada) or LKM (Mahayana) techniques in the outcome of mindfulness research. A deeper look is needed at the differences and similarities in the research conducted by Langer and Kabat-Zinn in order to determine the most effective approach to take in mindfulness methods in future research. Additionally, this analysis will look at the implications of mindfulness with and without Buddhist ethical teachings.

**Specific Purpose**

The focus of this meta-analysis is to investigate existing mindfulness research to determine if there is a difference in research outcomes between two types of eastern and western mindfulness techniques. The focus of this meta-analysis is also to determine if the inclusion or absence of Buddhist ethical teachings influences the outcomes.

**Propositions**

What are the differences and similarities between Langer and Kabat-Zinn mindfulness techniques and outcomes? What are the differences and similarities of the Mahayana and Theravada traditions of Buddhism specifically addressing LKM and vipassana meditation methods? What are the implications of mindfulness training without Buddhist ethical context of the Four Noble Truths, Four Immeasurables, and Eight-Fold Path? What is not being considered or studied in the existing data? What framework of mindfulness practice is best suited for studies on the effects of mindfulness in leadership development?

**Methodology**

Utilizing grounded theory, a qualitative study is best suited for the purposes of this meta-analysis because it allows for the search for patterns and relationship in existing research literature (Neuman, 2013, p. 477). Grounded theory is an inductive approach to build a larger theory framework by making comparisons (Neuman, 2013, p. 177). Quantitative was not chosen because of the large scope of unknown variables in the different approaches to mindfulness. A quantitative study could be used after the findings of this meta-analysis narrows the scope of research.

**Method Description**

Since the existing literature fails to address larger concepts surrounding the different frameworks of eastern and western mindfulness - namely Mahayana, Theravada, Langer, and Kabat-Zinn – an inductive approach is necessary to bricolage a larger construct for leadership research in mindfulness. Additionally, the existing literature on the implications of removing Buddhist ethical teachings (Four Noble Truths, Four Immeasurables and the Eight-Fold Path), does not fully determine if there is a negative implication to their absence, so the meta-analysis must include research outside the constructs of existing mindfulness research into the areas of religious secularization, ethics, and Buddhist teachings; therefore, a qualitative approach is necessary to accommodate a broader range of research perspectives. Finally, qualitative research utilizes the negative case method to determine what is missing from the current research approaches (Neuman, 2013, p. 499), and no studies were found that implicated what was missing from current mindfulness research.

Several mindfulness inventories have been created in the research, which all focus on self-reporting measures, which are: Mindful Attention Awareness Scale, Freiburg Mindfulness Inventory, Kentucky Inventory of Mindfulness Skills, Cognitive and Affective Mindfulness Scale, Philadelphia Mindfulness Scale, Southampton Mindfulness Questionnaire, Toronto Mindfulness Scale – Trait Version, Five-Facet Mindfulness Questionnaire, Langer’s Mindfulness Scales, and Langer Mindfulness Scale (Hart et al., 2013). The two most often used in the research by Langer and Kabat-Zinn were the Five-Facet Mindfulness Questionnaire and the Langers Mindfulness Scale (Hart et al., 2013). One of the major challenges of self-reporting surveys is the non-response rate of participants (Neuman, 2013, p. 341). Additionally, web surveys have three distinct disadvantages to self-reporting, which are the inability of everyone to have web access, privacy of the respondents, verification that the respondents’ identities, and complexity of software issues (Neuman, 2013, p. 348). The meta-analysis is needed to look at whether self-reporting inventories are an effective approach for leadership research on mindfulness in the construct of a larger framework of mindfulness research methods.

**Research Method**

**Literature Selection**

 Studies from Langer, Kabat-Zinn, Mahayana (LKM) and Theravada (vipassana) will be used to conduct the research. There is no limitation on the number of studies to be used in the meta-analysis as with qualitative research there is fluidity in the selection process (Neuman, 2013, p. 480), and studies on the ethical considerations will be taken from multiple disciplines of mindfulness, ethics, and religion research. Coding, method of agreement, and method of difference will be used to analyze the research specific to the different frameworks and ethical considerations. Negative case method will be used to determine if anything is missing from the existing literature.

**Method of Agreement and Method of Difference**

 Method of agreement focuses on what is common across cases, while method of difference looks for similarities and differences in the outcomes and causal features (Neuman, 2013, pp. 483 - 484). With the focus of research on what is common and different in the Langer, Kabat-Zinn, Mahayana, and Theravada applications of mindfulness research, coding will be necessary to organize the data.

**Coding**

 Coding of qualitative data on the literature will be open coding, axial coding, and selective coding. Open coding locates themes within the literature on initial pass through the data (Neuman, 2013, p. 481). Open coding allows for additional conceptual themes to be determined as part of the qualitative analysis of existing data in the literature (Neuman, 2013, p. 481), so open coding themes are likely to evolve. Axial coding will review and examine the initial coding of the data looking more deeply at the causes, consequences, and processes revealed in the open coding (Neuman, 2013, p. 483). Selective coding will analyze the themes and select cases that best exemplify the findings (Neuman, 2013, p. 484).

**Negative Case Method**

Negative case method will be used to determine if anything is missing from the existing data on mindfulness research. Negative case method is a way to “systematically examine the absence of what is expected” including silences, absences, and omission (Neuman, 2013, p.499). There are seven types of negative evidence: events that do not occur but are expected to occur; events where people or researchers do not notice them in the setting; events where people may want to hide; overlooked common place events that are routine; effects of researcher’s preconceived notions; unconscious nonreporting; and conscious nonreporting (Neuman, 2013, p. 500). Negative case method will look closely at the available research to determine if anything is not being considered in the data.

**Limitations**

 Shortcomings of this study is that there are a limited number of book resources reviewed in the literature due to time constraints of the researcher, so the focus of the literature is peer-review journals. Additionally, the wide scope of the different western mindfulness techniques will not be addressed as part of this study due to time and resource constraints, which excludes Mindfulness-Based Cognitive Therapy (MBCT), Acceptance and Commitment Therapy (ACT), Dialetical Behavior Therapy (DBT), Mode Deactivation Therapy (MDT), Monita Therapy, Adaptive Practice, and Mindfulness Relaxation among others. The focus will be on Kabat-Zinn’s Mindfulness-Based Stress Reduction (MBSR) and Langer’s Brief Mindfulness Interventions from the western frameworks. Quantitative studies on mindfulness are more difficult to find than quantitative studies as are studies specifically in Theravada and Mahayana frameworks, which is why Loving-Kindness Meditation and vipassana were chosen as representative of the eastern frameworks. This study does not address the issues in mindfulness inventories, but some discussion will be made at the effectiveness of self-reporting inventories.

**Ethical Considerations**

 There are no ethical considerations in this meta-analysis as there will be no human participants in this study (Neuman, 2013). All data is pre-existing mindfulness research literature.

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