

Mindfulness and meditation: The effect of a wellness intervention with child focused human
service workers

Thesis

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Abstract

With stress levels high in the fields of social work and human services, particularly among those that work with children and their families, symptoms and problems that evolve from stress can impact the wellbeing of the worker, the agency, and their clients. Finding methods of self-care to help combat stress can help with the negative consequences. Evidence shows the practice of meditation can positively impact workplace stress. This study tested whether a single, 45-minute instruction in meditation lead to an increase in mindfulness, which then mediated perceived stress. Random assignment placed the 47 participants, recruited from two agencies, in either the control group, an intervention group that only received the meditation training, or an intervention group that received both the intervention and weekly meditation tip by text or email to serve as a reminder. Participants were advised to practice daily for 5 to 10 minutes. The data was collected longitudinally over eight weeks, through three self-reported, online surveys that employed a measure of mindfulness and a measure of stress among social workers who practice with children and families. At follow-up, the control group scored significantly lower than the intervention group on the mindfulness measure $F(2, 41) = 4.87, p = 0.013$ and significantly higher on the stress measure $F(2, 41) = 5.69, p = .007$. Although both groups had significantly higher mindfulness and lower stress, there was no statistical significance found between the two intervention groups on these measures. An ordinary least squares regression supported the mediation hypothesis. Paths from meditation to mindfulness and mindfulness to stress were significant. When testing the full mediation model, the direct path from meditation to stress became non-significant and the indirect path of meditation through the mediator, mindfulness, to stress became significant. A Sobel test of mediator significance showed a significant indirect effect. Because two agencies provided participants, a test of a cluster effect was assessed and found not to be a factor.

Dedication

I dedicate this work to Adam Sornchai, who has provided constant affirmation, support, and motivation to succeed. Encouraging me in every way to pursue aspirations, he embodies what it means to be a spouse, life partner, and best friend. Most of all, I thank him for believing and trusting in my acumen, as we have invested together in my social work career.

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Fields of Study

Major Field: Social Work

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Chapter 1: Statement of Research Topic

Introduction

With high rates of stress in social work and human service careers, there is an increased chance that such stress could lead to grave problems among workers, which can also negatively affect the employing agencies and their clients (Department for Professional Employees, 2010; Kinnunen-Amoroso & Liira, 2013; Motowidlo, Packard, & Manning, 1986). Human service workers and social workers, particularly those who focus on children, their welfare, and their families, have been found to experience very high levels of stress related to their jobs (Graham & Shier, 2014; Levy & Poertner, 2014). Results from stress and subsequent stress outcomes could affect the worker's relationship with their clients, who are the focus of their social work career, as well as lead to possible dysfunctional behaviors (De Silva, Hewage, & Fonseka, 2009; University of Georgia, 2007; NASW, 2008).

To prevent and/or combat work-related stress and relieve its radiating effects, finding a way to care for oneself is important. Mindfulness meditation is one form of self-care practice and evidence supports its capacity to yield positive impacts on relief from workplace stress, even following a single brief training (Creswell, Pacilio, Lindsay, & Brown, 2014). Mindfulness meditation has been shown to enhance positive psychological functioning and "is associated with an array of cognitive and emotional benefits that often achieve medium to large effect sizes" (Hamilton, Kitzman & Guyotte, 2006; Fox, Nijeboer, Dixon, Floman, Ellamil, Rumak, ... Christoff, 2014, p. 50).

Statement of the Problem

Health and wellness can be impacted by the environment. The World Health Organization (WHO) (2015) states that "health is not merely the absence of disease or infirmity

but a positive state of complete physical, mental and social well-being” and that “[a] healthy work environment is one in which staff have made health and health promotion a priority and part of their working lives” (WHO, 2015). In the human service and social work fields, the health and well-being of clients are considered far more often than that of the practitioners themselves (Beddoe, Davys, & Adamson, 2013).

Human service and social work professionals experience some of the highest rates of stress and burnout (De Silva et al., 2009). “Such empirical research as is available suggests that social workers may experience higher levels of stress and resulting burnout than comparable occupational groups” (Lloyd et al., 2002, p. 256). In human service work and social work, client-based interactions with complex social situations and conflicts bring on distress that leads to higher perceived levels of stress and increased rates of burnout (Lloyd et al., 2002). It has been suggested that “the need to be helpful is a primary motive in [social workers] choice of profession and this need can easily lead to over involvement with patients thereby contributing to stress” (Lloyd et al., 2002, p. 256). Such occupational stress can cause issues with workers’ health and overall wellbeing, agency they work for, and clients that are under their care (Dillenburg, 2004; Kinnunen-Amoroso & Liira, 2013; Motowidlo, Packard, & Manning, 1986).

A core value of the social work profession is to have empathy for and build rapport with clients (National Association of Social Workers, 2008). In the NASW Code of Ethics, the importance of human relationships is a key value because of the “understanding that relationships between and among people are an important vehicle for change” and social workers act as a change agent (NASW, 2008). Careers that involve investment into the wellbeing of others, can come with an emotional cost to the professional (Foureur, Besley, Burton, Yu, &

Crisp, 2013). “The ‘costs of caring’ concept has received much attention in the literature that describes it variously as ‘compassion fatigue’, ‘post-traumatic stress disorder’, ‘secondary traumatic stress’ and ‘vicarious traumatization’” (Foureur et al., 2013, p. 115).

To help with the compounding issues related to stress, avenues of stress reduction and self-care should be taken. The International Self-Care Foundation (2016) uses the World Health Organization’s definition, that “[s]elf care is what people do for themselves to establish and maintain health, and to prevent and deal with illness. It is a broad concept encompassing hygiene (general and personal), nutrition (type and quality of food eaten), lifestyle (sporting activities, leisure, etc.), environmental factors (living conditions, social habits, etc.), socio-economic factors (income level, cultural beliefs, etc.), and self-medication” (International Self-Care Foundation, 2016). On an agency level, “[s]tress management interventions focusing on effective coping... which are targeted appropriately may improve retention [of workers]” (Bridger, Day, & Morton, 2013, p. 1629). In addition to striving for healthy work environments, resilience of workers can be improved, by method of self-care, to help with issues of stress due to the nature of the work. Socializing workers for self-care can create a culture within the workplace that is much more resilient to the impact of stress (Foureur et al., 2013).

