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The Impact of Mindfulness Practices in Teachers

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Abstract

Mindfulness training has been identified as a promising means for cultivating social and emotional competencies and reducing stress. The purpose of the quantitative pre-post study using convenience sampling of educators in a rural K-12 in the Arkansas River Valley was to examine whether teachers' participation in mindfulness activities were associated with changes in levels of stress, anxiety, depression, and job satisfaction. The study used the Depression, Anxiety, and Stress Scale (DASS-21) and the Job Satisfaction Survey (JSS) and measured the responses from novice (0-3 years) and experienced (4+ years) teachers. The findings revealed that there was no difference between the control and experienced groups on the DASS-21 and the JSS surveys; however, there was a significant difference among the experimental groups self-reported pre and posttests (novice and experienced). Even though this was not an original hypothesis, it was found that those who participated in mindful activities such as meditation and breathing techniques reported decreased depression, anxiety, and stress scores on the DASS-21 posttest. Moreover, the mindful activities appeared to benefit the experimental novice teachers as reported on the pre and post JSS surveys.

Keywords: mindfulness, job satisfaction, depression, anxiety, stress

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I. Introduction

The high frequency of teacher stress has been a challenge as prolonged teacher stress has a negative impact on teachers' health (Tschannen-Moran et al., 1998) and may be contributing to teacher satisfaction (Goldring, Taie, & Riddles, 2014). A large number of studies have highlighted factors associated with traits of personalities and attributes of schools that contribute to teacher strain (Pas, Bradshaw, & Hershfeldt, 2012). Despite the high number of studies documenting teachers' stress to date, few studies have investigated how teachers can be supported through mindful activities so that they can cope with the demands of the profession.

Background of Problem

Mindfulness research and applications are steadily increasing in school settings. According to Shapiro and Carlson (2009), "Mindfulness is the awareness that arises through intentionally attending in an open, accepting, and discerning way to whatever is arising in the present moment" (Shapiro & Carlson, 2009, p. 124). The components of mindfulness include a focus on the present moment, non-judgmental acceptance of experiences and events, and the ability to control negative emotions (Coffey, Hartman, & Fredrickson, 2010). Research has shown that when people are mindful, they are not distracted by external or internal stimuli, and they are better able to pay attention to tasks (Napoli, Krech, & Holley, 2005). The practice of mindfulness also enables individuals to regulate negative emotions in stressful situations (Beddoe & Murphy, 2004). Additionally, people who are mindful are believed to have an increase in cognitive ability and concentration under pressure (2004).

As indicated by the publication of recent studies, there is a growing interest in the impact of mindfulness training for teachers. While some studies are based on other training formats or apply meditation techniques that are possibly not comparable to mindfulness meditation (Anderson, Levinson, Barker, & Kiewra, 1999), the studies reviewed here use Mindfulness Based Stress Reduction (MBRS) training for teachers.

Problem Statement

The current problem is that stress among teachers plays a significant role in their emotional well-being (anxiety, stress, and depression) and job satisfaction. In order to address such problems, mindfulness-based programs are used as an intervention through ongoing professional development sessions or through professional learning community (PLC) meeting goals. Because stress impacts teacher health and performance and potentially student outcomes, it is important to learn about teachers' perceptions of their school's mindfulness professional development programs, their experiences with incorporating mindfulness strategies, and their beliefs regarding the benefits of these programs for themselves. While literature indicates that there is a growing interest in the impact of mindfulness training for teachers, it is not known in the Arkansas River Valley if there is a positive connection amongst teacher stress, anxiety, and depression levels and job satisfaction.

Purpose of the Study

The purpose of the current quantitative quasi pre-post study using convenience sampling will be to examine whether teachers' participation in mindfulness activities are associated with changes in levels of stress, anxiety, depression, and job satisfaction. While mindfulness training has been identified as a promising means for cultivating

social and emotional competencies and reducing stress, little research has investigated this approach with teachers and its impact on their mental health and job satisfaction. However, MBSR training has been helpful to teachers in other studies and is a current need in the teaching profession.

Research Questions/Hypotheses

This study builds on the existing research of mindfulness-based programs for teachers by incorporating mindfulness interventions such as meditation and breathing techniques during the fall semester of the 2021 school year. Therefore, this study will explore the following research questions and hypotheses:

RQ 1. How do mindfulness activities impact self-reported teacher stress, anxiety, and depression?

H1: Participants will have lower reported stress levels than the control group.

H2: Participants will have lower reported anxiety levels than the control group.

H3: Participants will have lower reported depression levels than the control group.

RQ 2. How do mindfulness activities impact teacher job satisfaction?

H4: Participants will have higher reporter job satisfaction than the control group.

H5: Novice participants will have higher reported job satisfaction than the novice control group.

H6: Experienced participants will have higher reported job satisfaction than the experienced control group.

Theoretical Framework

Bandura's Social Cognitive Theory (SCT) guides this study. SCT emphasizes that learning occurs in a social context with dynamic and reciprocal interaction of the person, environment, and behavior and focuses on social influences with an emphasis on external and internal social reinforcement (Bandura, 1986). The theory considers a person's past experiences, which factor into whether behavior action will occur (LaMorte, 2019). These past experiences influence reinforcements, expectations, and expectancies, all which shape whether a person will engage in a specific behavior and the reasons why a person engages in that behavior (Bandura, 1986).

Significance of the Study

This study may make possible contributions that will help communicate the importance of mindful based interventions for teachers while also clarifying the importance of self-regulation interventions as a needed professional development or part of a PLC process. This research contributes to the understanding of mindfulness interventions while also exploring teacher expectations and experiences. Additionally, this study details current mindfulness professional development programs, along with factors that may hinder or hurt the facilitation of such programs. By focusing on educators, it is hypothesized that this study will build a foundation for future research on how educational leaders can help teachers develop emotional health, habits of mind, and teacher job satisfaction through professional development sessions.

Adding to the current mindfulness-based interventions (MBI), research will also help to build theory and to support more like-minded studies. It is also hypothesized that teachers will report lower stress, anxiety, and depression after practicing mindfulness activities as well as noticeable improved teacher job satisfaction for both novice and experienced teachers alike. Thus, quantitative research is warranted and may benefit teachers as a necessary ongoing teacher professional development.

Research Design

Through using a quantitative study, at least 40 educators from a rural school district in the Arkansas River Valley will be used to answer if mindful activities impact teacher reported stress, anxiety, and depression as well as determine if mindful activities impact teacher self-reported job satisfaction. During the process, a quantitative quasi pre-post study will measure subjective stress perceptions by using the t-test method of disaggregating data in the SPSS software. Current literature supports these research methods as the studies outlined in the literature review report mindful training for teachers as psychological indicators of stress levels.

Definition of Terms

The following terms are defined to assist the reader:

Anxiety: Anxiety is a feeling of worry, nervousness, or unease, typically about an imminent event or something with an uncertain outcome (Merriam-Webster, 2019).

Burnout: Burnout is described as severe on the job stress (Freudenberger as cited by Williams & Dikes, 2015). Burnout is typically viewed as a three-part occurrence which includes exhaustion, depersonalization, and un-accomplishment (Friedman, 2000).

Depression: Depression is feelings of severe despondency and dejection (Merriam-Webster, 2019).

Job Satisfaction: Job satisfaction is a feeling or fulfillment or enjoyment that a person derives from one's job (Merriam-Webster, 2019).

Meditation: Meditation is a practice that has existed for over 5,000 years and is used for both healing and contemplative reasons; the word meditation is derived from the Latin "meditari," which means "to engage in contemplation or reflection" (Chiesa & Malinowski, 2011, p. 407).

Mindfulness: Mindfulness is a way for people to reduce suffering and increase their well-being by being in the present moment (Germer, 2004). Germer (2004) promotes the use of mindfulness as a method to reduce suffering by allowing people to be in the moment and less reactive; instead of being "caught up" in the past or future, the goals is to remain in the present and accept the moment without judgement. Kabat-Zinn (2013) describes mindfulness as a method to change the way people see and respond to situations.

Mindfulness Strategies: These include but are not limited to body scan, tai chi, mindful breathing, yoga, walking meditation, meditation, mindful eating, and loving kindness meditation (Kabat-Zinn & Hanh, 2009).

Mindfulness Based Stress Reduction (MBSR): In 1979, mindfulness-based stress reduction (MBSR) came into being at the Stress Reduction Clinic at the University of Massachusetts Medical Center (Kabat-Zinn, 2013). Kabat-Zinn (2013) describes this program of MBSR as an eight-week program, which meets once a week but encourages

people to practice daily meditation, including mindfulness practices and mindful breathing (sitting for a specified number of minutes and focusing on one's breath).

Stress: This is a physical, chemical, or emotional factor that causes bodily or mental tension and may be a factor in disease causation (Merriam-Webster, 2019).

Assumptions

According to Roberts (2010), assumptions in a study are the parts presumed to be true. The study will be based on the opinions and viewpoints of the teachers who respond to the pre and post surveys and who volunteers to participate in the control and experimental groups. The following are assumptions made by the researcher before conducting the quasi-experimental quantitative study using convenience sampling:

- It is assumed that study participants will answer survey questions honestly.
- It is assumed that study participants will understand the term "mindfulness strategies" and will actively engage in the strategies asked of them if they are in the experimental group.
- It is assumed that all participants will participate in the pre and post surveys.
- It is assumed that the participants will apply an adequate amount of application in order to master the mindfulness techniques.

Limitations

Limitations are factors out of the researcher's control (Simon & Goes, 2013). Limitations in the current study might include the following:

- The amount of training or experience that participants have with mindfulness meditation and breathing practices is unknown prior to the study.

- The inability to accurately measure the amount of meditative and mindful breathing practice each participant in the experimental group engages in during the study period
- If individual difference variables impact the rate at which the teachers are able to adhere to during the eight-week study period.

Delimitations

Delimitations result from the design and execution of the study and choices that the researcher makes (Simon & Goes, 2013). Delimitations in the study include the following:

- The convenience sample used in the study include the opinions of teachers in a select school in the Arkansas River Valley. These opinions are not representative of all teachers in Arkansas or K-12 teachers elsewhere.
- The researcher specifically selected the public school in Arkansas because of the access to the teachers. However, it is not known the exact mindfulness training each building or teacher has received in the past.
- The survey questions will only be completed before and after the study in order to keep questioning brief and to encourage a higher response rate and focused results from respondents.

Summary and Organization of Remainder of Study

The study is presented in five chapters. Chapter I contains an introduction to the study, statement of problem, purpose of the study, research questions, significance of the study, assumptions, limitations, delimitations of the study, and definition of terms. Chapter II features a review of related literature including the history and development of

MBSR, mindfulness education, teacher burnout and job dissatisfaction, and explanations of mindfulness and mediation. Chapter III presents the methodology that will be employed during the collection of data and provides a synopsis of the participants, instrumentation, data collection, and data analysis. Chapter IV will report the results of the study, and Chapter V will establish the summary, conclusions, and recommendations for future research.

II. Literature Review

As educators deal with the world's increasing complexity and uncertainty, it is important to have an outlet that will help maintain mental health as well as help promote job satisfaction. Mindfulness may be one such outlet, as it has been proven to be an effective, resilient, and low-cost response to seemingly obstinate problems (Kagan, 1992). Other than the health benefits, mindfulness is free, and everyone has the capacity to be present while not having to change oneself to meet criteria (Hargreaves, 1998). Moreover, those who practice mindfulness could potentially cultivate innate qualities with simple practices that are scientifically demonstrated to benefit oneself, loved ones, friends, neighbors, colleagues, institutions, and organizations (Hargreaves, 1998).

This literature review covers mindfulness and the theoretical framework (Bandura's Social Cognitive Theory). The literature review explores the history and explanation of mindfulness as well as the benefits. A review of research related to depression, anxiety, stress, and job satisfaction is presented as well as the implications of incorporating job-embedded professional development for educators.

Mindfulness

Mindfulness decreases stress, enhances performance, and helps participants gain insight and awareness through observing one's own mind (Parsons et al., 2017). By practicing mindfulness, one typically shows an increase of attention to others' well-being (Parsons et al., 2017). Both science and experience demonstrate positive benefits for health, happiness, work, and relationships (Kagan, 1992). Mindfulness is available to everyone in every moment, whether through meditation or mindful moment practices like taking time to pause and breathe when overwhelmed (Kabat-Zinn, 1998). The following

sections will define mindfulness, outline the historical development of mindfulness, and provide an overview of mindfulness practice.

What is Mindfulness?

Mindfulness is the ability to pay specific attention to the present moment in a non-judgmental way (Kabat-Zinn, 1991, 2003). Brown, Ryan, and Creswell (2007, p. 218) described mindful awareness as a "foundation for healthy self-regulation." A recent review of the neuroscience of mindfulness suggests that the practice of mindfulness may impact self-regulation by improving the regulation of attention and emotions (Tang, Hölzel, & Posner, 2015). Originally a Buddhist concept, mindful awareness describes a generic psychological faculty (Thera, 1975). It may be directed to bodily sensations as well as to emotional and cognitive experiences (Thera, 1975). Mindfulness is a practice involved in various religious secular traditions, from Hinduism and Buddhism to yoga and, more recently, non-religious meditation (Chakalson, 2014).

Today, Buddhism is most often thought of by non-practitioners in the terms of Tibetan Buddhism and the Dalai Lama, an individual who is thought to be an enlightened teacher of Tibetan Buddhism (Parsons et al., 2017). Because mindfulness is more involved in Buddhism than Hinduism, mindfulness is considered the first step to enlightenment that is reached by the Buddhist practice of mediation to bring about a state of ultimate consciousness, thus allowing personal attunement with a higher purpose in life (Parsons et al., 2017). Some believe that the English term "mindfulness" is a simple translation of the Buddhist concept of *Sati*, which means awareness (Parsons et al., 2017). The next sections detail the historical development of mindfulness and explain how mindfulness moved to western cultures.

Historical Development

People have been practicing mindfulness for thousands of years, whether on its own or as part of a larger tradition (Thera, 1975). Mindfulness was popularized at least 2,500 years ago in the East through religious and spiritual institutions (Khoury et al., 2013). Most western practitioners and teachers of mindfulness learned about such practices in the Buddhist tradition through Tibetan Buddhism and the Dalai Lama, an individual is thought to be an enlightened teacher of Tibetan Buddhism who escaped to India in 1956 during the Tibetan uprising (Khoury et al., 2013). There are also mindfulness roots in other religions (Khoury et al., 2013). The following sections will detail ancient mindfulness and describe common modern mindfulness programs.