Purpose of the Study

The purpose of the study is to explore whether learning and practicing mindfulness meditation would lead to a reduction in workplace stress and further, whether changes in mindfulness mediated perceived workplace stress. The study tests whether a single, 45-minute instruction increases mindfulness and decreases stress over an eight-week period. The study also tests whether a weekly mindfulness text message or email tip, serving as a reminder, impacts

stress and/or mindfulness scores. Additionally, the study aims to test the mechanism of mediation, by exploring the indirect effect of meditation on stress through mindfulness.

The experimental study is a longitudinal design, across eight weeks, employed self-reported measures of stress and mindfulness. Previous studies have assessed meditation in different workplace settings and using different and often longer meditation instructions, but no research was identified that explored the effect of a brief instruction with child focused social workers and human service workers and their perceived workplace stress. For example, in studies using mindfulness-based stress reduction (MBSR), participants are asked to attend a weekly two-and-a-half-hour course, and practice for about 45 minutes a day for eight weeks, with one eight-hour day (Praisman, 2008). Our study seeks to fill a gap in the present literature and contribute to knowledge in the field relating to healthier self-care routines.

Research Questions

Does learning mindfulness meditation reduce stress?

Does learning mindfulness meditation increase mindfulness?

Does a change in mindfulness mediate perceived stress?

Does a weekly text message or email sent to participants have an impact on outcomes?

This study explores whether persons randomly assigned to participate in a meditation instruction have reduced stress compared to persons in a no-instruction comparison group. The study also explores if an increase in mindfulness serves as a mediator in modeling changes in stress.

Chapter 2: Literature Review

Stress

Stress is described as the “emotional and psychological reactions to stressors” (Lloyd et al., 2002, p. 256). Stressors have been defined as “a demand, situation or circumstance that disrupts a person’s equilibrium and initiates the stress response of increased autonomic arousal” (Lloyd et al., 2002, p. 256). Stress can be caused by “both the quantitative and qualitative demands of a task...” (Kelly & Barrett, 2011, p. 31). Demands that are quantitative refer to the amount of effort exerted and demands considered qualitative in nature refer to actions brought on by the environment that cause physical or psychological discomfort due to its resulting cost or benefit (Kelly & Barrett, 2011).

Remaining in a state of stress for a prolonged period of time “is associated with chronic anxiety, psychosomatic illness and a variety of other emotional problems,” with burnout resulting, impacting the human service worker’s job performance (Lloyd et al., 2002, p. 256). “Burnout is a syndrome with dimensions of emotional exhaustion, depersonalization [sic], and reduced feelings of personal accomplishment” (Lloyd et al., 2002, p. 256). Dealing with the aforementioned issues, in addition to some of the conflicting elements of social work practice, such as putting the client first while trying to fill productivity quotas, will continue to present as issues.

Occupational Stress

Occupational stress on workers can have a profound and negative impact on their overall wellness. Stress can lead to motor behavior pattern issues, including accidents (Dillenburger, 2004). It can create negative emotional behavior patterns, like tiredness, boredom, apathy, and

low self-esteem. Manifestations of stress in physical health can be poor sleep, indigestion, dizziness, and trembling (Dillenburger, 2004). Wahrendorf, Sembajwe, Zins, Berkman, Goldberg, and Siegrist (2012) found that mental and physical health functioning were impacted by work related stress into middle age, after they left their job, and into retirement. This study showed that psychosocial and environmental stress could lead to unhealthy aging (Wahrendorf et al., 2012). In the short term, such stress can cause elevated blood pressure, muscle tension, and headache, as well as behavior changes, which could include increased consumption of alcohol and tobacco products (Yong, Nasterlack, Pluto, Lang, & Oberlinner, 2013). In the long term, a relationship between work stress and arterial hypertension and metabolic disorders, such as diabetes type 2, has also been demonstrated (Yong et al., 2013; Djindjic, Jovanovic, Djindjic, Jovanovic, & Jovanovic, 2012). Stress can also lead to tumor growth and faster spread of cancers (Robb, Benson, Middleton, Meyers, & Hebert, 2015).

One source of occupational stress is a “mismatch or imbalance between a person’s skill and abilities and the demands encountered by the job” (Dillenburger, 2004). The individual’s perception of their own capabilities and their ability to meet environmental demands is their experienced reality (Dillenburger, 2004). The resources that individuals hold may not be matched with the environment. Stress can arise from the individual’s natural longing for emotional balance and their judgment of potential stressors (Dillenburger, 2004).

Three main contexts in a child focused agency contribute to the advent of stress. First, the nature of the work and social context, including, clients and their problems, social attitudes toward their work, conflict, ambiguity, reorganization, economic factors, and legislative factors contribute to workplace stress (Dillenburger, 2004). Management, organizational, interpersonal, and leadership issues and factors are the second area (Dillenburger, 2004). Thirdly, individual

factors influence worker stress, including personal standards, involvement and commitment to the job, and distress of the possibility of attack (Dillenburg, 2004). The interaction of these factors can impact individuals on varying degrees.

Wages and student loan debt may also contribute to perceived occupational stress felt by some workers (Department of Professional Employees, 2010). According to the Bureau of Labor Statistics (2015) “[t]he median annual wage for social workers was \$45,000 in May 2014” and those working with children and families was lower, at \$42,120 (Bureau of Labor Statistics, 2015). Social workers, who hold both a bachelor’s and master’s degree, had on average between \$45,000 and \$60,000 in student load debt in the year 2014, and costs continue to rise for those going into or are currently in social work schooling (Soine, 2014). “The NASW and the CSWE have recognized and responded to the problem of social work education costs relative to the comparably low salaries of social workers” (Sione, 2014).

Workers often experience stress as a result of pressure to be cost effective, meet productivity standards, or other value conflicts between administrators and social workers (Lloyd, King, & Lesley, 2002). Social workers do not have much autonomy on topics of “whom they see, the nature and length of contacts with clients, the range of expert functions they will be requested to carry out, and the value placed by others on their work” (Lloyd, King, & Lesley, 2002, p. 257). Misunderstanding of the social worker’s role may cause frustration and feeling unvalued by colleagues from other professional backgrounds and may compound perceived stress (Lloyd, King, & Lesley, 2002). Workers may also find that their work intrudes on their private time, creating stress in their daily life due to not having boundaries set for themselves (Michel, A., Bosch, C., & Rexroth, M., 2014).

Worker stress can bring problems for clients and impact the professional relationship. Interpersonal sensitivity may decrease as a result of stress, leading to aggression and more selfish behaviors by the worker (Motowidlo, Packard, & Manning, 1986). “[A] stressful situation may result in emotional reactions... such as anger [and] frustration” (Yong et al., 2013, p. 348). Such expressions of emotion can lead the worker to make decisions contrary to the well-being of their clients. If clients sense a stressful environment, they may experience stress themselves (Dunlop, 2015). A stressful experience may make a client “feel as if their needs are not important to the staff or that they are a burden to the staff” (Dunlop, 2015, p. 535).