Ancient Mindfulness. Many think that mindfulness practice lies in Buddhism; however, the history of mindfulness actually goes further back to yoga practices of the Hindu people dated to 2300 BC and 1500 BC in the Indus Valley, near modern day Pakistan (Thera, 1975). In fact, Hindu scripture has many references to meditation, silence, and acceptance, which are all important elements of modern mindfulness (Hacker & Davis, 2006). Hinduism and Buddhism share many commonalities, such as they both formed in the same region and are greatly concerned with the concept of living in harmony with the natural order of the universe (Hacker & Davis, 2006); however, Buddhism is a religion and a philosophy that aims to show its followers the path to enlightenment, which means free from misinformation (Tang, Hölzel, & Posner, 2015).

Buddhism was founded around 400-500 BC by Siddhartha Gautama, who became referred to as Buddha (Hacker & Davis, 2006). Gautama is thought to have been born and raised around modern-day India and Nepal (Hacker & Davis, 2006). Based on where and

when Gautama was raised, it is thought that Hinduism informed his upbringing (Khoury et al., 2013). Since Buddha's death, Buddhism has split into Theravada Buddhism and Zen Buddhism (Parsons et al., 2017). The next section will bridge the gap between ancient mindfulness and mindfulness practices in Christianism and Islam.

Mindful Practices in Christianism and Islam. Although mostly influenced by Hinduism and Buddhism, the history of mindfulness goes beyond these two practices. Mindfulness also has roots in Judaism, Christianity, and Islam (Trousselard et al., 2014). In Christianity, Jesus speaks of the innermost *I am*, referring to the essence of every life-form, also known as *Christ within* (Tolle, 1999). Another well-known example in Christianity is Brother Lawrence, who emphasized being aware of the "Holy Spirit" in *Practicing the Presence of God* (Lawrence, 2004).

Islam also emphasizes mindfulness as seen in "Muraquabah," or better known as having a continuous awareness as Allah is always watching (Al-Jawziyyah, 2016). The basic mindfulness in Islam is that there is a pure core (the Fitrah) within everyone as every child is born with the Fitrah regardless of caste, creed, and religion (Al-Jawziyyah, 2016). Thus, Muslims access this purity through the practices of mindfulness (Lawrence, 2004). Next, mindfulness popularity will be described as it moves to the West.

Mindfulness Popularity to the West. Thich Nhat Hahn, a Vietnamese Zan master, was one of the first to bring mindfulness to popularity in the West in the mid 1970s (Hacker & Davis, 2006). He introduced simple yet profound teachings on mindful practices in daily life (Hacker & Davis, 2006). His book *The Miracle of Mindfulness* has been used for generations of Buddhist and non-Buddhist practitioners in modern times (Parsons et al., 2017).

Mindfulness was then introduced in the 1970s by Jon Kabat-Zinn in academic and medical contexts (Kabat-Zinn, 1975). Kabat-Zinn provided mindfulness training as a method for stress reduction and founded the Center for Mindfulness at the University of Massachusetts Medical School (Kabat-Zinn, 1991). Even though Buddhism is not a western practice, Kabat-Zinn also founded the Oasis Institute for Mindfulness-Based Professional Education and Training (Kabat-Zinn, 1991).

It was during this time that mindfulness began to spread throughout the United States under the form of secular meditation, yoga techniques, and awareness training (Parsons et al., 2017). As a result, yoga gained considerable popularity in the last 30-40 years in the West by fitness organizations and private studios that offer yoga without the explicit religious component (Kabat-Zinn, 1991). Tai Chi is another practice involving mindfulness (Chaskalson, 2014). It is currently gaining popularity in western society; it is not as popular as yoga but offers individuals who struggle with "stillness" another method of practicing mindfulness (Chakalson, 2014).

Moreover, Kabat-Zinn learned about and studied mindfulness under several Buddhist teachers, including Thich Nhat Hanh (Kabat-Zinn, 1991). This gave Kabat-Zinn Eastern foundation in mindfulness that he integrated with Western science in 1975 to develop his Mindfulness-Based Stress Reduction (MBSR) program, an eight week program aimed at reducing stress (Kabat-Zinn, 1991). This integration with Western science was a crucial aspect in helping mindfulness gain widespread popularity in the West in common mindfulness practices. More so, practitioners began using mindfulness meditation as described in the following section in psychotherapy.

Mindfulness Meditation in Psychotherapy

Aside from academic science, Jack Kornfield, Sharon Salzberg, and Joseph Goldstein played a crucial role integrating mindfulness into psychotherapy when they founded the Insight Meditation Society (IMS) in 1975 (Chaskalson, 2014). The IMS helped introduce mindfulness meditation to the West, and the combination of mindfulness meditation and MBSR helped popularize mindfulness within both clinical and non-clinical populations (Chaskalson, 2014). The following will talk about Mindfulness-Based Stress Reduction (MBSR), Mindfulness-Based Cognitive Therapy (MBCT), and Interacting Cognitive Subsystems (ICS).

Mindful-Based Stress Reduction (MBSR)

A popular and secular way to train in mindfulness is Mindfulness-Based Stress Reduction (MBSR) training. MBSR is a group training program aimed at alleviating suffering from stress-related symptoms, illness, anxiety, and chronic pain (Kabat-Zinn, 1991). MBSR is presented as a structured eight-week course with weekly group meetings that range from two and a half to three hours in length (Parsons et al., 2017). The main goal is to help people develop mindfulness (Parsons et al., 2017). Aided by group practice and audio recordings for home practice, participants experience and reflect on mindfulness meditations such as observing the breath, scanning the body to become aware of body sensations, and walking mindfully (Hargreaves, 1998).

Mindfulness-based stress reduction sessions (MBSR) provide training in formal mindfulness practices such as sitting meditation and yoga (Chakalson, 2014). In sitting meditation, the primary focus of mindful attention is on breathing, the rising and falling abdomen, as well as on other perceptions and a state of nonjudgmental awareness of

cognitions and the stream of thoughts and distractions that flow through the mind (Roeser, 2013). Mindful movement is based on yoga and focuses on moving the body through a series of postures to develop greater strength, balance, flexibility, and body awareness as a means of encouraging attentiveness to body sensations and movement (Romas & Sharma, 2014). In all of these exercises, when thoughts arise and attention wanders, the practice is to return the attention to the intended focus (Chakalson, 2014). Participants are also encouraged to practice mindfulness informally by bringing attention to emotions, thoughts, and appraisals that occur while engaged in everyday activities, including walking, eating, driving, working, and conversing (Romas & Sharma, 2014).

MBSR is based on training attention through straightforward, secular, meditation techniques. It seeks to change participant relationships with stressful thoughts and events by decreasing emotional reactivity and enhancing cognitive appraisal (Brouwers & Tomic, 2000). The benefits of the standardized full-length mindfulness-based stress reduction curriculum are well documented as the full-length standard mindfulness-based stress reduction program is among the most widely researched mindfulness procedures (Brouwers & Tomic, 2000).

MBSR is effective in fostering emotional well-being and reducing psychological distress among nonclinical healthy individuals and persons with chronic psychological disorders (Romas & Sharma, 2014). Mindfulness-based stress reduction's standard curriculum is conducted in a structured 8-week group format, during which participants meet weekly for 2.5-hour group sessions in addition to one 6-hour daylong retreat, for a total of 26 contact hours (Romas & Sharma, 2014). Unfortunately, most people do not

have the time, resources, or accessibility needed to participate in extensive meditation programs. This can lead to not only stress, but to anxiety and depression.

Mindfulness-Based Cognitive Therapy (MBCT)

MBSR served as an inspiration for another popular mindfulness-based therapy program, Mindfulness-Based Cognitive Therapy (MBCT). MBCT is a type of psychotherapy that involves a combination of cognitive behavior therapy (CBT), meditation, and the cultivation of a present-oriented, non-judgmental attitude called "mindfulness" that is aimed at treading Major Depressive Disorder (Chaskalson, 2014). MBCT was developed by therapists Zindel Segal, Mark Williams, and John Teasdale, who sought to build upon cognitive therapy (Parsons et al., 2017). Zindel, Segal, Williams, and Teasdale thought that integrating cognitive therapy with a Kabat-Zinn's MBSR therapy would be most effective for users (Parsons et al., 2017).

MBCT was originally released to be a relapse-prevention treatment for individuals with major depressive disorder (MDD) (Fulton, Germer, & Siegel, 2005). A focus on MDD and cognitive processes distinguishes MBCT from other mindfulness-based therapies (Parsons et al., 2017). Mindful-Based Stress Reduction (MBSR), for example, is a generalized program that also utilizes mindfulness (Fulton, Germer, & Siegel, 2005). MBSR and MBCT are similar in that they are both group-intervention programs that uses mindfulness to help improve the life of individuals with chronic clinical ailments and high stress-lives (Herbert & Forman, 2011).

Cognitive Behavior Therapy (CBT) inspired methods are used in MBCT, such as educating the participant about depression and the role that cognition plays within depressive characteristics (Fulton, Germer, & Siegel, 2005). MBCT takes practices from

CBT and applies aspects of mindfulness to the approach. *Decentering* is an example that teaches the user to focus on becoming aware of all incoming thoughts and feelings and accepting them but not attaching or reacting to such thoughts and feelings. This process aims to aid an individual in disengaging from self-criticism, rumination, and dysphoric moods that can arise when reacting to negative thinking patterns (Fulton, Germer, & Siegel, 2005).

Like CBT, MBCT functions on the etiological theory that when individuals who have historically had depression become distressed, they return to automatic cognitive process that can trigger a depressive episode (Herbert & Forman, 2011). The goal of MBCT is to interrupt these automatic processes and teach the participants to focus less on reacting to incoming stimuli, and instead accepting and observing events, feelings, and thoughts without judgement (Herbert & Forman, 2011). Like MBSR, this mindfulness practice encourages the participant to notice when automatic processes are occurring and to alter their reactions to be more of a reflection (Fulton, Germer, & Siegel, 2005). With regard to development, MBCT emphasizes awareness of thoughts, which helps individuals recognize negative thoughts that lead to rumination (Fulton, Germer, & Siegel, 2005). It is theorized that this aspect of MBCT is responsible for the observed clinical outcomes (Fulton, Germer, & Siegel, 2005).

Beyond the use of MBCT to reduce depressive symptoms, research supports the effectiveness of mindfulness meditation in reducing cravings for individuals with substance abuse (Grossman et al., 2004). Addiction is known to involve interference with the prefrontal cortex, which ordinarily allows for delaying of immediate gratification for longer-term benefits by the limbic and paralimbic brain regions (Herbert & Forman,

2011). The nucleus accumbens, together with the ventral tegmental area, constitutes the central link in the reward circuit (Herbert & Forman, 2011).

The nucleus accumbens is also one of the brain structures that is most closely involved in drug dependency (Grossman et al., 2004). In an experiment with smokers, mindfulness meditation practiced over a two-week period totaling five hours of meditation decreased smoking by about 60% and reduced their cravings, even for those smokers who had no prior intentions to quit (Grossman et al., 2004). In addition, neuroimaging among those who practice mindfulness mediation reveals increased activity in the prefrontal cortex. The following section will discuss Interacting Cognitive Subsystems (ICS).

Interacting Cognitive Subsystems (ICS)

In 1991, Barnard and Teadale created a multilevel concept of the mind called *Interacting Cognitive Subsystems* (ICS; Fulton, Germer, & Siegel, 2005). The ICS model is based on Banard's and Teasdale's concept that the mind has multiple modes that are responsible for receiving and processing new information cognitively and emotionally (Fulton, Germer, & Siegel, 2005). This concept associates an individual's vulnerability to depression with the degree to which one relies on only of the modes of mind, inadvertently blocking the other modes (Herbert & Forman, 2011). The two main modes of mind are the "doing" mode and the "being" mode (Fulton, Germer, & Siegel, 2005). The "doing" mode is also known as the "driven" mode (Fulton, Germer, & Siegel, 2005). This mode is very goal-oriented and is triggered when the mind develops a discrepancy between how things are and how the mind wishes things to be (Kuyken et al., 2016). The second main mode of mind is the "being" mode (Kuyken et al., 2016). This mode is not

focused on achieving specific goals; instead, the emphasis is on accepting and allowing what is, without any immediate pressure to change it (Kuyken et al., 2016).

The central component of ICS is metacognitive awareness, meaning the ability to experience negative thoughts and feelings as mental events that pass through the mind, rather than part of the self (Fulton, Germer, & Siegel, 2005). Individuals with high metacognitive awareness are able to avoid depression and negative thought patterns more easily during stressful life situations, in comparison with those with low metacognitive awareness (Kuyken et al., 2016). Metacognitive awareness is regularly reflected through an individual's ability to decenter (Herbert & Forman, 2011). Decentering is also used, like the MBCT method, to help the user perceive thoughts and feelings as both impermanent and objective occurrences in the mind (Grossman et al., 2014).

In Barnard and Teasdale's model, mental health is related to an individual's ability to disengage from one mode or to easily move among the modes of the mind using meditation and mindfulness practices (1991). Those who are able to flexibly move between the modes of mind based on conditions in the environment are the most favorable state (Barnard & Teasdale, 1991). The ICS model theorized that the "being" mode is the most likely mode of mind that will lead to lasting emotional changes (Barnard & Teasdale, 1991). Therefore, to prevent relapse in depression, cognitive therapy must promote this mode (Grossman et al., 2014).

The theories behind mindfulness-based approaches to psychological issues function on the idea that being aware of things in the present, and not focusing on the past or the future, will allow individuals to be more apt to deal with current stressors and distressed feelings with a flexible and accepting mindset, rather than avoiding and

potentially prolonging problems (Fulton, Germer, & Siegel, 2005). In the following section, mindfulness practice will be detailed as well as the benefits of incorporating into everyday life.

Mindfulness Practice

Mindfulness is a state of mind that most people can attain, but in order to maintain it for longer periods of time, it needs practicing (Parsons et al., 2017). One such example is through mindfulness meditation. As participants begin to discipline the mind, they will probably find themselves feeling kinder, calmer, and more patient. According to Teper, Sigal, & Inzlicht (2013), mindfulness helps those practicing that thoughts are just thoughts; they do not require action. This tidying, mindful approach to self-regulation is significantly less draining than exerting self-control, as it does not involve ego-based willpower is an expression of our deeper values, deeper desires, and deeper needs at that moment in which it is practiced (Brown, 2018). The next section will outline how to incorporate mindfulness practice into daily routine.

Incorporating Mindfulness Practice into Daily Routine

While using brief mediation can be a great way to move into the moment of relaxation where one is generally free of worries, the real power of mindfulness practice is learning how to keep oneself in the moment in all circumstances (Walsh et al., 2006). This allows users to navigate through the world in a resilient, focused, and controlled manner (Tang et al., 2015). It is imperative to realize that one will interact with stressors day after day; therefore, the most important step of mindfulness is to be able to recognize that stressful events will happen and that carrying over feelings from stressful events is what leads to one feeling overwhelmed with anxiety and depression (Tang et al., 2015).

By learning how to use mindful activities throughout the day, participants can better encourage oneself to be present in each moment throughout the day and to wash away any baggage that has been carried from the past (Tang et al., 2015). Therefore, as participants face stressors with calmness helps one to become stronger and will help to decrease any future anxieties (Walsh et al., 2006).

An example of a transition, or moving into a state free of worry, is to start and end each day with a brief meditation. By awakening mindfully, or without anxiety or fear, one can start the day fresh and face it resiliently (Walsh et al., 2006). By mindfully moving into rest, or by acknowledging that it is time to allow the brain to rest through mindfulness practice, participants can step away from stress of the day and experience rejuvenation of a good night's sleep (Walsh et al., 2006). Another example is to take mindful moments as one transitions from one task to another. With eyes closed, participants should take a slow breath in and out while counting breaths until reaching five (Chakalson, 2014).

It is helpful to prevent the mind from wandering to the past or future and simply focus on the five breaths (Chakalson, 2014). If it wanders, the participant should refocus oneself and begin counting again (Walsh et al., 2006). Finally, participants should consider a meditation for major transitions as a school or work day can be exhausting (Brouwers & Tomic, 2000). When leaving work or entering home (a new space), it is helpful to practice a quick guided meditation to set the mind space of the evening and to help leave all stressors at work or school (Brouwers & Tomic, 2000).

Another quick and easy method of mindfulness is the 3x3 method made popular by Phil Bouissiere (2017). He claims that mindfulness can be obtained in as little a 30

seconds using the 3x3 method (Bouissiere, 2017). The 3x3 method is extremely simple as all one has to do is identify one physical object in the environment, name it, and take one deep breath and then repeat this process three times (Bouissiere, 2017). Bouissiere claims that this strategy reduces one's physiological response to stress claiming that "Every moment has meaning" (2017). Thus, using the 3x3 method, when used daily in practical application, reaps positive outcomes in a quick amount of time (Brouissiere, 2017). Next, the benefits of mindfulness mediation will explained.

Four Tetrads of Meditation

When meditating, one focuses on the workings of the mind such as sensations, emotions, and thoughts. Mindfulness mediation asks participants to suspend judgement and unleash natural curiosity about the workings of the mind, approaching experiences with warmth and kindness to oneself and others. Because of the vast complexities of meditation in psychotherapy, it is helpful to understand the Four Tetrads of meditation.

1st Tetrad – Mindfulness of the Body. The first tetrad of mindfulness meditation is focusing on the breath itself. It is important in this step is inhale and then exhale in long, deep breaths as this helps become more sensitive to the breathing process (Sapolsky, 2004). Being intentional with the breathing process allows the participant to become sensitive to the whole body as breathing is a whole body process (energy flow goes through the entire body) (Sapolsky, 2004). Inhaling and exhaling also helps to calm the body as it is a gentle and soothing process (Hanson, 2013).

2nd Tetrad – Mindfulness of Feelings. Mindfulness of feelings ensures that the participant focuses on the feelings created by the way one pays attention to the breath (Hanson, 2013). During this tetrad of breathing, it is important to remember that the mind

helps fabricate feelings (feelings do not come and go on their own), perceptions have an effect on the mind, and that feelings induced by the breath have an effect on the mind (Sapolsky, 2004).

3rd Tetrad – Mindfulness of the Mind. The third tetrad focuses on the state of the mind as it tries to stay with the breath. Breathing helps to steady the mind, especially if the mind is restless or scattered. Moreover, meditative, controlled breathing releases the mind of burdens, anger, fears, and negative desires (Hanson, 2013).

4th Tetrad – Mindfulness of Mental Content (Dharma). The fourth tetrad focuses on the mental qualities and the component factors that go into shaping the state of mind as these are involved in developing dispassion for the whole process of fabrication (Sapolsky, 2004). This tetrad of breathing allows the participant to stay focused on relinquishment as one breathes in and out while allowing stress, anxiety, and depression to release into the universe (Hanson, 2013). Focusing on this tetrad allows the participant to see things as they actually are, as they are actually happening (Hanson, 2013). The next section will detail the frequent occurrence of stress and the importance of practicing mindfulness practices to deflate stress.

Benefits of Mindfulness Meditation

The results of brushing mindfulness practices aside is more stress and a decrease quality of life (Brouissiere, 2017). The regular practice of mindfulness has been linked to better stress management and work-life balance as well as long-term mental and physical health (Slutsky et al., 2018). Mindfulness has even been linked to younger, healthier brains in brain imaging studies and slows aging at the genetic level while also potentially lowering healthcare costs (Bishop et al., 2004).

Stress Reduction

According to Romas and Sharma, mindfulness offers an effective way of reducing stress by combining meditation and yoga as a positive modality for reducing stress (2014). Mindfulness-based stress reduction is a widely disseminated and frequently cited example of mindfulness training that has been shown to reduce stress, depression, and anxiety (Roeser, 2013). Mindfulness-based stress reduction teaches individuals to observe situations and thoughts in a nonjudgmental manner without reacting to them thoughtlessly, helps people develop a more automatic consciousness of experiences, and could represent an effective instrument for the reduction of stress (Roeser, 2013).

Anxiety & Depression Reduction

The basic premise underlying mindfulness practices is that experiencing the present moment nonjudgmentally and openly can effectively counter the effects of stressors because excessive orientation toward the past or future when dealing with stressors can be related to feelings of anxiety and depression (Kabat-Zinn, 2003). It is further believed that, by teaching people to respond to stressful situations more reflectively rather than reflexively, mindfulness-based practices can effectively counter experiential avoidance strategies, which are attempts to alter the intensity or frequency of unwanted internal experiences (Hayes et al., 2006). These maladaptive strategies are believed to contribute to the maintenance of many, if not all emotional disorders (Bishop et al., 2004; Hayes, 2004). In addition, the slow and deep breathing involved in mindfulness meditation may alleviate bodily symptoms of distress by balancing sympathetic and parasympathetic responses (Kabat-Zinn, 2003). For example, in the case

of MBSR (Kabat-Zinn, 1982), the two key components are sitting meditation and yoga (Kabat-Zinn, 2003).

Increased Job Satisfaction

Slutsky et al. (2018) has found that mindfulness training offered in the workplace can improve productivity and work-life balance. The randomized controlled study was conducted in a 60 participant marketing firm (Slutsky et al., 2018). Thirty participants participated in mindfulness activities like yoga and meditation for six weeks, while the other 30 participants completed a half-day mindfulness seminar (Slutsky et al., 2018). Researchers found that a six week mindfulness training program is more helpful than a half-day seminar to improve attention, self-reported job satisfaction, and a positive attitude toward work (Slutsky et al., 2018). These findings are a growing part of research suggesting that mindfulness improves job satisfaction, rational thinking, and emotional resilience (Slutsky et al., 2018).

Hafenbrack & Vohs (2018) have suggested that mindfulness could reduce motivation in employees, potentially neutralizing its positive impact on job performance; however, it is thought that mindfulness strategies in the workplace help employees to be more accepting. Moreover, it was found that participants appeared to be calmer and more focused (Hafenbrack & Vohs, 2018). Thus, over a long-term span, possessing more calmness, patience, and resilience will help more employees effectively approach and problem-solve challenging tasks over time (Slutsky et al., 2018). Applying mindfulness to the work equation allows staff the possibility of developing peer relationships based on mutuality and social awareness, thus creating a supportive atmosphere where educators feel safe (Klusmann, 2013). Through these experiences and by incorporating mindfulness

into district mission, vision, and goals, teachers will potentially reap the benefits of mindfulness through a happy classroom culture (Shardlow, 2015).

Increase Teacher Self-Motivation and Focus. Teachers who use mindful techniques can improve self-regulation and focus (Brackett et al., 2010). Teachers who engage in mindfulness-based practices have been shown to have lower cortisol levels and to be more responsive and compassionate towards their students, less emotionally reactive, and more intention in their teaching practices (Kagan, 1992). Mindfulness is also an important tool in increasing equity in classrooms by helping educators become aware of how our own bias can keep one from extending compassion toward students, families, and coworkers (Kagan, 1992).

Moreover, stressed teachers impact students' stress levels, and student stress levels impacts learning outcomes (Brackett et al., 2010). It is found that students learn better in a climate that is more emotionally positive (Brackett et al., 2010). Researchers have found a link between positive emotional classroom climates and academic achievement (Kagan, 1992). Furthermore, when teachers learn and incorporate mindfulness into daily practice, there is potential for teachers to reap the benefits such as reduced stress, depression, anxiety, and an increase in job satisfaction (Kagan, 1992).

Luckily, learning and cultivating skills of mindfulness can help to promote a calm, relaxed, yet enlivened classroom environment that students need in order to learn and where teachers are happy and intrinsically motivated (Tang et al., 2015). Mindfulness can also help to be more effective at reducing conflict and developing more positive methods of relating to families, the community, students, and collogues, which can help

job satisfaction (Brackett at al., 2010). The following section will discuss the benefits of mindfulness and reduced heart disease.

Reduce Heart Disease

Heart disease is the leading killer in the United States, accounting for about one in four deaths every year (Hughes et al., 2013). Because mindfulness-based stress reduction (MBSR) is an increasingly popular practice demonstrated to alleviate stress and treat certain health conditions, MBSR may reduce elevated blood pressure (Hughes et al., 2013). One such study involved those with pre-hypertension who were randomly assigned to augment their drug treatment with either a course in mindfulness or a program that taught progressive muscle relaxation (Hughes et al., 2013). Those who learned mindfulness had significantly greater reductions in their systolic and diastolic blood pressure than those who learned progressive muscle relaxation, suggesting that mindfulness could help those at risk for heart disease by bringing blood pressure down (Hughes et al., 2013). Moreover, research from the American Heart Association (2017) concluded that, while research remains preliminary, there is enough evidence to suggest mindfulness as an adjunct treatment for coronary disease and its prevention as meditating can increase respiratory sinus arrhythmia, the natural variations in a heart rate that happen when breathing that indicate better heart health and an increased chance of surviving a heart attack (American Heart Association, 2017). The next section will detail mindfulness and cognitive decline.

Decrease Cognitive Decline

Mindfulness may also decrease cognitive decline from aging or Alzheimer's as people tend to lose some of their cognitive flexibility and short-term memory while aging

(Hernandez et al., 2016). In a 2016 study, those with Alzheimer's disease engaged in either mindfulness mediation, cognitive stimulation therapy, relaxation training, or not treatment, and were given cognitive tests over a two year span (Hernandez et al.). While cognitive stimulation and relaxation training seemed to be somewhat beneficial in comparison to no treatment, the mindfulness training group had much more robust improvements on cognitive scores than any other group (Hernandez et al., 2016).

This is perhaps true with evidence from a 2017 study that looked at brain functions in healthy, older adults suggesting that meditation may increase attention (Malinowski et al.). In this study, those 55 to 75 years old spent eight weeks practicing either breathing meditation or a control activity (Malinowski, et al., 2017). Then, the participants were given a test that measures attention and emotional control called the Stroup test while having their brains monitored by electroencephalography (Malinowski et al., 2017). Those undergoing breath training had significantly better attention on the Stroup test and more activation in an area of the brain associated with attention than those in the active control group (Malinowski et al., 2017). The next section will outline mindfulness and immune response.

Immune Response

Moreover, mindfulness may improve immune response as suggested by Creswell et al. (2008). In a study of patients with breast cancer or HIV, mindfulness mediation appeared to increase levels of T-Cells and T-Cell activity (Creswell et al., 2008). This is important as human bodies send out troops of immune cells (T-Cells) that circulate in the blood and help fight disease and infection (Creswell et al., 2008). This also suggests that mindfulness could play a role in fighting cancer and other diseases that call upon immune

cells as mindfulness appears to improve a variety of biomarkers that might indicate progression of the disease (Creswell et al., 2008).

Mindfulness has also been linked to increases of interleukin-10 colitis patients who took a meditation course compared to a mind-body educational program, especially among patients whose colitis was flared (Jedel et al., 2014) while Meesters et al. found that patients who had a greater increase in mindfulness after an MBSR course also showed faster wound healing, a process regulated by the immune system (2017).

Studies have also found effects on markers of inflammation, like C-reactive protein, which in higher levels can harm physical health (Pradhan et al., 2007). Research shows that people with rheumatoid arthritis have reduced C-reactive protein levels after taking an MBSR course versus being on a waitlist for the course (Pradhan et al., 2007). Overall, these findings suggest that mindfulness meditation can have disease-fighting powers through our immune response (Pradhan et al., 2007). This is described in the next section detailing stress for teachers.

Stress for Teachers

In addition to mindfulness, the second important topic in this study relates to stress for teachers specifically. Stress is a problem in modern society as continuous stress consumes energy and, when at extreme levels, negatively impacts physical and mental health (Romas & Sharma, 2014). However, stress is currently exponentially higher for teachers across the United States after dealing with nearly two years of uncertainty, long hours, juggling personal and professional responsibilities, and facing quarantines, illnesses, and deaths of students and their own family and friends (Green, 2021). Many

experienced teachers claim that the last two years in education have been the most challenging they have ever encountered in education (Green, 2021).

Teachers are almost twice as likely to experience frequent job-related stress and nearly three times as likely to experience symptoms of anxiety and depression than the general adult population (Will, 2021). As teachers spend the school year juggling remote and in-person learning (and also potentially pivoting between the two), they have had to contend with technical problems and the fear of contracting COVID-19 in the classroom (Green, 2021). Because teaching was already a stressful job before the pandemic beginning in 2020, one in five teachers report that they are not coping well with the job-related stress, and 27% said they experience symptoms of depression and anxiety (Will, 2021). Unfortunately, those experiencing symptoms of depression and burnout can be less engaged in their work and may be absent more often that lead to a potential unfavorable impact on students as well as the harmful impact depression and anxiety has on teachers, their well-being, and their professional and personal relationships (Will, 2021). Thus, the next section will detail job satisfaction for teachers.

Teacher Job Satisfaction

The third important topic in this study relates to teacher job satisfaction. Hoppock (1935) defines job satisfaction as any combination of psychological, physiological, and environmental circumstances that cause a person to truthfully indicate joy in the workplace. In more recent years, job satisfaction has been called a set of favorable or unfavorable feelings and emotions with which employees view their work (Karatepe et al., 2006). As reported by Jumari, (2001), job satisfaction research has discovered that

communication, culture, security, leadership, pay, and rewards are the top concerns of employees when rating job satisfaction.