The issues that come from occupational stress experienced by workers can result in negative consequences, not only for employees, but also for the organization or agency as a whole (Kinnunen-Amoroso & Liira, 2013). Psychological strain and less effective stress coping skills felt by workers have been shown to increase rates of turnover and decrease work morale (Bridger et al., 2013; Dillenburger, 2004). Enthusiasm for the job may wain, resulting in growing numbers of call-offs, with increased levels of stress (Dunlop, 2015). Additionally, worker’s capability dramatically decreases when perception of occupational stress is high (Yong et al., 2013). This impacts clients in many ways. If a client senses a stressful environment, they may not recommend the agency for others to go to for help, leading to a negative agency reputation (Dunlop, 2015).

History and Origins of Meditation

“The word meditate comes from the Latin *meditari*, “to think or reflect upon”” (Bonadonna, 2003, p. 310). Meditation has origins in Eastern cultures, philosophies, and the Buddhist and Hindu religions (Bonadonna, 2003). Meditation has had a role in most of the other

predominant world religions, as well, including Taoism, Islam, Baha’I Faith, Jainism, Judaism, Sikhism, and Christianity, though it does not require religious affiliation to be practiced (Chow, 2016b). It was found in documents dated as old as 1500 BCE, created by a Hindu sect in India (Chow, 2016a). Other forms of meditation were created around the years 600-500 BCE and between the years 400-100 BCE philosophies on yoga were being transcribed (Chow, 2016a).

Buddhism started with Prince Siddhartha Gautama, “also known as the Buddha “the awakened one... [who] was the leader and founder of a sect of wanderer ascetics” in India (Violatti, 2013). Siddhartha wanted to alleviate suffering and believed that knowledge and meditation led to salvation (Violatti, 2003). “Buddhist meditators have been called the first scientists, alluding to more than 2500 years of precise, detailed observation of inner experience” (Bonadonna, 2003, p. 309).

Meditation routines have historically been practiced for two reasons. One is “to achieve a better understanding of life, enlarge their consciousness, and gain wisdom” (Sedlmeier, Eberth, Schwarz, Zimmerman, Haorig, Jaeger, & Kunze, 2012, p. 1139). The other is for self-regulation to rise above psychological or emotional difficulties, which is the focus of this study (Sedlmeier et al., 2012). “[A]pproaches to meditation differ in the mental faculties they use (e.g. attention, feeling, reasoning, visualization, memory, bodily awareness), in how these faculties are used (e.g. actively, passively, effortlessly, forcefully), and the objects to which these faculties are directed (e.g. thoughts, images, concepts, internal energy, aspect of the body, love, God)” (Sedlmeier et al., 2012, p. 1142).

Meditation has become more popular worldwide in the past 40 years, particularly as an extension and compliment to modern orthodox medicine practices (Bonadonna, 2003).

“Mindfulness meditation is taught as the basis for more than 100 stress reduction programs sponsored by major medical centers around the United States” (Bonadonna, 2003, p. 309). Mindfulness-Based Stress Reduction (MBSR), created by Jon Kabat-Zinn in 1979, and meditation has increased in notoriety and popularity since (Chow, 2016a; Robb et al., 2015)).

Shamatha-Vipashyana Practice

Shamatha-Vipashyana was the mindfulness practice introduced to participants in this study. Shamatha meditation is “designed to help calm the mind and bring forth its natural qualities of spaciousness, clarity, and attentiveness” (Nalandabodhi, 2016). With vipashyana meditation, clear insight is focused on. “[R]elying on the foundation of a calm and settled mind, you begin to investigate or analyze the true nature of your mind and how it creates its world” (Nalandabodhi, 2016).

Mindfulness and Meditation as Self-Care

Through a regular self-care practice of meditation, mindfulness can be cultivated and can help practitioner’s overall health (Mars & Oliver, 2016). Self-care is defined through various avenues, including, procedures taken to obtain greater well-being, activities that bring about self-care, and forms of support (Richards, Campenni, & Muse-Burke, 2010). Research suggests a relationship exists between self-care and a direct effect on self-awareness and well-being, and “mindfulness has been found to positively affect well-being” (Richards et al., 2010, p. 247).

Practice of meditation may help workers to separate their work-life from their private, home lives (Michel, Bosch, & Rexroth, 2014). “Mindfulness, both within the field of psychology and medicine, has grown substantially over the past two decades as a skill to enhance adaptive coping to stressful events” (Pidgeon, Ford, & Klaassen, 2014, p. 356). Mindfulness

allows its users to intentionally focus on the present moment, not judging the past or future (Pidgeon et al., 2014). There is no good or bad way to meditate, so practitioners are encouraged to approach meditation exercises with gentleness toward themselves (Mars & Oliver, 2016; J. Glowski, personal communication, December 10, 2015)

Mindfulness has been found to increase self-compassion. “Self-compassion involves responding to personal shortcomings, failures and inadequacies with kindness, caring and a non-judgmental attitude” (Pidgeon et al., 2014, p. 356). Mindfulness has enabled its practitioners to change how they evaluate themselves. Instead of harshly judging themselves and critically evaluating themselves when negative events occur, individuals are better able to be more caring and non-judgmental in their self-evaluations (Pidgeon et al., 2014).

By practicing mindfulness meditation, the harmful effects of stress can be prevented and counteracted (Robb et al., 2015). Due to stress being a harmful factor to the cardiovascular system, practicing meditation, which in turn reduces stress, can lower blood pressure and help the cardiovascular system be healthier as a whole (Harvard Medical School, 2014). It can also be a means of potential disease and cancer prevention (Robb et al., 2015). As previously presented in the problem statement, the issues caused by stress can potentially be improved by self-care through meditation practices.

Meditation and Mindfulness in the Workplace

A daily mindfulness meditation practice has been recommended to individuals in the workplace as “a sustainable habit that will enable them to approach their work more clearly” (European Association for Palliative Care, 2015). Teaching a brief mindfulness training to human service workers has been found to increase resilience, mindfulness and self-compassion

(Pidgeon et al., 2014). Stress depletes resilience, but when resilience is at healthy levels in individuals, they are better able “to cope and adapt in the face of adversity and to bounce back when stressors become overwhelming,” because it is “a significant protective factor against instances of compassion fatigue, burnout and mental and physical illness” (Pidgeon et al., 2014, p. 355).

Emotional intelligence has been found to increase with mindfulness meditation practice, which can aid in the therapeutic relationship (Charoensukmongkol, 2014). Emotional intelligence, as defined by Salovey and Mayer (1990), is “a set of skills hypothesized to contribute to the accurate appraisal and expression of emotion in oneself and in others, the effective regulation of emotion in self and others, and the use of feelings to motivate, plan and achieve in one’s life” (Salovey & Mayer, 1990, p. 185). Appraising emotion is important in assessing oneself and the client in a human service position. By assessing emotion and not judging it, one is able to be less affected and less occupied with emotional stressors (Charoensukmongkol, 2014).

Meditation has been used for many years and is now getting more notoriety in Western culture. It has been introduced at various corporations because of its link to “emotional intelligence, productivity and innovation” (Mars & Oliver, 2016, p. 8). Among the companies who introduced mindfulness meditation practices for their employees are Hewlett-Packard Co., Apple and their co-founder Steve Jobs, Google, and management firm McKinsey & Co. They use the practice as an HR strategy, health and happiness of employees, saving money, attrition of customers, increase listening among workers, and increase clarity and focus, among others (Mars & Oliver, 2016). Mindfulness meditation has been studied “as an avenue to increase

productivity and alleviate modern workers' growing stress" (Morganson, Rotch, & Christie, 2015, p. 683).

Literature Review Summary Statement

Though meditation has been practiced for thousands of years, recent study on its many benefits has aided in its more recent popularity (Bonadonna, 2003). Meditation can be the means to obtain mindfulness, as well as a method of self-care for stress reduction (Mars & Oliver, 2016; Robb et al., 2015). Self-care practices are important due to the harmful effects stress has on workers, agencies, and clients (Kinnunen-Amoroso & Liira, 2013; Dillenburger, 2004). Mindfulness meditation, as a method of stress reduction, can improve health outcomes, professional relationships, and agency productivity (Pidgeon et al., 2014; Robb et al., 2015). It is also being used more often in workplaces to help workers be more effective in their jobs and overall healthier individuals (Mars & Oliver, 2016).

Chapter 3: Methodology

Participants

After obtaining approval from the Behavioral Sciences Institutional Review Board, participants were recruited from two agencies in Central Ohio that employ social workers who provide services to children and their families. Letters of support for participation were obtained from the agencies, Nationwide Children's Hospital and Directions for Youth and Families, to recruit study participants from their organizations. The author presented the study to those at Nationwide Children's Hospital in a staff meeting and for Directions for Youth and Families, met with the CEO and he presented the study to his staff. Participants who wished to enroll emailed the author to inform of their interest and were then sent consent forms. Perspective participants were told that if they were assigned to the control group, they would still be offered the opportunity to learn mindfulness meditation at the conclusion of the study. Participants were given a 10 dollar Starbuck's gift card when they signed the consent form and another when they completed the final survey.

Intervention

The 47 participants who agreed to participate in the study were randomly assigned to one of three groups: a control group, an intervention group that received a 45-minute mindfulness meditation instruction, or an intervention group that received a 45-minute mindfulness meditation instruction and a weekly mindfulness tip. The weekly tip was provided to serve as a reminder of key elements of effective meditation practice and was sent either through email or text message, at the preference of the participant.

Participants were randomized using an online randomizing tool through Random.org. Participants were initially assigned a number according to the order in which they enrolled in the

study. After entering the numbers, they were randomized, then evenly divided into three groups as listed in the new generated order.

Participants assigned to mindfulness training attended a 45-minute class taught by Dr. Janice Glowski, an instructor with more than 20 years of experience in meditation and mindfulness and teaching its practice. The practice itself is called “Shamatha-Vipashyana (calm-abiding) practice, colloquially referred to as “mindfulness” practice, combined with a specific view and approach that informs the practitioner’s understanding of the practice’s purpose” (J. Glowski, personal communication, December 10, 2015). Participants from both intervention groups were given a handout with an overview of the instruction session information (Appendix A) and were asked to practice the exercise they learned daily for 5 to 10 minutes each day.

Research Design

This is a longitudinal and experimental design study using three self-reported surveys. The study was eight consecutive weeks, beginning the day the intervention was administered to the intervention groups. Random assignment placed participants into one of three groups, including a control group and two intervention groups. Progress throughout the study was followed by additional surveys after four weeks and after eight weeks. Data collected from each survey was used to analyze and compare within and between group differences.

Data Collection Procedures

The consent form and three surveys used for this study were hosted by Qualtrics, a secure site. These items were emailed to participants and were accessed by personalized links on the device of their choice. Participants completed a consent form, indicating their intentions to be involved with the study. The Freiburg Mindfulness Inventory (FMI) (Appendix B), and a Child

Welfare Worker Stress Inventory (CWWSI) (Appendix C) collected data on mindfulness and workplace stress through each survey (Walach, Buccheld, Buttenmuller, Kleinknecht, & Schmidt, 2006; Levy & Poertner, 2014). The first survey, collecting baseline data, consisted of demographics and the two measures. The second survey, at four weeks, and the last survey, at eight weeks, collected data using the same two measures for stress and mindfulness. Participants had the ability to skip any question while taking the surveys and could stop taking the survey at any time.

Measures

This study sought to learn whether meditation changed perceived stress levels over time and in order to more thoroughly understand the data, we wanted to learn the mechanism through which this might occur, specifically whether an increase in mindfulness served as a mediator of stress. For this reason, two different self-report measures were used in this study: one to gather data on mindfulness and another to gather data on work-related perceived stress. Mindfulness levels were measured using The Freiburg Mindfulness Inventory (FMI) (Walach et al., 2006). Perceived workplace stress scores were measured using the Child Welfare Worker Stress Inventory (CWWSI) (Levy & Poertner, 2015).

Mindfulness

The FMI, a 14 item scale, assessed mindfulness of participants. This is the short form of the scale and has been found valid and reliable (Walach et al., 2006). This short form had an internal consistency of Cronbach alpha = .86 and “[c]orrelation with other relevant constructs (self-awareness, dissociation, global severity index, meditation experience in years) was significant in the medium to low range of correlations and lends construct validity to the scale”

(Walach et al., 2006, p. 1543-1544). The scale was designed for secular measurements of mindfulness and is therefore void of specific religious contexts. It covers all aspects of mindfulness, including “a cognitive component, a process component, one that relates to the acceptance of experience and one that involves a non-judgmental stance,” with each aspect being very much interrelated (Walach et al., 2006, p. 1551).