Job satisfaction for teachers is vital to success as it is a primary responsibility for schools to ascertain that employees are satisfied through measurements, but also to find out the causes of dissatisfaction when employees are not feeling satisfied (McBride, 2002). Tools like the Job Satisfaction Survey (Spector, 1985), the Job Description Index (Castanheira, 2014), and the Minnesota Satisfaction Questionnaire (Weiss, Dawis, & England, 1967) help to rate job satisfaction. In addition, the Employee Job Satisfaction and Engagement Report from the Society for Human Resource Management (Lee et al., 2016) notes that those who report job satisfaction are more likely to be motivated at work. According to Latham (2012), motivation is a cognitive resource allocation process in which a person makes choices as to the time and energy allocated to an array of motives or tasks. Thus, when a teacher is able to make a choice, they feel more motivated to perform a task (Lathan, 2012). When a teacher is more motivated to perform and complete a task, this tends to be linked with higher job satisfaction, better job performance, and less chance of burnout (Jalagat, 2016).

The lack of job satisfaction also leads to burnout and turnover problems (Gallup, 2013). When considering job satisfaction for teachers specifically, nearly one in every four teachers report they are likely to leave their current teaching career by the end of the 2021-2022 school year, while 54% of teachers say they are somewhat or very likely to leave teaching within the next two years (Will, 2021). Before the COVID-19 pandemic, federal data indicated that 16% of teachers quit their teaching job every year and either go to another school or leave the teaching profession entirely (Will, 2021). Therefore, in

order to improve the quality of teaching and ease the difficulty of shortage of teachers, it is important to maintain teachers' high job satisfaction.

External Predictors or Teacher Job Satisfaction

Since teacher job satisfaction may influence teacher career stability, researchers have compiled predictors that can influence teacher job satisfaction. Based on Hoppock's (1935) definition of job satisfaction, teacher job satisfaction could be described as teachers' positive emotional state resulting from the appreciation of being teachers. Improving teacher job satisfaction is important because research shows that younger teachers are more likely to leave their jobs because of low job satisfaction, which leads to a teacher shortage (Green-Reese, Johnson, & Campbell, 1991). Research regarding facets' of job satisfaction is described below.

Nature of work and contingent rewards. Norton (1999) found that teachers who are committed to their role as a teacher statistically enjoy their coworkers and feel as if they are valued by administration. Minarik, Thornton, and Perreault (2003) also found that if teachers were not given enough contingent rewards, like positive reinforcement from others, for their teaching skills and knowledge, they were more likely to report having a lower job satisfaction and were more likely to leave the profession. This includes but is not limited to not feeling appreciated at work and efforts not being appropriately rewarded.

Pay, benefits, and promotions. Elam (1989) reports that a reason for teachers' dissatisfaction is low salary, and Certo and Fox (2002) reports that teachers with higher salaries had higher levels of job satisfaction. Because of this, low socio-economic schools face the risk of losing teachers and having low teacher quality where there is low job

satisfaction among teachers (Billingsley, 2004). Also, the benefits such as good retirement, traveling welfare, and subsidies for future education also has a positive influence on teacher job satisfaction (Chen et al., 2006). As for promotion, Wong and Wong (2005) find that teachers in low socio-economic regions have a low satisfaction about promotion, which influences the district's outcomes, especially teacher commitment to their school.

Relationships. According to Norton (1999), ensuring that teachers love their jobs and those they work with will increase job satisfaction of teachers. Teachers' working relationships are crucial to the overall well-being and performance ratings at work (Tran et al., 2018). Positive effects of high-quality workplace relationships equates to higher commitment, lower level of job stress, and increased perception of social impact (Tran et al., 2018). Motivation of working relationships increases personal responsibility, management skills, and a greater performance that often leads higher job satisfaction (Raza, 2015). This increases a greater positive attitude regarding the workplace and fosters positive of working interactions (Tran et al., 2018). Unfortunately, COVID-19 is also affecting the job satisfaction of teachers, and deterioration of the well-being of educators is also caused by changes in the working environment, such as remote working that affects both social interactions that impede job satisfaction (Raza, 2015).

Working conditions. Working conditions, including supervision, operating procedures, co-workers, and communication have been important factors to influence teacher job satisfaction (Norton, 1999). Minarik, Thornton, and Perreault (2003) found several factors that may influence job satisfaction in the work place, such as not enough mentoring, lack of administrative and community support, students' misbehaviors, and

unsafe working conditions. Other research shows that bad working conditions and heavy teaching workload also reduce teacher job satisfaction (Liu & Ramsey, 2008). Moreover, the way principals manage their schools, relationships with coworkers, and the lack of peer support are other factors that influence teacher job satisfaction (Minarik, Thornton, & Perreault, 2003).

Overall performance and job satisfaction is sustained when both organizational leaders and staff are motivated by a positive working environment (Watkins, 2000). Moreover, it has been determined that principals can sustain performance improvements by creating a climate that motivates, develops, and retains talented people (Stringer, 2002). Stinger (2002) also found that the leader of an organization is the most important determinant of climate as it drives motivation and performance. For instance, Goleman (2001) found that "An analysis of data on 3,781 executives, correlated with data from climate surveys filled out by those who worked for them, suggest that 50% to 70% of employees' perception of working climate is linked to the characteristics of the leader (p. 42). Also, there is a direct correlation between growth, efficiency, and profitability as "analysis suggests that climate accounts for nearly a third of the motivation results, which is simply too much of an impact to ignore" (Goleman, 2000, p. 82). Moreover, McGlamory and Edick (2004) report that the Cadre Project, a support program for newly certified elementary and secondary teachers that provided personal professional development (PD), significantly increased job satisfaction and the likelihood to stay in their profession.

Job-Embedded Professional Development

Job-embedded professional development (JEPD) refers to teacher learning that is grounded in day to day teaching practice and is designed to enhance teachers' instructional practices with the intent of improving student learning (Darling-Hammond & McLaughlin, 1995). JEPD facilitates the transfer of new skills into practice (Hirsh, 2009). When ongoing support through the tools of JEPD is linked with instructional supervision, transfer of skills into practice becomes part of the job (Hirsh, 2009).

Through embedding mindfulness practices into daily professional development, the skills taught are going to become part of the job (Darling-Hammond & McLaughlin, 1995). For mindfulness learning to occur on the job, learning must be consistent with principles of adult learning (Hirsh, 2009). Learning goals must be realistic, learning must be relevant to the teacher, and teachers must have concrete opportunities to practice the skills be learning (Hirsh, 2009).

For learning to occur on the job, teachers must be able to trust the process (peer coaching and video tape analysis), their colleagues, and themselves (Hirsh, 2009). Teachers need to know that feedback will be constructive and not personal while also providing sufficient resources in order to support learning (Darling-Hammond & McLaughlin, 1995). Providing release time for teachers' professional development requires the creative use of human resources and with outside facilitators to assist teachers in learning new skills (Darling-Hammond & McLaughlin, 1995).

Moreover, cost and time must be considered. Traditionally, professional development takes place after hours or during the summer months at a remote location (Hirsh, 2009). Job-embedded mindfulness professional development requites time to be

regularly built into the routines of the normal working day at the teachers' school (Hirsh, 2009). To extend learning time into the regular school day, administrators may re-arrange existing planning time to create extended time, beyond the traditional daily planning period for collaborative learning and to practice mindfulness when not with students (Hirsh, 2009). Because of the need of mindfulness, the next section will explain the importance and need for the study.

Need for Study

Educator's jobs are stressful and this is why the study of the impact of mindfulness on teachers is important. Mindfulness practices can reduce levels of stress, anxiety, depression, increase job satisfaction among educators (Tang et al., 2015). Moreover, with heightened performance pressure to teach seamlessly while battling quarantines and Covid-19 absences, educators must have inexpensive tools to keep themselves mentally and physically healthy and for schools to retain highly qualified staff (DESE, 2020).

Demographics

The school district at the focus of this study is in the Arkansas River Valley nestled at the base of the Ouachita, Boston, and Ozark Mountains. The national census reports that the small town to which the school district belongs has a population of 4,693 people (U.S. Census Bureau, 2020). The 2020 average household income has fallen to $21,713 from $22,185 in 2017, and the estimated per capita income is only $18,174 (U.S. Census Bureau, 2020). This is potentially because a chicken plant, a small hospital, two grocery stores, three banks, two gas stations, and one school hold the only jobs in the community and most of the county.

The school district serves 2,104 students grades K-12. During the 2020-2021 school year, 75.4% of students were eligible for free/reduced meals, which is well above the national average of 51.49% (Department of Elementary and Secondary Education, 2020). 96.3% of the school's staff is completely certified and highly qualified to teach in their subject area (Department of Elementary and Secondary Education, 2020). In addition, 55.6% of those educators have bachelor's degrees, while 44.4% have master's degrees (Department of Elementary and Secondary Education, 2020).

Theoretical Framework: Bandura's Social Cognitive Theory

This study is guided by Bandura's Social Cognitive Theory (SCT). Social Cognitive Theory (SCT) started as the Social Learning Theory (SLT) in the 1960s and originated from the work of Albert Bandura (LaMorte, 2019). SLT developed into SCT in 1986 and emphasizes that learning occurs in a social context with dynamic and reciprocal interaction of the person, environment, and behavior (Bandura, 1986). SCT specifically focuses on social influence and its emphasis on external and internal social reinforcement (Bandura, 1986). SCT considers the unique method in which individuals acquire and maintain behavior, while also considering the social environment in which individuals perform behavior (LaMorte, 2019). The theory takes into account a person's past experiences, which factor into whether behavior action will occur (LaMorte, 2019). These past experiences influence reinforcements, expectations, and expectancies, all of which shape whether a person will engage in a specific behavior and the reasons why a person engages in that behavior (Bandura, 1986).

Key Concepts

SCT emphasizes that observational learning is not a simple imitation process; humans are the agents of their own behaviors (Bandura, 2001). Based on this idea, Bandura identified several concepts critical for learning (Bandura, 2001). The first concept is human agency (Bandura, 2001). The core feature is it's "power to originate actions for given purposes" (Bandura, 1997, p. 3). Also, "SCT identifies the following three modes of human agency: personal, proxy, and collective" (Bandura, 1997, 9. 13).

The next key concept of SCT is self-regulation (Bandura, 2001). Self-regulation refers to the self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals (Boekaerts, 2005). According to Bandura, self-regulation operates through the following set of psychological sub-functions: self-monitoring, judgmental, and self-reaction influences (Bandura, 1991). The last key concept is self-efficacy (Bandura, 2001). Self-efficacy plays a central role in self-regulation process because it concerns an individual's belief in their capabilities to control actions or events in their lives (Wood & Bandura, 1989). These beliefs are based on the individual feeling that they possess the requisite cognitive abilities, motivation, and resources to complete the task (Wood & Bandura, 1989). The following are the four main sources of information that create students' self-efficacy, enactive mastery experiences, vicarious (observational) experiences, social persuasions, and psychological states (Bandura, 1997).

Basic Assumptions

Bandura (2006) often objects to being associated with American behaviorists primarily because he views his theory as "cognitive" and not "behaviorist." However, his

emphasis on the social origins of cognitive process is why his work falls within the paradigm of developmental theories (Green & Peril, 2009). Additionally, he argues that individuals learn both behaviors and cognitive strategies by observing the behavior of others, and these acquisitions can be learned without being directly reinforced (Green & Peril, 2009).

Relevant Propositions

Mccormick and Martinko (2004) introduced relevant propositions regarding Bandura's SCT. They claimed that people can learn by observing others; learning is an internal process that may or not result in a behavior change; and learning can occur without a change in behavior. However, Betz (2007), supported Bandura's basic assumptions of SCT and pointed that behavior is directed toward particular goals; behavior eventually becomes self-regulated; and cognition plays a role in learning. Finally, other studies supported that reinforcement and punishment have indirect rather than direct effects on learning and behavior (Green & Peril, 2009).

Strengths of Social Cognitive Theory

Based on research, strengths of SCT include the accumulated amount of impressive research records (Green & Peril, 2009). Another strength includes the importance placed on human social behaviors while also being an evolving theory that is open to change (Green & Peril, 2009). Moreover, the theory is focused on important theoretical issues (i.e. role of reward in learning, the stability of behavior) while also offering a reasonable view of people and concern with the social implications of the theory (Mccormick and Martinko, 2004).

Limitations of Social Cognitive Theory

There are several limitations of SCT, which should be considered when using this theory in studies. For instance, the theory assumes that changes in the environment will automatically lead to changes in the person, when this may not always be true (Brackett et al., 2010). Moreover, the theory is loosely organized, based solely on the dynamic interplay between person, behavior, and the environment (LaMorte, 2019). In addition, SCT heavily focuses on the process of learning and in doing so disregards biological and hormonal predispositions that may influence behaviors, regardless of past experience and expectations (LaMorte, 2019).

Ties to this Research Study

This study is guided by Bandura's Social Cognitive Theory (SCT). SCT argues that via self-regulation, individuals have the ability to control their actions (Bandura, 1989). Moreover, self-regulation increases individual expectation of future success in similar situations based on successful past mastery experience (Bandura, 1997). In other words, personal belief in the ability to perform the action required and in self-regulated behavior is increased (Bandura, 1997). SCT purports that self-regulated behavior is fundamental to human action (Bandura, 2005). Bandura claims that both physical and mental controls are areas in which self-regulation has demonstrated positive effect in pain and emotional management (1989). Thus, the ability to control one's situation, to lower anxiety, and to decrease fear is psychologically beneficial, resulting in reduced perceptions of pain (Bandura, 1989).

Currently, there is literature that supports the benefits of self-regulation for teachers. For instance, Roeser et al. (2013) randomized 113 public school teachers from

Canada and the USA (89% women) to control (N=59) and mindfulness-intervention groups (N=54). The intervention was a slightly adapted version of MBSR. The study showed that mindfulness training for school teachers was feasible in terms of their ability to comply with home practice and completion of the program (87% completed the program). In addition to psychological indicators of stress, the study also considered physiological measures such as heart rate and cortisol level (Roeser et al., 2013).

Compared to the control group, teachers of the mindfulness intervention reported greater improvements in measures of mindfulness, self-compassion, and considerable reductions in occupational stress and symptoms of burnout, anxiety, and depression (Roeser et al., 2013). Objective measures of focused attention and working memory capacity increased significantly in the intervention but not in the control group (Roeser et al., 2013). However, the effect sizes between groups were small for these measures.

Changes in mindfulness and self-compassion at post-test mediated effects of the intervention on reductions in stress, burnout, anxiety, and depression at the three-month follow-up. However, no positive training effect on physiological indicators of stress such as blood pressure, resting heart rate, and cortisol level was detected (Roeser et al., 2013). While this and the other results discussed above are promising, studies focusing on the impact of MBSR on teacher self-regulation and classroom performance are lacking.