Participants were asked to reflect on the last 30 days prior to taking this inventory. Response occurred on a four point scale, with 1 = rarely, 2 = occasionally, 3 = fairly often, and 4 = almost always (Walach et al., 2006). Coding for most responses is added up to their summary, but a few items were reverse scored. For instance, “I am impatient with myself and with others” would have a reversed score (Walach et al., 2006, p. 1553).

Stress

The CWWSI is a 35 item scale used in this study to measure worker stress. The instrument demonstrated high reliability, with a Cronbach’s alpha score of 0.93, and validity, “shown by a correlation of 0.70 between a stress/burnout measure and the stress inventory” (Levy & Poertner, 2014, p. 7). The CWWSI takes factors of complexities and numerous sources of workplace stress into account through its measures (Levy & Poertner, 2014). The factors being analyzed include work demands, emotional demands, support, interpersonal conflict, working with stakeholders, safety, working with families, and effort. For each of the 35 items, participants responded on a one to four scale, “with 1 = “never stressful”; 2 = “sometimes stressful”; 3 = “frequently stressful”; 4 = “almost always stressful”” (Levey & Poertner, 2014, p. 10). “The Child Welfare Worker Stress Inventory found that the dimensions of work and emotional demands were most important in explaining worker stress” (Levy & Poertner, 2014, p.

13). With the dynamic nature of the workplace environment and stress, perceived workplace stress will likely change over time; therefore, the inventory provides a snapshot of the stressors influencing the worker at the time they complete the inventory (Levy & Poertner, 2014).

Data Analysis

The data was exported from Qualtrics to SPSS. The data was cleaned and coded and scales constructed consistent with the authors scoring instructions. Descriptive statistics describe continuous variables, and frequency analysis was employed to describe categorical variables. A one-way analysis of variance tested difference in follow-up mean scores for both mindfulness and workplace stress for the three groups (control, meditation, meditation with weekly message). Ordinary least squares regression was employed to test the direct and indirect effect of meditation training upon mindfulness and workplace stress. The analysis following the guidelines for assessing mediation described by Baron and Kenny (1986). A Sobel test (Sobel, 1986) was employed to determine whether the indirect effect was significant.

Chapter 4: Results

Demographics of the Sample

Participants consisted of 47 adults, who were recruited by the researcher through presenting the study at staff meetings and then consented to participating in the study. The study was presented at two agencies, in staff meetings, and participants used email to notify of their interest for involvement in the study. A 10 dollar Starbucks gift card was sent to participants who signed the consent form and another was sent after they completed the last survey. Participants were randomly assigned to the three groups using an online randomizing tool. There were 47 participants that completed the baseline survey and 46 participants completed the eight-week follow-up survey. Participants were sent communication and surveys through email. The recruitment script is in the appendix (Appendix D).

Informed consent was obtained through a secure Qualtrics online form, emailed prior to the start of the study, which participants signed. The sample consisted of 47 participants, with an age range of 22 to 63 years old and an average age of 33 years old. A majority, 91%, of the participants were women. Most, 81%, had a master's degree, and the remaining 18% had an undergraduate degree. Participants had a range of 1.2 to 38 years of professional experience, with an average of 10.5. In their current jobs, the range was 0.3 to 16 years, with the average being 3.1 (s.d. = 3.8).

The majority of respondents, 68%, reported some previous experience with a mindfulness practice. The most common practices were yoga, 29.8%, and meditation, 25.5%. However, recent experience with mindfulness practices were limited. Of those with a history of a mindfulness practice, the mean number of days practiced in the 30 days preceding the baseline were 4.3 days (s.d. = 7.8). There were no significant differences between the treatment and

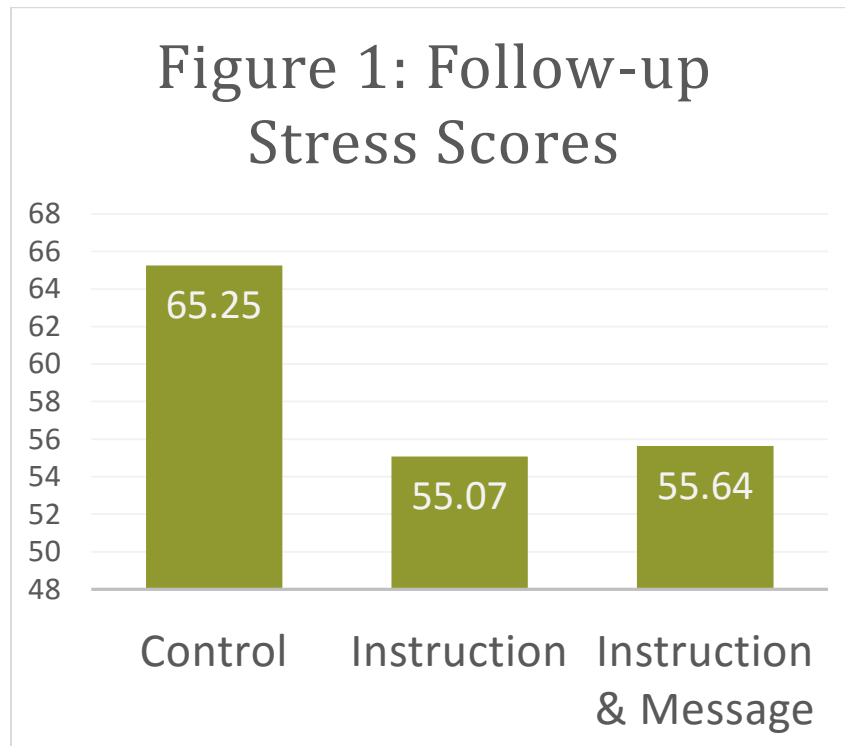
control groups on any of the variables described here, lending support to the success of the randomization procedure.