Brackett et al. (2010) found that the emotional regulation ability of teachers was positively associated with job satisfaction, positive affect, and principal's support. In a large-scale qualitative study, Sutton, Mudrey-Camino and Knight (2009) showed that teachers were aware of the importance of emotional regulation but thought they sometimes lacked the skills to regulate negative emotions (Sutton, Mudrey-Camino, &

Knight, 2009). Moreover, emotionally exhausted teachers were also more likely to describe student behavior as disruptive (Kokkinos, Panayiotou, & Davazoglou, 2003).

Furthermore, the more teachers experienced negative affect in the classroom, the more students rated their instructional as of poor quality (Frenzel et al., 2009). To support this, theorists have researched mindful practices in efforts to help regulate stress, anxiety, and depression while also positively influencing job satisfaction. However, a potential risk with mindful practices is to view the process as a simple treatment to apply when one is feels stress, anxiety, depression, or has low job satisfaction (Tang et al., 2015).

Ultimately, Bandura's Social Cognitive Theory (SCT) ties into the study because educators who are able to better regulate their emotions are more likely to report reduce levels of stress, anxiety, depression, and increase job satisfaction and mindfulness is designed for stress management, depression, and anxiety (Tang et al., 2015) Therefore, it makes sense to determine if there is a relationship between mindfulness practices and teachers (Tang et al., 2015). Teachers with reported low stress, anxiety, and depression levels as well as high reported job satisfaction could bring more enjoyment and motivation to both schools and students, which could results in increased teacher and student success (Demirtas, 2010).

Research Questions

The following research questions will be explored in this study:

RQ 1. How do mindfulness activities impact self-reported teacher stress, anxiety, and depression?

RQ 2. How do mindfulness activities impact teacher job satisfaction?

Summary

The literature review of this quantitative study began with the examination of the definition and history of mindfulness. If was found that mindfulness is the ability to pay specific attention to the present moment in a non-judgmental way (Kabat-Zinn, 1991, 2003) and has been practiced as early as Hinduism dating back between 2300 BC and 1500 BC (Thera, 1975). These were the ancient yoga practice of meditation, silence, and acceptance (Trousselard et al., 2014). Later on, Buddhism considered *Sati*, or mindfulness, as an essential part of Buddhist practice as taught by Buddha 2,500 years ago (Thera, 1975). In modern times, many traditions such as Tibetan or Zen schools teach mindfulness (Thera, 1975). Mindfulness also has roots in other religions, such as practicing the *Presence of God* (Christianity) or having a continuous awareness of Allah (Islam) are examples of mindful practices (Thera, 1975). Secular practices in the West started only recently in the 1970s (Thera, 1975). These practices have the main objective of stress reduction or mind focus enhancement (Parsons et al., 2017). Connecting mindfulness and its ancient rooted philosophy brings in-depth and more effective practices (Thera, 1975). Perhaps this is because mindfulness is not only a tool or therapy but rather allows users to learn to connect genuinely with their higher self in order to encompass a profound vision (Thera, 1975). Consequently, mindful practices

The literature review further outlines that even though people have been meditating for years often as part of a spiritual practice, it has not been until recently that mindfulness has become a popular way to help people, specifically, educators, manage their stress, anxiety, depression, and overall job satisfaction (Parsons et al., 2017). Researchers and practitioners have found that mindfulness practices, specifically

meditation, changes human brains and biology in positive ways, thus improving mental and physical health.

Following a review of the history, important mindful strategies are discussed including Mindful-Based Stress Reduction (MBSR), Mindful-Based Cognitive Theory (MBCT), and Interacting Cognitive Subsystems (ICS). Central key concepts of these theories discuss their benefits and how they foster emotional well-being and the potential to reduce psychological stress (Parsons et al., 2017). The literature review also contains an examination of the benefits of mindfulness practices (Brackett et al., 2010) and the impacts on education as well as a detailed explanation of Bandura's Social Cognitive Theory (1986).

III. Methodology

The purpose of the quantitative study will be to examine whether participation in mindfulness activities is associated with changes in levels of mindfulness of teachers. This study may make possible contributions that will help communicate the importance of mindful based interventions for teachers while also clarifying the need for mindful interventions in teachers' professional development. The methodology sections outline the research questions while detailing the research design, participants, instrumentation, and the data collection and analysis phases of the research process.

Research Questions and Hypotheses

This study will explore the following research questions and hypotheses:

RQ 1. How do mindfulness activities impact self-reported teacher stress, anxiety, and depression?

H1: Participants will have lower reported stress levels than the control group.

H2: Participants will have lower reported anxiety levels than the control group.

H3: Participants will have lower reported depression levels than the control group.

RQ 2. How do mindfulness activities impact teacher job satisfaction?

H1: Participants will have higher reporter job satisfaction than the control group.

H2: Novice participants will have higher reported job satisfaction than the novice control group.

H3: Experienced participants will have higher reported job satisfaction than the experienced control group.

Research Design

A quantitative quasi pre-post group design study will be conducted in order to measure subjective stress perceptions. Quantitative studies include a set of strategies, techniques, and assumptions used to study psychology and social processes through numeric patterns (Coghlan & Brydon-Miller, 2014). The collection of quantitative data allows researchers to conduct statistical analysis that aggregate and show relationships amongst the data (Coghlan & Brydon-Miller, 2014). Quantitative studies include surveys, questionaries, structured observations, or experiments (Allen, 2017). The purpose of quantitative research is to generate knowledge and create understanding about a social world and is used to learn about a particular group or people or otherwise known as a sample population (2017). Quantitative research design relies on data that is observed or examined through sample questions administered to a specific population (Allen, 2017).

The format of the study will be a pre and post group design with one control group and one intervention group. Pre-test and post-test design is an experiment where test units are randomly allocated to an experimental group and a control group. (Levine, 2014). Both groups are measured before and after the experimental group is exposed to the treatment (Levine, 2014). Of the minimum 40 participants, at least 20 will be randomly assigned to do the pre and post surveys, the short three to five minute guided mediations at least five days a week, and using the 3x3 Method when anxious or stressed. The control group will complete the pre and post surveys only at the beginning and the end of the eight-week period.

Participants

The results of this study will generalize novice and experienced teachers in a rural public school in the Arkansas River Valley. A minimum of 20 novice teachers and a minimum of 20 experienced teachers will be recruited through convenience sampling at a rural K-12 public school in the Arkansas River Valley.

Population and Context of the Study

This study will include, at most, 157 participants between the ages of 23 and 81 in grades Kindergarten through the 12th grade. The longest teaching educator has 51 years in education while there will be participants who have just started their career with no years' experience. According to the Division of Elementary and Secondary Education (DESE), the district teachers have an average of 14 years teaching experience (DESE, 2019). Those participating play different roles in the educational process. Some are classroom educators who teach all subjects (grades K-4) and others are subject specific (grades 5th - 12th). Others are specialty teachers (music, art, computer, physical education, library media specialists, Reserve Officers' Training Corps, special education, etc.). Other participants may also include school counselors, library media specialists, instructional facilitators, and reading/math/English as a Second Language interventionists. Most of the school staff have gained their initial teacher licensure through a traditional four-year accredited college program. However, some gained their teacher licensure through non-traditional master's programs.

The school community consists of an estimated 2,100 students who are reported as being low-socioeconomic with a significant portion Spanish speaking or English as a second language (ESL). According to the Department of Elementary and Secondary

Education, 20% of the students are English learners, 70% live in poverty situations, and 15% of students are eligible to receive special education services (2019). The student demographics are as follows: 61.1% Caucasian, 30.8% Hispanic, 2% African-America, 1.4% two or more races, 1% Asian, and .2% Native American (DESE, 2019).

Sample

At a minimum, 20 novice teachers and 20 experienced teachers will be recruited through convenience sampling at a rural K-12 public school in the Arkansas River Valley. This sample size of a minimum of 40 has been decided as it encompasses roughly 25% of the teacher population; thus, if some teachers drop out, the researcher will still have a sample size that represents at least 10% of the teacher population. It is important to maintain a sample size that is appropriate of the population represented as to be able to generalize study findings for a group of people while also producing results among variables that are significantly different (Length, 2001). For quantitative studies, a large group of participants broadens the range of possible data and forms a better picture for analysis (Length, 2001).

Teachers who have 0-3 years' experience will be considered novice, and those with four or more years will be considered as experienced. Detailed demographics will be collected including current medical or mental health difficulties as well as years of teaching to determine novice or experienced status. Exclusion criteria for this study will be as follows: (1) those currently suffering from an acute psychiatric crisis, and/or (2) psychosis or delusion currently being treated by a medical professional. Those teaching who indicate they are on a mental health care plan with their primary care provider (PCP) will not be eligible to participate as not to interfere with the current treatment plan as

prescribed by a medical professional. Eligibility includes educators who are as follows: 1) a licensed teacher in the chosen River Valley school, 2) agree to participate in the pre-posttest given, and 3) agree to actively practice the mindfulness activities described to them at the initial meeting if chosen to be in the treatment group.

Sampling Method

Convenience sampling will be used to obtain, at a minimum, 40 plus K-12 teachers in a rural public school district in the Arkansas River Valley. Convenience sampling is the method of gathering data from participants who are conveniently located (Gall, Borg, & Gall, 1996). "Researchers often need to select a convenience sample or face the possibility that they will be unable to do the study. Although a sample randomly drawn from a population is more desirable, it usually is better to do a study with a convenience sample than to do no study at all– assuming, of course, that the sample suits the purpose of the study" (Gall, Borg, & Gall, 1996, p. 228). Convenience sampling is best for this study as it is inexpensive, efficient, and easy to implement in one school semester. In addition, the researcher works in the school district and has access to the participants. The participants chosen will be the most appropriate source of data for the study as the control and treatment participants are most likely those who will benefit from the study of the impact of mindfulness activities of educators.

In order to obtain participants, the researcher will detail the study with the school superintendent to first gain permission. After permission is granted, the researcher will email the teacher population a detailed explanation of the study as well as a form link to sign up for participation in hopes of recruiting those educators who truly want to be part of an educational study regarding the impact of mindfulness. Those who wish to

participate will complete a six question form indicating that they would like to participate in the study (question one) as well as select meeting times and dates that would work for them (question two).

The third question will ask to list the number of years teaching while the fourth question will have the participants indicate if they are currently under the care of a primary care provider who has placed them on a mental health care treatment plan. If not, the participant must agree to allow their anonymous information to be disaggregated and shared while also agreeing to fully participate with fidelity in the pre and post surveys and the mindfulness activities if chosen to be in the treatment group. The educators also must agree to not share treatment/mindfulness activities until after the study is completed as not to impede findings.

To assign groups, the researcher will first write all the names down on a piece of paper. Then, the names will be separated between novice and experienced teachers. Lastly, the names from the novice group will be randomly drawn and the names of the experienced group will be randomly drawn. After groups are established, participants will receive a welcome email with detailed instructions that include their role in the study as well as reiterate the information provided to them at the introductory Google Meet.

After the study is over, the researcher will share treatment plans and access to all mindfulness activities through a video that will give the control group equal access. The researcher is hopeful that more than forty participants sign up in case some decide to drop out of the study. If more sign up, the control group and the participating group will be as evenly and randomly divided as possible.

Data Collection

This will be a quantitative study using the Depression Anxiety Stress Scales-21 (DASS-21) before and after practicing in a period of mindful activities. Moreover, Job Satisfaction Survey (JSS) will be used to determine job satisfaction based on a nine-facet scale to examine attitudes and aspects of the job.

This study will be conducted between September and November of 2021 in a small rural school in the Arkansas River Valley. During an eight-week period, a minimum of 40 participants will be recruited through convenience sampling. Of this minimum of 40, at least 20 participants who will sign up for the study using the electronic form sent to their email will begin the mindfulness regime after taking the pretests (DASS-21 and JSS). Twenty other teachers (a minimum of 10 novice and 10 experienced) will be randomly selected as the control group and will only complete the pre-tests (week one after the informational zoom meeting) and posttests (at the end of week eight).

Before starting the eight-week regiment, all participants, control and treatment group, will complete the DASS21 and JSS pretests. The treatment group will be shown "30 Seconds to Mindfulness" by Phil Boissiere. This is an eight minute *Ted Talk* on the background of mindfulness and will provide as evidence for the benefits of stress management through mindfulness practices, more specifically, guided mediation, breathing techniques, and the 3x3 Method: The treatment group will identify three everyday objects close to them when anxious. They will then take a deep breath and say the first object in their head or aloud; take a deep breath and say the second object; take a deep breath and say the third object; thus, the goal is for the participants to breathe and

identify these three objects three times (hence the 3x3 method). This will take place through a short zoom session after school during the first week of September. The treatment group will then, for eight weeks, practice short three to five minute guided meditation practices each day for a minimum of five days a week (following sample YouTube videos sent to them) as well as practice the 3x3 breathing method when feeling anxious. When the study is over, all participants will then complete the post DASS-21 and JSS.

Those participating in the control group and the treatment group will be entered in a drawing for one of two $100 Amazon gift cards. The gift cards (one for control group participants and one for treatment group participants) will be given to the winners at the end of the eight weeks after the post-tests have been completed.

Instruments

The data will be disaggregated through SPSS software using a t-test to evaluate changes to the outcome variable across the control and intervention groups. The participants and the control group will both take the following pre and post surveys over an eight-week period: Depression Anxiety Stress Scale-21 (DASS-21) and the Job Satisfaction Survey (JSS).

Depression, Anxiety, Stress Scales (DASS-21)

In order to perform the quantitative study, the researcher will use a survey to measure emotional status of stress levels using the Depression Anxiety Stress Scales-21 (DASS-21) before and after participating in a period of mindful activities. The participants and control group will also take the Job Satisfaction Survey (JSS) to determine the teachers' self-reported satisfaction with their current job by rating salary,

promotion opportunities, supervision, fringe benefits, coworkers, tasks, communication, and general satisfaction.