TABLE 1. Sample Characteristics

Variable	N	Range	Mean \pm SD
<i>Age</i>	47	22-63	33.4 \pm 9.8
<i>Professional experience (years)</i>	47	1.2-38	10.5 \pm 8.8
<i>Time in Current Job (years)</i>	47	0.3-16	3.1 \pm 3.8
Variable	N	Percentage	
<i>Gender</i>			
Male	4	8.5%	
Female	43	91.5%	
<i>Level of Education</i>			
Bachelor's	9	18%	
Master's	38	81%	
<i>History of Mindfulness Practice</i>			
Yes	32	68.1%	
No	15	31.9%	
<i>Type of Practice</i>			
Yoga	14	29.8%	
Meditation	12	25.5%	
Other	6	12.8%	
No response/No history	15	31.9%	

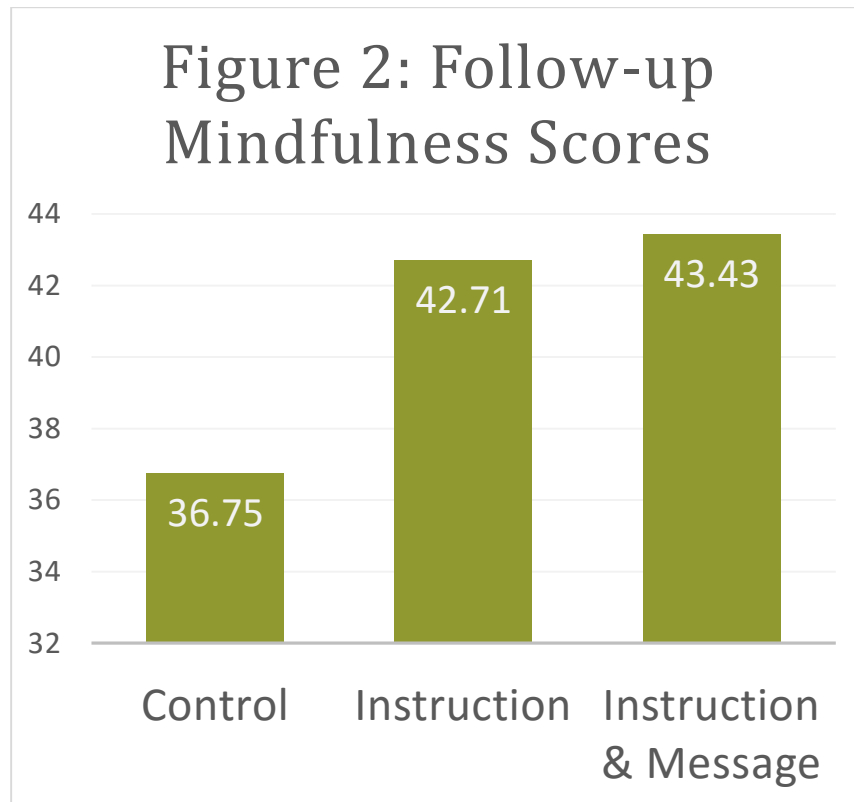
Research Q. 1: Does learning mindfulness meditation reduce stress?

We asked participants to rate their stress using the CWWSI before the introduction of the intervention, after four weeks, and at the end of the study, after eight weeks. At the eight-week follow-up, using a one-way analysis of variance, between group differences were significant $F(2,41) = 5.69, p = .007$. The control group scored significantly higher stress scores, at 65.25, while the instruction group and the instruction and message group scored 55.07 and 55.64, respectively. Figure 1 displays the between group differences on stress mean scores at the eight-week follow-up.



Research Q. 2: Does learning mindfulness meditation increase mindfulness?

Participants were asked to rate their mindfulness levels by using the FMI on the three self-reported surveys. A one-way analysis of variance tested difference in follow-up mean scores for mindfulness and found the between group differences to be significant $F(2, 41) = 4.87$, $p = .013$. The instruction group and the instruction with the message group had statistically higher mindfulness scores, at 42.71 and 43.43, than those that did not receive the intervention, which had a mean score of 36.75. Figure 2 shows the group mindfulness mean scores, displayed below.



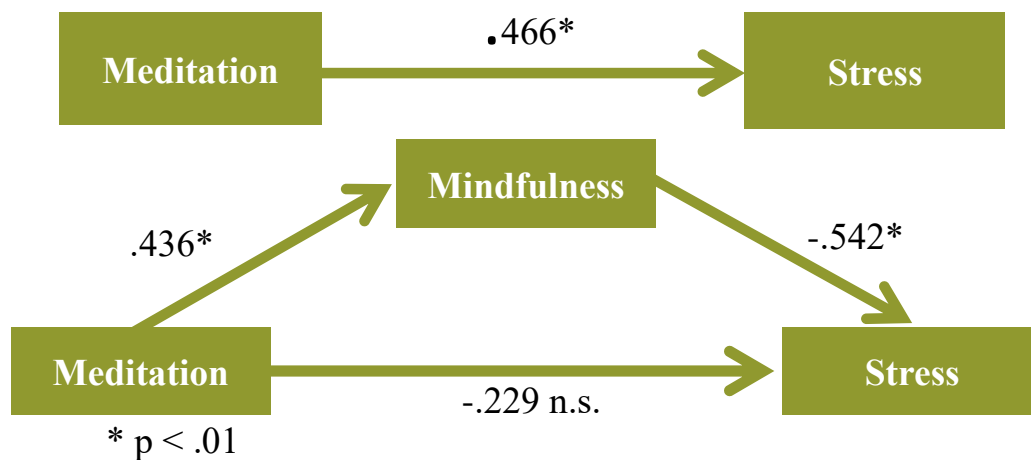
Research Q. 3: Does a change in mindfulness mediate perceived stress?

Having established a significant relationship between mediation and increases in mindfulness and reductions in stress, we next explored the role of an increase in mindfulness as a

potential mediator of stress. Following the framework proposed by Baron and Kenny (1986), we employed a series of ordinary least square regressions to assess the presence of mediation.

Consistent with Baron and Kenny's (1986) description of testing for mediation, when dependent variable stress was regressed upon independent variable meditation, the coefficient for the direct path from meditation to stress was significant ($t = -3.41$; $p = .001$). Next, the mediating variable, mindfulness, was regressed upon meditation, and that coefficient was also significant ($t = 3.14$; $p = .003$). Finally, to assess mediation, the stress dependent measure was regressed upon both the mindfulness measures and the independent variable of assignment to meditation. The coefficient for mindfulness was significant ($t = -4.29$; $p < .001$), and the direct path from stress to mindfulness was no longer significant ($t = -1.79$; $p = .081$). These findings are consistent with a conclusion of a fully mediated model (Baron & Kenny, 1986). A Sobel (1986) test of the indirect effect of mindfulness was significant providing further support for a conclusion that an increase in mindfulness mediates the impact of meditation upon stress ($t = -2.71$; $p < .001$). Figure 3 displays the mediation model.

Figure 3: Mediation Model



Research Q. 4: Do weekly reminders sent to participants have an impact on outcomes?

In this study, we used the weekly messages (Appendix E) sent to one intervention group as a reminder to meditate, to see if it would impact stress and mindfulness scores. As previously presented in the mindfulness and stress scores, there was not statistical significance between groups. We did not find that weekly message tips impacted outcomes in this study.

Results Summary

The results of this study were as hypothesized. Through the introduction of a 45-minute mindfulness meditation instruction, instruction group participants reported lower work-related stress and higher levels of mindfulness than those that received no intervention. By testing for mediation, statistical significance was found in the indirect effect of meditation through the mediator, mindfulness, on stress. Differences were not significant between the intervention group that received both the instruction and the weekly message and the group that only received the instruction.

Chapter 5: Discussion

Summary of the Problem

Stress, caused by a workplace environment, can cause problems for workers, agencies, and those that they serve (Wahrendorf et al., 2012; Dillenburger, 2004; Dunlop, 2015). Human service workers and social workers whose attention is on children and their families have high rates of stress, which leads to reciprocating issues (Dillenburger, 2004). By exploring and cultivating healthy self-care practices, the effects of workplace stress may be alleviated (Mars & Oliver, 2016). One such self-care practice found to be helpful for stress and positively impacting well-being is meditation (Pidgeon et al., 2014; Richards et al., 2010).

Summary of the Study

With high rates of stress in child focused social work, we will continue to see the resulting problems affecting clients, whom are the focus of their career, the agencies they work for, and the workers themselves. This study sought to explore whether a brief mindfulness meditation training helped alleviate work related perceived stress. The study also sought to find if there was a relationship between meditation and stress, through the mediating variable, mindfulness. The mediation model in this study helped to explain the indirect effect of meditation on perceived workplace stress through mindfulness. The study was also seeking to find if sending a weekly mindfulness tip impacted the resulting outcomes.

Summary of the Results

In analyzing the data collected at the eight-week follow-up survey, the author found that mindfulness meditation was associated with a reduction in perceived workplace stress. Those randomly assigned to the intervention groups reported significantly higher mindfulness scores, measured through the FMI, than those in the control group who received no intervention.

Similarly, those who participated in the training and randomly placed in the intervention groups had significantly lower on the stress inventory, the CWWSI, than those who received no training. By analyzing the data, looking at the mediation model, and performing the Sobel test for mediation, we were able to find statistical significance in the indirect effect of meditation through mindfulness on perceived workplace stress levels.

The results show that there is a relationship between brief meditation instruction and perceived workplace stress, but did not find a relationship from weekly text message or email mindfulness tips and outcomes. This suggests that a weekly reminder to meditate does not help or hinder perceived workplace stress. The hypothesized results, with meditation reducing stress, were what came to fruition.

Limitations

Two limitations were found in the study. First, due to an oversight, follow-up questions on how many days participants practiced throughout the study were not asked. This data would have been helpful in order to better understand the dose that created the effect we saw in the outcomes. Plans for future study and building upon this research will help to fill this gap in the data. Secondly, the study was limited due to the self-reported measure of stress. Had stress been measured directly, using bio-metric measures of stress, it would have further enhanced the study's findings.

Implications

The findings from this study suggested that mindfulness meditation has the potential to be serve as a form of self-care for perceived workplace stress, particularly in respect to human service workers and social workers who focus on children and their families in their jobs. We

can see that there is a need for stress reduction interventions with workers because of their high rates of perceived workplace stress and the resulting problems. This study gives one form of self-care that suggests positive results through learning mindfulness meditation, which increasing mindfulness and decreasing stress levels.

Knowledge of this study's findings for the field of social work could extend to more agencies, workers, and students going into the field. Agencies who see the negative effects of worker stress, such as high turnover and increased sick-days taken, may see that providing mindfulness meditation helps their workers to be more effective in their roles with decreased levels of perceived stress (Kinnunen-Amoroso & Liira, 2013; Bridger et al., 2013; Dillenburger, 2004). Understanding the negative costs of workplace stress on the agencies' impact in the community and with clients may provide additional incentive for agencies to teach mindfulness meditation to their employees. Providing educational options for self-care can help improve worker's overall well-being, showing that agencies care about their employees. Likewise, colleges and universities that offer social work as a major may want to provide meditation as a form of self-care before students graduate. This would give students further tools for their future careers, before they start a job that may bring about feelings of stress.

These findings have implications for future research focusing on workplace stress. As previously mentioned, future study would benefit from collecting data from participants on how many days they practiced mindfulness meditation during the study. It would also be useful to use a larger sample in the future, for greater diversity in demographics. Since this was self-report data collection, a more direct form of data collection would be useful to study. Using biometric data, such as saliva swabs to test for cortisol levels, would be helpful to see if the body portrays a similar effect to what was reported in the present study. Being still and in a seated

position may not appeal to everyone. In the future, study of mindfulness meditation and movement exercises, such as yoga, Tai Chi, and Qi Gong, would be an additional way to expand upon this research.

Conclusion

As there seems to be limited research that looks at the mediated effect of mindfulness meditation on perceived stress levels of child focused human service workers and social workers, this study offers further information for the field on the topics of stress and worker self-care. Through study outcomes and sharing knowledge on workplace stress, there is hope for future, more prevalent intervention with workers and those going into the field. This study may also inspire future research of the topic in the field to help combat workplace stress for those that suffer from it.

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Appendix A: Participant Handout

Janice Glowski, Ph.D.

Director, Practice, & Education

Shambhala Columbus

Elements of Meditation Instruction Introduced to Participants in this Study

Prepared for Jessica E. Sornchai's Research Project

Introduction

This study introduces Shamatha - Vipashyana (calm abiding) practice, colloquially referred to as “mindfulness” practice, combined with a specific view and approach that informs the practitioner’s understanding of the practice’s purpose.

View and Approach Communicated

Meditation is an opportunity to rest in what we already are—fundamental wholeness, natural peace, and clarity. It helps us develop friendship with our minds, skill in how to work with speed and difficulty, and a sense of humor. We learn to connect with ourselves and our immediate experience, in a simple, nonjudgmental way.

Participants are encouraged to approach meditation practice with a quality of gentleness, kindness, and self-caring.

Three Formal Components of Meditation

- 1. Body** (for sitting in a chair)
Both feet are placed flat on the floor.
The spine is upright, with a natural curve.
The hands rest on the thighs, palms down.
The arms and shoulders are relaxed.
The chin is slightly tucked.
The eyes rest in a soft gaze (about 4 – 6 feet in front of you). The face and jaw are naturally relaxed.
A general emphasis is placed on “resting and experiencing the body.”
Participants are encouraged to take a gentle approach to working with their bodies, being sure to gently accommodate and adjust to their individual needs.
- 2. Breath**
A light attention is placed on the breath, particularly as it leaves the body.
The emphasis is on feeling breathing or the breathing body.
Participants are encouraged to open and to let go with the outbreath.
- 3. Mind**
Relaxing into one’s experience of body and breathing allows one to notice thoughts that arise.
Participants are encouraged to gently and precisely notice thoughts, and without judgment, return their attention to the breath.