The Depression, Anxiety and Stress Scale-21 (DASS-21) is a questionnaire that consists of three self-report scales designed to measure the emotional states of depression, anxiety, and stress Lovibond & Lovibond, (1995). The DASS-21 consists of 21 items, seven items per subscale: depression, anxiety and stress. Patients will be asked to score every item on a scale from 0 (does not apply to me at all) to 3 (applies to me very much). Sum scores will be computed by adding up the scores on the items per (sub)scale and multiplying them by a factor two. Sum scores for the total DASS-21 total scale will range between 0 and 120, and those for each of the subscales will range between 0 and 42. Cut-off scores of 60 and 21 will be used for the total DASS-21 scores. These cut-off scores are derived from a set of severity ratings, proposed by Lovibond and Lovibond (1995). Scores ≥60 (for DASS-total) and ≥21 (for the depression subscale) are labeled as "high" or "severe" (Lovibond & Lovibond, 1995). The DASS-21 survey is the best fit for this research because the instruments to be used are established and have been used by Henry and Crawford (2005) and Lovibond and Lovibond (1995). Henry and Crawford (2005) also reported subscales to be reliable measures of depression (x=.88), anxiety (x=.82), and stress (x-.90).

Validity. Akin and Cetin (2007) investigated the validity of the of the Depression Anxiety Stress Scale-21 (DASS-21). The sample of the study consisted of 590 university students, 121 English teachers and 136 emotionally disturbed individuals who sought treatment in various clinics and counseling centers (Akin & Cetin, 2007). Findings from discriminant validity analyses showed that the DASS-21 discriminates the normal and

clinical population (Akin & Cetin, 2007). Concurrent validity was measured against the DASS-42, a much longer questionnaire by Lovibond and Lovibond, and the correlation coefficients between the two scales were found to be high at 0.87 and 0.84 (Akin & Cetin, 2007). These results provide evidence that the DASS-21 is a valid instrument.

Reliability. According to Akin & Cetin, the DASS-21 has been found to have an overall reliability of $\alpha = .93$. The reliability of the DASS-21 was $\alpha = .95$ for the depression subscale (Akin & Cetin, 2007). Internal consistency of the entire scale was found to be reliable at $\alpha = 0.89$ (Akin & Cetin, 2007). Item-total correlations ranged from 0.51 to 0.75. Test-retest and split-half reliability coefficient scores were 0.99 and 0.96 (Akin & Cetin, 2007). These results provide evidence that the DASS-21 is a reliable instrument.

Job Satisfaction Survey (JSS)

The Job Satisfaction Survey (JSS) is a 36 item, nine-subscale survey used to assess employee attitudes about the job and aspects of the job (Spector, 1985). The JSS is the best fit for this study as it was developed on 10 diverse samples with a combined sample size of more than 2100 people (Spector, 1985). The nine subscales of the JSS are Pay, Promotion, Supervision, Fringe Benefits, Contingent Rewards (performance-based rewards), Operating Procedures (required rules and procedures), Coworkers, Nature of Work, and Communication. Each subscale is assessed with four items, and a total score is determined from all items.

When administering the JSS, a summative rating scale will be used, with six choices per item ranging from “strongly disagree” to “strongly agree.” Items will be written in both directions, so some must be reverse scored. The cut scores to represent

dissatisfaction versus satisfaction will be determined by using a six-point agree-disagree response choices where the researcher will assume agreement with positively worded items and disagreement with negatively worded items representing satisfaction. Similarly, disagreement with positive-worded items and agreement with negative-worded items will represent dissatisfaction.

Validity. This study uses scales for job satisfaction that the support validity of the study (Spector, 1985). The JSS is a well-established instrument that has been repeatedly investigated for validity. For the Spector (1985) study, major evidence for discriminant and convergent validities was provided by a multitrait-multimethod analysis of the JSS and the Job Descriptor Index (JDI) subscales (1985). The JDI was introduced in this study as the JSS did not cover all areas of human services satisfaction (Spector, 1985). In addition, the JDI found lower satisfaction than norms of the JSS (Spector, 1985).

After completing the validation study, it was determined that "validity correlations between equivalent subscales from both instruments (JSS and JDI) were significantly larger than zero and of reasonable magnitude of .61 to .80" (Spector, 1985). Moreover, the interrelationship pattern among subscales within each subscale was consistent except for one correlation from each instrument ranging from .20 to .37 (Spector, 1985). In turn, the subscales were intercorrelated but there were moderate differences in the subscale correlations; however, they were shown to be similar enough to the JDI even though the subscale diverged slightly. (Spector, 1985). Thus, these correlations ranged from .11 to .59 with a median correlation of .35, establishing that the JSS measures what Spector claims it measures (1985). Exploratory factor analysis of the

nine subscales show little evidence of cross-loadings, and a confirmatory factor analysis for the subscales showed good fit (1985).

Reliability. The internal consistency reliability was calculated for each subscale, and each was above the $\alpha = .50$ minimum (Spector, 1985). Each subscale showed over $\alpha = .70$ except for two, and the total (overall) scale was $\alpha = .91$ (Spector, 1985). The nine sub-scales show an internal consistency of $\alpha = 0.60$ for coworkers to $\alpha = 0.91$ for the total scale (Spector, 1985). Coefficient alphas for the eight subscales are all above $\alpha = .90$ (Spector, 1985).

Data Analysis

The data in this study will be analyzed using the appropriate statistical test for each hypothesis. Table 1 below outlines each hypothesis, the research questions that aligns with each hypothesis, and the variables and statistical test to be performed.

Table 1

Research Questions, Hypotheses, Variables, & Statistical Tests

Research Question	Hypothesis	Variables	Statistical Test
RQ1: How do mindfulness activities impact teachers' self-reported stress, anxiety, and depression levels?	H1: Participants will have lower reported stress levels than the control group.	IV-Participation DV-Self-Reported Stress	t-test
	H2: Participants will have lower reported anxiety levels than the control group.	IV-Participation DV-Self-Reported Anxiety	t-test
	H3: Participants will have lower reported depression levels than the control group.	IV-Participation DV-Self-Reported Depression	t-test
RQ2: How do mindfulness activities impact teacher job satisfaction?	H4: Participants will have higher reporter job satisfaction than the control group.	IV-Participation DV- self-reported teacher job satisfaction.	t-test
	H5: Novice participants will have higher reported job satisfaction than the novice control group.	IV-Novice Participants DV- Job Satisfaction	t-test
	H6: Experienced participants will have higher reported job satisfaction than the experienced control group.	IV - Experienced Participants DV- Job Satisfaction	t-test

Conclusion

Mindfulness is being aware of one's emotions and using interventions as a systematic retraining of awareness and non-reactivity, leading to diffusion from whatever is experienced, and allowing the individual to more consciously choose those thoughts, emotions, and sensations they will identify with, rather than habitually reacting to them. that incorporating mindfulness into job-embedded professional development opportunities for teachers has beneficial impacts of teacher well-being and work performance. In conclusion, it is hypothesized that mindfulness strategies extinguishes harmful thoughts and behaviors and improves job satisfaction.

Through research on emotional regulation and job satisfaction, it is hypothesized that this study will build a foundation for future research on how educational leaders can help teachers develop social and emotional health, habits of mind, and how districts can improve teacher job satisfaction through professional development sessions. It is also hypothesized that novice and experienced teachers will report lower stress levels as well as improved job satisfaction after practicing mindfulness activities.

IV. Results

The purpose of the quantitative study was to examine whether participation in mindfulness activities is associated with changes in levels of mindfulness of teachers. The researcher used the following questions to guide this study:

1. How do mindfulness activities impact teachers' self-reported stress, anxiety, and depression levels?
2. How do mindfulness activities impact teacher job satisfaction?

This chapter is divided into two sections. The first section describes the convenient sampling groups and the data collection process. This portion also includes demographic information for the study participants. The second section includes instrument reliability and data collected for each of the research questions along with an analysis of each hypothesis. The chapter ends with a summary of the findings.

Description of the Sample

The target population for this study was certified classrooms teachers in the Arkansas River Valley employed in a rural public school district. The sample population included primary, intermediate, middle, and high school novice (teaching 0-3 years) and experienced (4 plus years). The number of total participating teachers consisted of 45 certified educators broken down into the following subcategories:

Table 2

Teaching Experience

	Number of Participants
Experimental Novice	11
Experimental Experienced	10
Control Novice	12
Control Experienced	12

Upon IRB approval, the researcher emailed all K-12 teachers within the participating school district. Potential participants were emailed a flyer (Appendix A), interest letter (Appendix B), and a consent form (Appendix C). Those who chose to participate returned the consent form and were given an online screener (Appendix D) to ensure they qualified for participation and to determine if they were novice (0-3 years) or experienced (4+ years).

When all participants had returned all needed documents, the researcher used a random generator to create the sample groups (experimental novice, experimental experienced, control novice, and control experienced). The control groups (control novice and control experienced) were emailed the DASS21 and the JSS and asked to complete and return. They were also told that they would complete the same forms eight week later with no intervention between the pre and post surveys. The experimental groups (experienced experimental and novice experimental) were then emailed with guided meditation sample videos and the *30 Seconds to Mindfulness* (Boissiere, 2017). The experimental groups were also sent the DASS21 and the JSS surveys to complete and return upon completion with instructions to complete the guided meditation and the 3x3 method when stressed or anxious at least three to five times a week for eight weeks. They were also told that they would complete the DASS21 and the JSS after the eight-week experimental period.

Demographic Information

Participants in this study consisted of 45 total participants. Of those participants, 11 are males and 34 are females (See Table 3). Of the 45 participants, 21 teach K-5th grades, 9 teach 6th-8th grades, and 15 teach 9-12th grades. There were 23 novice

participants with 0-3 years teaching experience and 22 experienced teachers with four or more teaching years. Most teachers identified their ethnicity as Caucasian (34), six identified as Hispanic, one identified as Black, and four identified as Bi- or Multiracial.

Table 3

Sample Demographic Information

		Number of Participants
Gender		
	Female	34
	Male	11
Grade Level		
	Elementary (K-5)	21
	Middle (6-8)	9
	High (9-12)	15
Teaching Experience		
	0-3 years	23
	4 or more	22
Ethnicity		
	Black	1
	Caucasian	34
	Hispanic	6
	Bi or Multiracial	4

Most participants in the study were female and identified as Caucasian. This is not expected since 29,941 out of 34,046 teachers in Arkansas identify as White (Arkansas Department of Education Data Center, 2022).

Findings

The following section outlines the analysis of data and findings for both research questions in this study. First, the researcher analyzed data to determine if mindfulness activities impact teachers' self-reported stress, anxiety, and depression levels. Secondly, the data was used to determine if mindfulness activities impact teacher job satisfaction.

T-tests were used for all analyses. According to Levine (2014), a t-test is one of the more common tests in statistics as it is used to test the mean of a single group against a known mean. An alpha level of $p < .05$ was established to accept or reject the research hypotheses.

Research Question 1

The first research question was: *How do mindfulness activities impact teachers' self-reported stress, anxiety, and depression levels?* The purpose of this question was to determine if teacher participation in meditation and the 3x3 breathing technique three to fives times a week decreased teacher stress, anxiety, and depression levels. Hypotheses 1-3 in this study were associated with this research question.

T-test results. To answer the first research question, a t-test was conducted to test each of the hypotheses. An analysis of the data is presented in Table 4.

Table 4

Impact of Mindfulness Activities on Teacher Stress, Anxiety, and Depression

	Experimental (n=21)		Control (n=24)		*t*	*p*
	M	*SD*	*M*	*SD*		
Stress	12.48	9.73	15.5	9.50	-1.05	.30
Anxiety	5.14	5.88	4.25	5.48	.53	.60
Depression	5.71	8.25	6.75	8.88	-.40	.69

$p < 0.05$ level (2-tailed)

The statistical findings are as follows for each hypothesis for research question 1.

Hypothesis 1. *Participants will have lower reported stress levels than the control group.* No significant differences were found for participant stress levels [t (100) = -1.05, $p < .30$] in the experimental group ($M = 12.48$, $SD = 9.73$) versus the control group ($M =$

15.5, *SD* = 9.50); therefore, when analyzed this way, the data suggested practicing mindfulness activities for an eight-week period did not have an effect on participants' stress levels in this sample. Hypothesis one is rejected.

Hypothesis 2. *Participants will have lower reported anxiety levels than the control group.* No significant differences were found for participant anxiety levels [t(100) = .53, p <.60] in the experimental group (*M* =5.14, *SD* = 5.88) versus the control group (*M* = 4.25, *SD* = 5.48); therefore, when analyzed this way, the data suggested practicing mindfulness activities for an eight-week period did not have an effect on participants' anxiety levels in this sample. Hypothesis two is rejected.

Hypothesis 3. *Participants will have lower reported depression levels than the control group.* No significant differences were found for participants depression levels [t(100) = -.40, p = .69] in the experimental group (*M* = 5.71, *SD* = 8.25) versus the control group (*M* = 6.25, *SD* = 8.88); therefore, when analyzed this way, the data suggested practicing mindfulness activities for an eight-week period did not have an effect on participants' depression levels in this sample. Hypothesis three is rejected.

Research question one summary. Based on the statistical data from the t-tests performed to compare stress, anxiety, and depression scales using the DASS-21 pre and post surveys, participating in mindfulness activities for an eight-week period did not have an effect on experimental and control group participants.

Research Question 2

The second research question was: *How do mindfulness activities impact teacher job satisfaction?* The purpose of this question was to determine if teacher participation in

meditation and the 3x3 breathing techniques at least three to five times a week increased teacher job satisfaction.

T-test results. To answer the second research question, a t-test was conducted to test each of the hypotheses. An analysis of the data is presented in Table 5, and the results of each hypothesis for this research question are described below.

Table 5

Impact of Mindfulness Activities on Teacher Job Satisfaction

	Experimental (n=21)		Control (n=24)		*t*	*p*
	M	*SD*	*M*	*SD*		
Experimental vs Control	137	22	130	32	.85	.40
Novice Experimental vs Novice Control	135	24	116	17	2.10	.05
Experimental Experienced vs Control Experienced	140	19	144	38	-.30	.77

$p < 0.05$ level (2-tailed)

Hypothesis 4. *Participants will have higher reporter job satisfaction than the control group.* No significant differences were found for participants' job satisfaction [t(100) =.85, p = .40] in the experimental group (M = 137, SD = 22) versus the control group (M = 130, SD = 32); therefore, when analyzed this way, the data suggested practicing mindfulness activities for an eight-week period did not have an effect on participants' job satisfaction in this sample. Hypothesis four is rejected.

Hypothesis 5. *Novice participants will have higher reported job satisfaction than the novice control group.* Significant differences were found in job satisfaction [t(100) =

2.10, p = .05] for participants in the novice experimental group (M = 135, SD = 24) versus the novice control group (M = 116, SD = 17). It appears practicing mindfulness activities for an eight-week period did have an effect on novice teachers' job satisfaction, as average job satisfaction scores were higher for novice teachers in the experimental group (M = 135) when compared to the novice control group in this sample (M = 116). Hypothesis five is accepted.