Daily Practice

Participants are encouraged to create a time and space (5-10 minutes or whatever is possible) for practice, and to simply experience their practice, rather than judging it or themselves. Suggestions about how to incorporate this type of stillness practice into their everyday lives are also offered.

Appendix B: Freiburg Mindfulness Inventory (FMI)

Description:

The FMI is a useful, valid and reliable questionnaire for measuring mindfulness. It is most suitable in generalized contexts, where knowledge of the Buddhist background of mindfulness cannot be expected. The 14 items cover all aspects of mindfulness.

The purpose of this inventory is to characterize your experience of mindfulness. Please use the last ___ days as the time-frame to consider each item. Provide an answer for every statement as best you can. Please answer as honestly and spontaneously as possible. There are neither 'right' nor 'wrong' answers, nor 'good' or 'bad' responses. What is important to us is your own personal experience.

	1	2	3	4
	Rarely	Occasionally	Fairly often	Almost always
I am open to the experience of the present moment.				1 2 3 4
I sense my body, whether eating, cooking, cleaning or talking.				1 2 3 4
When I notice an absence of mind, I gently return to the experience of the here and now.				1 2 3 4
I am able to appreciate myself.				1 2 3 4
I pay attention to what's behind my actions.				1 2 3 4
I see my mistakes and difficulties without judging them.				1 2 3 4
I feel connected to my experience in the here-and-now.				1 2 3 4
I accept unpleasant experiences.				1 2 3 4
I am friendly to myself when things go wrong.				1 2 3 4
I watch my feelings without getting lost in them.				1 2 3 4
In difficult situations, I can pause without immediately reacting.				1 2 3 4
I experience moments of inner peace and ease, even when things get hectic and stressful.				1 2 3 4
I am impatient with myself and with others.				1 2 3 4
I am able to smile when I notice how I sometimes make life difficult.				1 2 3 4

Appendix C: Child Welfare Worker Stress Inventory

	Rarely	Occasionally	Fairly Often	Almost Always
I am open to the experience of the present moment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sense my body, whether eating, cooking, cleaning or talking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I notice an absence of mind, I gently return to the experience of the here and now.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to appreciate myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I pay attention to what's behind my actions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I see my mistakes and difficulties without judging them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel connected to my experience in the here-and-now.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I accept unpleasant experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am friendly to myself when things go wrong.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I watch my feelings without getting lost in them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In difficult situations, I can pause without immediately reacting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I experience moments of inner peace and ease, even when things get hectic and stressful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am impatient with myself and with others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to smile when I notice how I sometimes make life difficult.				
	Never Stressful	Sometimes Stressful	Frequently/Stressful	Almost Always
Lack of resources for families	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conflicts with the legal system (Judge, DA, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insufficient time to complete work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of opportunity to talk with others about the work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Rarely	Occasionally	Fairly Often	Almost Always
Inadequate information to do the job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with difficult or uncooperative families	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stakeholders devaluing the work I do (courts, mental health, schools, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Required non-social work tasks, such as clerical work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of support from immediate supervisor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being held accountable for things over which I have no control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Talking with families about emotional matters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Testifying in court	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Case-related documentation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being blamed for something that goes wrong	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling unsafe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling unprepared to help families with their problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disagreements about cases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix D: Recruitment Script

Recruitment Script (to be read if respondent makes inquiry by phone or email):

Subject Line: Opportunity to Participate in Student Research Study on Mindfulness and Stress

Hello, my name is Jessica Sornchai. I am a student at The Ohio State University, and I am studying Social work. I am in the honors program and I am conducting a research project as a portion of that program. I am hoping to learn more about how child welfare workers' experience practicing mindfulness meditation and if it might affect their stress levels, particularly in respect to their jobs. My study has been approved by the Ohio State Institutional Review Board and is being supervised by a faculty member at Ohio State, Tom Gregoire. If you choose to participate, you will be randomly assigned to a group. All participants will be asked to take three online surveys on stress and mindfulness: one at the beginning of the study, one after four weeks, which is the middle of the study, and one after eight weeks, which is the end of the study. If you are assigned to an intervention group, you will receive training in mindful meditation lasting about one hour, and be asked to do a 15 to 20 minute daily mindfulness exercise. I would also like to ask for volunteers from the group of participants to do an interview after the study is over. The interview will last an estimated 15 minutes or less. For your trouble, I will give you a 10 dollar Starbucks' gift card before the study begins, another after the last assessment, and if you do an interview with me, I will give you another 10 dollar gift card before the interview. Are you interested in participating in this study? If so, I have a consent form for you to sign that contains more information.

Appendix E: Weekly Text or Email Messages Sent to Participants in the Instruction and Message Group – Provided by J. Glowski

Week 1: Remember gentleness in your daily mindful practices. “To be gentle is to understand that life is a journey deserving constant attentiveness. Gentleness is “just doing it” in such a way that we can do it again and again.” – Sakyong Mipham Rinpoche

Week 2: “To be gentle is to understand that life is a journey deserving constant attentiveness. Gentleness is “just doing it” in such a way that we can do it again and again.” – Sakyong Mipham Rinpoche

Week 3: “In Asian languages, the word for ‘mind’ and the word for ‘heart’ are the same. So if you’re not hearing mindfulness in some deep way as heartfulness, you’re not really understanding it. Compassion and kindness toward oneself are intrinsically woven into it. You could think of mindfulness as wise and affectionate attention.” – John Kabot-Zinn

Week 4: We are half way through the study. Please complete the second questionnaire sent by email this week. Thank you!

Week 5: There always is space – between the things in our world and between our thoughts. Simply remembering this, coming back to “now” without judgment, and resting in that space for a few moments can be very refreshing.

Week 6: “The key to meditation is knowing what mindfulness is. Once meditation has brought confidence to your mind, you will be able to practice mindfulness in almost any circumstance...” – Sakyong Mipham Rinpoche

Week 7: “... You will feel a certain equanimity even in changing environments. When you are neither threatened nor seduced by external distractions, you can naturally relax almost anywhere, resting in a deeper consciousness and a more mindful mind, because you are fully present.” – Sakyong Mipham Rinpoche

Week 8: This is the last week of the study. Thank you for your involvement! Your last survey has been sent to you.