Hypothesis 6. *Experienced participants will have higher reported job satisfaction than the experienced control group.* No significant differences in job satisfaction [t(100) = -.30, p = 77] were found for participants in the experimental experienced group (M = 140, SD = 19) versus the control experienced group (M = 144, SD = 38); therefore, when analyzed this way, the data suggested practicing mindfulness activities for an eight-week period did not have an effect on participants' job satisfaction levels in this sample. Hypothesis six is rejected.

Research question two summary. Based on the statistical data from the t-tests performed to compare job satisfaction among novice and experienced teachers using mindful activities for an eight-week period, the mindfulness activities did not have an effect on the experimental vs. control group and the experimental experienced groups; however, there was a significant difference among the novice control group and the novice experimental group's job satisfaction; therefore, mindfulness activities did appear to have an impact on novice educators when considering job satisfaction.

Other Analyses

Addition tests were performed in addition to the hypothesis to check variances in the data. These additional analyses included within group analyses and Levene's test for equality of variances. Each of these is described below.

Within Group Means. Even though this was not a hypothesis, the researcher found it important to explore if there were any differences in mean scores among the groups before testing. Therefore, a t-test experimental and control group using all measures as computed in SPSS software (DASS-21 stress pre and post; DASS-21 anxiety pre and post; DASS-21 depression pre and post; JSS total pre; and JSS total post). This testing measure showed that there were no significant mean score differences among the participating groups as reported in Table 6.

Table 6

T-Test Experimental and Control All Measures

	Experimental (n=21)		Control (n=24)	
	M	*SD*	*M*	*SD*
DASS Stress Pre	19	12	13	9
DASS Stress Post	12	10	16	9
DASS Anxiety Pre	9	10	2	1
DASS Anxiety Post	5	6	4	5
DASS Depression Pre	7	7	5	7
DASS Depression post	6	8	7	9
JSS Total Pre	136	26	147	34
JSS Total Post	137	22	130	32
Overall Group	2	1	3	1

Levene's Test

A Levene's test was run in order to determine equality of variances. Using the Levene statistic that equals 2.081 with a significance of .153, the researcher can assume

that there are equal variances. An independent samples test was also run to determine equality of means. Through this measure, it was found that the experimental group (*M*= 8.9) had a higher anxiety score than the control group (*M*=3.9) at the time of the pretest. Because of this, the researcher found no differences in variances/distributions except for *the* aforementioned DASS-21 anxiety score.

DASS-21 Experimental Data Set

Following the conclusion of the data related to the hypotheses, a DASS-21 stress experimental pre and post paired sample statistics t-test was completed to compare within groups to ensure that all areas for potential impact had been considered. When looking at the data from this test, it was determined that the experienced DASS-21 stress experienced participants' mean decreased from the pretest (*M*=18) to the posttest (*M*=12) with $p<.000$. Looking further into the groups, this was the case for DASS-21 anxiety pre (*M*=9) to anxiety post (*M*=5) with $p<.007$; and DASS-21 depression pre (*M*=19) to depression post (*M*=6) with $p<.000$. The data from this test suggests that the control groups' DASS-21 anxiety and depression mean scores decreased from pretest to the posttest.

DASS-21 Control Data Set

The DASS-21 stress control group scores pretest scores (*M*=13) were lower than the posttest scores (*M*=16) indicating that the control group's stress raised while participating in the study without using mindful activities with $p<.029$. Moreover, the DASS-21 anxiety scores of the control group pretest (*M*=4) and posttest (*M*=4) did not show a significance with $p<.647$ while the DASS-21 depression pretest ($M = 5$) was lower than the depression posttest (*M*=7) with a $p < .012$, thus showing the depression

rates among the control group were higher by the end of the study and indicating there was as significant negative change within the control groups.

JSS Pre and Posttests

The JSS pretest (M=136) and posttest (M=137) of the experienced group did not show significance (p<.810) while the JSS pretest (M=147*)* and the posttest (M=130) of the control group indicated that reported job satisfaction of those not practicing mindful activities went down (p<.003).

Chapter Summary

This chapter presented results of a quantitative study using two research questions and six hypotheses. The study on the impact of mindful activities on teacher self-reported stress, anxiety, depression, and job satisfaction included a descriptive analysis of demographic information in a frequency table and one statistical analysis (t-test).

A t-test was conducted to compare stress, anxiety, depression and job satisfaction among control and experimental groups. A t-test was also conducted to compare stress, anxiety, depression, and job satisfaction among novice and experienced teachers. Based on the data from the DASS-21 and the JSS pre and posttests, mindful activities do not play an impact among teachers' anxiety, stress, and depression levels; however, it was determined that mindful activities over an eight-week period do have a significant impact on novice teachers' job satisfaction. It was also determined that comparisons between groups (experimental vs control) did not reveal significant results, but comparisons within groups did reveal significant results. Experimental scores moved down while control scores worsened.

V. Discussion

The purpose of the current quantitative quasi pre-post study was to examine whether teachers' participation in mindfulness activities are associated with changes in levels of stress, anxiety, depression, and job satisfaction. Mindfulness decreases stress, enhances performance, and helps participants gain insight through observing one's own mind (Parsons et al., 2017). Mindfulness has been proven to be an effective and a low-cost method of improving mental health as well as job satisfaction through simple practices that can be practiced in various locations (Hargreaves, 1998). Moreover, mindfulness is available to everyone in every moment, whether through meditation or mindful moment practices such as taking time to breathe when overwhelmed (Kabat-Zinn, 1998). While mindfulness training has been identified as a method of embracing social and emotional competencies while also reducing stress, little research has been completed with teachers and the effects on depression, anxiety, stress, and job satisfaction (Flook, 2013). This research is valuable as educators must deal with increasing uncertainty (Flook, 2013).

This study was completed using existing research of mindfulness-based programs for teachers by implementing meditation and breath work for eight weeks and followed these research questions:

1. How do mindfulness activities impact self-reported teacher stress, anxiety, and depression?
2. How do mindfulness activities impact teacher job satisfaction?

Summary of Findings

The purpose of this study was to examine whether teachers' participation in mindfulness activities were associated with changes in levels of stress, anxiety, depression, and job satisfaction using a t-test analysis in SPSS software. While mindfulness training has been identified as a method of reducing stress and increasing job satisfaction, this study was completed in order to help clarify the importance of self-regulation interventions practiced during job-embedded professional development.

The first research question explored if mindfulness activities impacted self-reported teacher stress, anxiety and depression. It was further examined to determine if mindfulness activities made an impact amongst novice educators (0-3 years) versus experienced educators (4 plus years). This was tested using the Depression, Anxiety, and Stress Scales (DASS-21). Through a t-test analysis, each hypothesis for research question one was rejected because there was not a significant difference among the control and experimental groups when measuring depression, anxiety, and stress. Moreover, there was not a significant difference when calculating the mean of the novice and experienced participants.

The second question researched if mindfulness activities impact teacher job satisfaction by using the Job Satisfaction Survey (JSS) created by Paul Spector. This test examined if there was a significant change among the control and experimental participants as well as a difference among novice and experienced participants. All hypothesis of research question two were rejected because there was not a significant difference in job satisfaction among the control experienced, control novice, experimental experienced, and experimental novice testing groups.

Even though this was not a hypothesis, the researcher found it important to explore if there were any differences in mean scores among the groups before testing. Therefore, a t-test experimental and control group using all measures as computed in SPSS software (DASS-21 stress pre and post; DASS-21 anxiety pre and post; DASS-21 depression pre and post; JSS total pre; and JSS total post). This testing measure showed that there were no significant mean score differences among the participating groups.

Discussion

The purpose of the study using convenience sampling was to examine whether teachers' participation in mindfulness activities were associated with changes in levels of stress, anxiety, depression, and job satisfaction. The overall findings of this study were discussed in the previous section. The three major takeaways from this study are as follows:

1. There are no differences between groups, but there was a difference within groups.
2. The activities seemed to serve novice teachers more than experienced teachers.
3. The anxiety experimental group's pre-test had higher scores than the control group pre-test as this is the only instance where the Levene's test indicated an unequal variance.

Each major finding is discussed below.

No Differences between Groups, but there was a Difference Within Groups

Data from the DASS-21indicated that meditation and breathing exercises did not impact the mean scores for depression, anxiety, and stress from the pre and post-tests for the experienced experimental and the experimental novice groups. The scores of from the

control experienced and the control novice groups also did not show a significant difference. This was not the outcome that was expected; based on the literature on this topic, it was anticipated those who participated in the mindfulness exercises may report reduced depression, anxiety, and stress. However, even though the findings did not show a significant difference, it is important to consider that studies show that the combination of mindfulness with Mindfulness-Based Stress Reduction (MBSR) alleviate suffering from stress-related symptoms, illness, anxiety, and chronic pain when practiced over a longer period of time (Kabat-Zinn, 1991). Thus, it is possible there is a difference, but it was not measurable during the eight-week period.

Though there were no differences between the groups at the end of the study, the researcher decided to explore if there were differences within the groups in the study (for example, the experimental novice group's pre-test vs. the same group's posttest scores). Even though it was not a stated hypothesis when planning the study, this analysis proved fruitful—there was a significant difference within the experimental novice and experimental experienced group's pre and posttests as their scores went down indicating that they self-reported less depression, anxiety, and stress according to the DASS-21 posttest. Even though it was not originally planned to explore changes within depression, anxiety, and stress *within* the groups, these findings support other research that has found that as participants begin to discipline their minds, they will potentially find themselves feeling kinder, calmer, and more patient (Teper, Sigal, & Inzlicht, 2013). Perhaps this is attributed to mindfulness practices in the workplace improves job satisfaction rational thinking, and emotional resilience (Slutsky et al., 2018).

Mindfulness Appears to Serve Novice Teachers More Than Experienced Teachers

In this study, novice experimental teachers reported higher job satisfaction (as measured by the JSS) than experienced experimental teachers after the end of the eight-week experimental testing period. Thus, the mindfulness exercises appeared to be more effective for novice teachers than experiences teachers. This may be explained by research by Klusmann (2013) that found applying mindfulness to the workplace gives staff the ability to develop positive peer relations based on mutuality and social awareness and therefore creating a supportive atmosphere where educators feel safe. As a new teacher in a school environment, these social skills are imperative to have in order to feel confident and successful in order to be successful to support not only themselves as well as student needs. When considering the experienced teachers, it is possible that they did not benefit from the mindfulness practices as much as the novice teachers as they have years of experience and better understand work dynamics and, for the most part, have a better sense of ownership and confidence in their teaching abilities. As Alvey (2005) reports, teacher isolation among the experienced teachers is typically less as they have built relationships with other teachers in the building; therefore, scheduling of common planning times does not matter as much as a novice teacher as they can approach most anyone during their free time to collaborate with or to socialize.

Experimental Group's Anxiety Pre-Test Scores Were Higher Than the Control Group Pre-Test Anxiety Scores

Before any of the overall t-tests were ran in SPSS, a t-test was conducted to determine any differences at the beginning of the study that needed to be identified before determining the mean of the pre and posttests of the control and experimental groups.

When the pre and post-tests where compared, it was determined that the experimental group who took the DASS-21 reported significantly higher scores in anxiety than the control group upon entering the study.

Procedurally, there is no research design-related reason for these group to differ (i.e., they were randomly assigned into the treatment and control groups), so other characteristics were looked at within the groups to determine potential reasons to explain the higher anxiety scores for the experimental group pretest results. There are many factors to consider when determining why the anxiety levels were initially higher for the experimental group when comparing to the control group. One consideration is changes within the school dynamics during the eight-week experimental period. It is important to note that the study took place during a time period when Covid-19 numbers for students and staff began to peak due to the Omicron variant, and it was a difficult period to have school as it was rare to have a full class of students due to isolations and quarantines. This also occurred at the same time as the district superintendent tendered their resignation, and the primary school principal retired. None of these events could have been anticipated at the start of the study. Because of these inconsistencies before the beginning of the study, the potential for anxiety amongst staff may have been higher simply because of the inconsistent work environment and fear of the unknown and potential changes coming from new administration. According to Flook (2013), new policies, rapid changes, and a lack of job security can impact the dynamics of a workplace. Such work environments may increase levels of stress and anxiety, in addition to putting one at risk to experience health-related consequences (Flook, 2013).

Another consideration to contribute to the higher anxiety scores in the experimental group is that participants (randomly assigned to the experimental group) communicated that they had a family history of anxiety and others indicated that they were on thyroid medication that impacted their hormones levels; thus, they often went through periods of increased anxiety. Moreover, there were overall personal circumstances that impacted members of the experimental group that may have impacted the pretest results such as divorce, grief, money problems, and beginning a master's degree.

Connections to Theory

These findings, even though not all were initial hypotheses, are supported by previous studies as well by Bandura's Social Cognitive Theory (SCT). SCT emphasizes that learning occurs in the social context with dynamic and reciprocal interactions of the person, environment, and behavior and focuses on social influences with an importance on external and internal social reinforcement (Bandura, 1986). Furthermore, experiences and practices influence reinforcements, expectations, and such expectancies will determine if a person engages in specific behaviors (or why someone engages in such behaviors; LaMorte, 2019).

The goal of this study was to use mindful practices to provide a framework to help reduce depression, anxiety, and stress and increase job satisfaction for teachers. Overall, mindfulness practices encompass all components of SCT, as meditation and breath work embodies the participant, alters the environment, and teaches coping mechanisms when experiencing stressful situations (LaMorte, 2019). By altering one's environment through meditation and breath work, the participant learns to positively

adapt to stress to allow stress behaviors and perceived stress to improve. This finding is consistent with the belief that mindfulness training should increase the ability to respond mindfully to daily life occurrences, which should lead to the ability to adapt to stress (Holzel et al., 2011). Thus, Bandura's SCT helps to explain the findings that determined there was a decrease in the DASS-21 scores of the experimental novice and the experimental experienced groups.

Implications

The following section details implications for practice specifically related to potential education impacts based on the findings from this study. The topics in this section include implications for practice and implications for future research. teachers, school boards, and colleges of education.

Implications for Practice

Mindfulness practices can help to increase the ability to regulate emotions, decrease stress, anxiety, and depression. It can also help to focus attention, as well as to observe thoughts and feelings without judgment, especially in the school setting with teachers. The three areas addressed in this section are implications for teachers, K-12 administrators/district leaders, and school boards.

Implications for Teachers

Mindfulness is a problem in modern society as continuous stress and anxiety consumes energy, and when at extreme levels, negatively impacts physical and mental health (Romas & Sharma, 2014). Because of this and the stressful nature of the education profession, especially during a global pandemic, teachers have reported lower job satisfaction and an increased risk of teacher burnout (Green, 2021). According to the

findings from this study, mindfulness practices such as meditation and breathing techniques may help novice teachers improve their job satisfaction as well as help those who consistently practice mindful activities to decrease their depression, anxiety, and stress.

Implications K-12 Administration/District Leaders

Mindfulness is a potential tool for K-12 administrators and district leaders who can provide such training through job-embedded professional development. While mental well-being is crucial to oneself, it can also positively impact schools as a whole. As stated in the literature review, mindfulness in schools can help by improving academic results, increasing staff and student mental health, and foster resilience and character building (Hargreaves, 1998).

While mindfulness does not change what happens to a person, it does change relationships and potential views of current situations (Hargreaves, 1998). Mindfulness in education may reduce the negative effects of stress and increase teacher and student engagement. Mindfulness also has the potential to help guide students academically while reducing the potential amount of behavior problems (Romas & Sharma, 2014). Because of the positive impact mindfulness may have on the school community coupled with administrative support, there is potential that teacher absences will decrease due to better health (less illnesses and exhaustion), and teacher retention will increase as educators may be more likely to be satisfied with their careers (Jalagat, 2016). If educators are constant in a school district, there is less change and more potential for better test scores and more rapport among staff and students (Jalagat, 2016).

Implications for School Boards

Although mindfulness is not a new practice, it would benefit school boards to support district leaders and administrators while implementing job-embedded professional development on mindful practices throughout the school year. To do this, the school board must support the early dismissal of school so teachers may participate in mindful activities. Moreover, school boards who understand and support mindful activities may not see a high turnover rate in staff and administration thus maintaining a public perception of stability and the importance of the staff wellness. Moreover, school boards who support and provide opportunities for mindful practices might increase the likelihood that teachers will provide mindful activities in the classroom that will support student learning and the whole child; therefore, potentially increasing student attendance, student social/emotional health, and graduation rates.

Implications for Colleges of Education

The findings in the study indicated a potential positive and significant correlation between job satisfaction of novice teachers when practicing mindfulness activities. Because of this correlation and positive novice teacher outcomes, this data may provide higher education with information that supports a systemic change among course content in the college of education. For instance, educator pathway programs could include embedded content that educates students on personal mindfulness practices. In turn, the likelihood of the novice teacher modeling such mindful behaviors for students increases and as well as the potential for a positive classroom culture. Such techniques, if taught early in educator programs, may help decrease college student depression, stress, and anxiety, thus increasing their satisfaction with the college prepatory programs while

decreasing the likelihood of college burnout presenting itself among young adults (Will, 2021). Information gathered from such a study that focuses on mental and physical well-being of students would also be beneficial for chancellors, deans, and department heads when making organizational decisions regarding potential professional development, curriculum modifications, and faculty collaboration expectations.

Implications for Future Research

It is evident that more research is vital to understanding the implications of mindfulness activities and the impact on teachers and the school community. This study revealed important findings regarding novice teachers' job satisfaction as well as the impact of mindfulness on depression, anxiety, and stress of novice and experienced teachers. This research did find that those novice teachers who practiced mindfulness did show an increase of job satisfaction, and the experimental novice and experimental experienced groups showed a decrease of depression, anxiety, and stress when comparing their pretest and posttest scores. Because of these findings, it is important to do more research, potentially for a longer period with more participants, to obtain more data that represents a vast number of educators.

It would also benefit to extend the study to schools outside of the River Valley and with more participants in each group (experienced/novice and treatment/control groups) in order to verify the external validity of the findings of this study. Additionally, this study could be expanded to higher education to include college students majoring in education to determine if there is an impact in college education pathway programs who implement mindfulness-based curriculum into the course of study. Supplementary study

including qualitative measures such as interviews would also be beneficial to determine if the quantitative and qualitative data were congruent.

Chapter Summary

Research question one explored how mindfulness activities impacted self-reported teacher stress, anxiety, and depression. To address this question, volunteer teacher participants in a rural River Valley school completed a Depression, Anxiety, and Stress Scale (DASS-21) pre and posttest. The participants were categorized into novice (0-3 years) and experienced (4 plus years). After this step, the teachers were randomly assigned to control and experimental groups. To complete the study, the participants were grouped as follows: 1) control novice 2) control experienced 3) experimental novice 4) experimental experienced.

Although there were no significant findings when running t-tests among all groups using the DASS-21 and JSS scales, there were important findings that were not hypothesized found among novice experimental teachers and the depression, anxiety, and stress of experimental novice and experimental experienced groups.

The implications of this research impact teachers, administrators, school boards and higher education. To expand on the current research and to add to the field of mindfulness studies, it is beneficial to include further research with participants in higher education settings who are seeking a career in education. Future research should also include the exploration of quantitative studies in conjunction with qualitative studies to better understand the dynamics and feelings of those who practice mindfulness.

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Appendix A

Flyer

Depression, Anxiety, and Stress Research Study

- **Are you a certified teacher in the Dardanelle School District?**
- **Do you want to change your mindful habits to potentially reduce depression, anxiety, and stress?**

If you answered yes to both of these questions, you may be eligible to participate in an IRB approved research project that is designed to compare the effectiveness of mindfulness activities

Shawn Hettinga	888-888-888 or ********@atu.edu
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Shawn Hettinga	888-888-888 or ********@atu.edu

You will be asked to participate in mindful activities (meditation and deep breathing) for an eight week period and take two pre and post surveys before and after the eight weeks. You can earn up to $100 for your participation.

Benefits include the opportunity to participate in mindfulness activities that will potentially benefit your mental and physical health.

If you would like to learn more, please contact Shawn Hettinga at

888-888-888 or ********@atu.edu

Appendix B

Interest Letter

October 14, 2021
Re: THE IMPACT OF MINDFULNESS PRACTICES IN TEACHERS

Dear Educator,

I am writing to let you know about an opportunity to participate in a voluntary research study about the impacts of mindfulness on teachers. This study is being conducted by me, Shawn Hettinga, at Arkansas Tech University.

Participation includes practicing quick, mindful activities daily for eight weeks (if randomly chosen to be in the experimental group) and completing the Depression, Anxiety, and Stress Scale (DASS21) and the Jobs Satisfaction Survey (JSS) before and after the research period. If you are randomly selected in the control group, you will complete the DASS21 and JSS before and after the eight week period but will not participate in mindful activities during the research period.

All certified teachers are welcome to participate; however, if you are working closely with a counselor or therapist and have a current treatment plan in place to target depression, anxiety, and/or stress, please do not participate and continue to follow your medical health professional's treatment plan.

All survey results will be confidential to the researcher only. Participants in the control group and the experimental group will be entered into a drawing for a $100 Amazon gift card (one gift card for the control group and one gift card for the experimental group).

(*Explain any other relevant information, for example, will there be follow-up to this letter, are there special contact instructions, websites with additional information*).

If you would like additional information about this study, please contact Shawn Hettinga at 888-888-888 or ********@atu.edu or complete the following Google form: https://forms.gle/Bqt6KY2Yhg2SxL3n6.

Thank you for your consideration, and once again, please do not hesitate to contact me if you are interested in learning more about this Institutional Review Board approved project.

Shawn Hettinga
Principal Investigator
Doctoral Candidate
Arkansas Tech University

Appendix C

Consent Form

Study Title: THE IMPACT OF MINDFULNESS PRACTICES IN TEACHERS
Principal Investigator: *Shawn Hettinga, Primary Investigator*

You are being invited to participate in a research study. This consent form will provide you with information on the research project, what you will need to do, and the associated risks and benefits of the research. Your participation is voluntary. Please read this form carefully. It is important that you ask questions and fully understand the research in order to make an informed decision.

Purpose

The purpose of the current pre-post study will be to examine whether teachers' participation in mindfulness activities are associated with changes in levels of stress, anxiety, depression, and job satisfaction.

Procedures

The format of the study will be a pre and post group design with one control group and one intervention group. Pre-test and post-test design is an experiment where test units are randomly allocated to an experimental group and a control group. Both groups are measured before and after the experimental group is exposed to the treatment. Of the minimum 40 participants, at least 20 will be randomly assigned to do the pre and post surveys, the short three-to-five-minute guided mediations at least three days a week and using the 3x3 Breathing Method when anxious or stressed. The control group will complete the pre and post surveys only at the beginning and the end of the eight-week period. After the study is over, the researcher will share treatment plans and access to all mindfulness activities through a video that will give the control group equal access. The researcher is hopeful that more than forty participants sign up in case some decide to drop out of the study. If more sign up, the control group and the participating group will be as evenly and randomly divided as possible.

Benefits

The participants may expect an increase of their mental and physical health as well as an improved satisfaction with their job.

Risks and Discomforts

There are no anticipated risks beyond those encountered in everyday life.

Confidentiality

The only person who has access to the personally identifying information will be the primary researcher. Each participant will be assigned a number and will be referred to as that number when disaggregating data. The data will be stored online in the researcher's private Google drive as well as a locked filing cabinet in the researcher's home. After the study is complete, dissertation is written and successfully defended, the information will be shredded in June of 2022. When reporting the research, each participant will be assigned a number and names will not be used, even after the study is complete.

Future Research

Any findings may be used by or shared with other research without your additional consent, but personal names will never be released.

Compensation

Participants in the control group will be entered in a drawing to win a $100 gift card, and participants in the experimental group will be entered into a chance to a $100 gift card.

Voluntary

Participation in this study is voluntary. You may discontinue participation at any time without penalty or loss of benefits.

If you have any questions or concerns about this research, you may contact Shawn Hettinga at Arkansas
Tech University. This project has been approved by the Arkansas Tech University Institutional Review Board. If you have any questions about your rights as a research participant or complaints about the research, you may call the IRB at 479.880.4327.

To participate, please sign the consent form below. You will then be contacted giving a date, time, and zoom link of the informational meeting that will detail the study and answer any questions.

_____Yes, I wish to participate in the eight week study entitled THE IMPACT OF MINDFULNESS PRACTICES IN TEACHERS under the direction of researcher, Shawn Hettinga.

_____(Printed Name)

_____(Signature)

_____(Date)

Appendix D

Online Screener

The Impact of Mindfulness on Teachers

* Required

1. Email *
2. Are you a teacher in the Dardanelle School District? * *Mark only one.*

   Yes

   No

3. Are you a novice (0-3 years of teaching) or an experienced teacher (4 plus years)? *

   Novice

   Experienced

4. Are you interested in participating in an eight-week student of the impact of mindfulness activities on teachers? *

   Mark only one.

   Yes/No

5. Do you have a strict mental health care plan with your therapist/counselor or primary care physician? *

   Mark only one.

   Yes/No

Appendix E

CITI Certification

Appendix F

DASS-21 Survey

DASS21

Name: Date:

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you **over the past week**. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree or a good part of time
3 Applied to me very much or most of the time

1 (s)	I found it hard to wind down	0	1	2	3
2 (a)	I was aware of dryness of my mouth	0	1	2	3
3 (d)	I couldn't seem to experience any positive feeling at all	0	1	2	3
4 (a)	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5 (d)	I found it difficult to work up the initiative to do things	0	1	2	3
6 (s)	I tended to over-react to situations	0	1	2	3
7 (a)	I experienced trembling (e.g. in the hands)	0	1	2	3
8 (s)	I felt that I was using a lot of nervous energy	0	1	2	3
9 (a)	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10 (d)	I felt that I had nothing to look forward to	0	1	2	3
11 (s)	I found myself getting agitated	0	1	2	3
12 (s)	I found it difficult to relax	0	1	2	3
13 (d)	I felt down-hearted and blue	0	1	2	3
14 (s)	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15 (a)	I felt I was close to panic	0	1	2	3
16 (d)	I was unable to become enthusiastic about anything	0	1	2	3
17 (d)	I felt I wasn't worth much as a person	0	1	2	3
18 (s)	I felt that I was rather touchy	0	1	2	3
19 (a)	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	0	1	2	3
20 (a)	I felt scared without any good reason	0	1	2	3
21 (d)	I felt that life was meaningless	0	1	2	3

Appendix G

JSS Survey

	JOB SATISFACTION SURVEY Paul E. Spector Department of Psychology University of South Florida 	
	PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT.	Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much
1	I feel I am being paid a fair amount for the work I do.	1 2 3 4 5 6
2	There is really too little chance for promotion on my job.	1 2 3 4 5 6
3	My supervisor is quite competent in doing his/her job.	1 2 3 4 5 6
4	I am not satisfied with the benefits I receive.	1 2 3 4 5 6
5	When I do a good job, I receive the recognition for it that I should receive.	1 2 3 4 5 6
6	Many of our rules and procedures make doing a good job difficult.	1 2 3 4 5 6
7	I like the people I work with.	1 2 3 4 5 6
8	I sometimes feel my job is meaningless.	1 2 3 4 5 6
9	Communications seem good within this organization.	1 2 3 4 5 6
10	Raises are too few and far between.	1 2 3 4 5 6
11	Those who do well on the job stand a fair chance of being promoted.	1 2 3 4 5 6
12	My supervisor is unfair to me.	1 2 3 4 5 6
13	The benefits we receive are as good as most other organizations offer.	1 2 3 4 5 6
14	I do not feel that the work I do is appreciated.	1 2 3 4 5 6
15	My efforts to do a good job are seldom blocked by red tape.	1 2 3 4 5 6
16	I find I have to work harder at my job because of the incompetence of people I work with.	1 2 3 4 5 6
17	I like doing the things I do at work.	1 2 3 4 5 6
18	The goals of this organization are not clear to me.	1 2 3 4 5 6

	PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT. 	Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much
19	I feel unappreciated by the organization when I think about what they pay me.	1 2 3 4 5 6
20	People get ahead as fast here as they do in other places.	1 2 3 4 5 6
21	My supervisor shows too little interest in the feelings of subordinates.	1 2 3 4 5 6
22	The benefit package we have is equitable.	1 2 3 4 5 6
23	There are few rewards for those who work here.	1 2 3 4 5 6
24	I have too much to do at work.	1 2 3 4 5 6
25	I enjoy my coworkers.	1 2 3 4 5 6
26	I often feel that I do not know what is going on with the organization.	1 2 3 4 5 6
27	I feel a sense of pride in doing my job.	1 2 3 4 5 6
28	I feel satisfied with my chances for salary increases.	1 2 3 4 5 6
29	There are benefits we do not have which we should have.	1 2 3 4 5 6
30	I like my supervisor.	1 2 3 4 5 6
31	I have too much paperwork.	1 2 3 4 5 6
32	I don't feel my efforts are rewarded the way they should be.	1 2 3 4 5 6
33	I am satisfied with my chances for promotion.	1 2 3 4 5 6
34	There is too much bickering and fighting at work.	1 2 3 4 5 6
35	My job is enjoyable.	1 2 3 4 5 6
36	Work assignments are not fully explained.	1 2 3 4 5 6