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A Descriptive Analysis of the Impact of Mindfulness-Based Intervention for Public Educators During COVID-19

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Abstract

Educators face high levels of stress, occupational burnout, and anxiety (Kurtz, 2021). The COVID-19 pandemic further exasperated occupational stress to higher levels and the long-lasting impact of the pandemic are still unknown. The consequences of burnout are enormous and previous research suggests mindfulness is a promising intervention that has the potential to remediate this issue (Ott et al., 2020). This exploratory analysis examines the results of pre-existing data gathered from over 400 Oregon educators who participated in a mindfulness-based intervention aimed to combat the exasperated stress experienced during the 2020-21 school year. Little research has analyzed the effects of an intervention involving stakeholders during the design and implementation phases. Results of the analysis reveal mindfulness, self-compassion, and resilience as themes surfaced through the self-reports of program participants. Additionally, statistically significant results were found using independent sample t-test for the pre and post-survey survey questions. This study adds to the existing research promoting mindfulness as a promising intervention to alleviate the negative impact of stress on workplace performance and wellbeing and offers compelling evidence to support integrating mindfulness practices into education. In conclusion, mindfulness has the potential to serve as an antidote for stress among educators and might have a positive ripple effect in reengaging the workforce. Education is difficult but we can teach skills to build resiliency and promote longevity within the field. Now is the time to reimagine education and change the narrative from education as being a stressful career path to one that is fulfilling, difficult, and worthwhile.

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CHAPTER ONE: INTRODUCTION

Teaching is one of the most stressful occupations, according to a report by Teacher Stress and Health (2016). The consequences of stress affect multiple aspects of educator experience, including their attendance, performance, turnover, and wellbeing; these things, in turn, profoundly affect student achievement (Kurtz, 2021). “Teachers are leaving the profession at alarming rates for reasons grounded in the high stress environment” (Ott et al., 2020, p. 3). Martin et al. (2012) provide strong evidence that teachers often leave the field due to emotional exhaustion and stress, causing significant detriment to the field at large. Indeed, even a teacher’s intent to leave the field can damage their productivity and stamina (Martin et al., 2012).

While teachers have reported significant job stress under normal circumstances, educator stress has increased exponentially with the onset of the COVID-19 pandemic; 92% of teachers report being more stressed during the pandemic (Kurtz, 2021). International research studies corroborate an increase in educators’ self-reported symptomology, which is associated with stress, up significantly since March of 2020. According to research conducted by Ozamiz-Etxabarria et al. (2020), more than 25% of teacher participants who completed a self-report survey indicated significant symptoms of stress, anxiety, and depression, findings corroborated by Al-Lily et al. (2020). This research study was designed to look specifically at educator stress during a tumultuous time in history.

As the societal restrictions resulting from COVID-19 persist, researchers expect increased rates of psychological distress, such as post-traumatic stress disorder (Ozamiz-Etxabarria et al., 2020). This includes higher rates of depression, anxiety, stress, sleep disturbances, and feelings that one is unable to cope. Further, many adults report less extreme but nonetheless significant symptoms such as disordered eating, increased substance and alcohol use,

and chronic stress and worry over the COVID-19 pandemic (Panchal et al., 2021). As mentioned, teachers are prone to heightened stress; the next section illustrates how stakeholders have attempted to address these concerns.

Because educators face many stressors at work and psychological symptoms are rising, leaders are seeking to initiate proactive interventions to prevent a cascade of damaging effects, particularly to retain educators who would otherwise leave the profession due to burnout (Ott et al., 2020, p. 3). McCardle (2007) calls for evidence-based interventions such as the one at the heart of this study to address educator stress because stress and associated burnout is "a major contributor to high teacher attrition and early retirement" (p. 473). Preventative action, intervention, and study of these issues is critical for intervening in educator burnout and turnover. One way to address these issues is to provide educators tools to enhance wellbeing and invest in mindfulness-based professional development (Ott et al., 2020).

The Case and Context for the Intervention

This study examines the results of a MBI program using an exploratory analysis. The following section offers background and context for an MBI program aimed to mitigate educators' stress during the 2020-2021 school year. Over 500 Oregon educators participated in an intervention designed to address educators' increased levels of anxiety and stress related to COVID-19, along with its associated disruptions to educational practice. The 2020-21 school year had an unmeasurable impact on educator stress levels, creating a situation where an Oregon educational leader, Keith Ussery, decided to act (see Appendix A). As the Deputy Superintendent for Willamette Education Service District (WESD), he has worked for years to introduce social emotional learning (SEL) structures to support students in accessing their education. The 2020-21 school year created conditions for Mr. Ussery to shift the focus from

student wellness to adults, in order to address educators' physical and emotional needs. In his own experience, mindfulness-based stress reduction (MBSR) techniques have supported his professional and personal wellbeing. He perceived the urgency of addressing educator stress and chose to utilize an MBSR framework to help educators in his district ameliorate their stress.

Chronic stress management has usefulness across many disciplines; teaching is just one profession where people can convince themselves there is nothing they can do about the chronic stress they deem as just part of their job. Additionally, educators are often told that engaging in wellness and self-care activities is important, but they do not have the tools to do so effectively. Mr. Ussery chose to use federal funding in his region to address this issue, sharing with me that he could not perceive any better way to spend the money, given the challenges educators faced during the pandemic (K. Ussery, personal communication, September 15, 2021). These funds originated from congressional allocation of $13.2 billion of the Coronavirus Aid Relief and Economic Security (CARES) Act, which was specifically earmarked to address the impact of COVID-19 on schools across the nation.

Mr. Ussery began researching vendors who could offer a structured MBSR intervention as a pilot program in the fall of 2020. He sought a vendor who was an Oregon-based company with applicable credentials in mental health and wanted to ensure a vendor would adjust their program to meet teachers' scheduling needs. The Pause® at Work program met these criteria; co-founders Ryan Keeny and Rena Satre Meloy were willing to be creative in formulating a MBSR based program that would meet educators' needs (Appendix B). The five-week pilot program began in September 2020 for approximately 80 educators; upon its completion and with positive feedback from participants, a subsequent six-week program was offered again; 500 teachers participated in the second cohort.

Purpose of the Study

This study was designed to analyze preexisting data on the effectiveness and usefulness of this MBI program by exploring pre and post-survey results for participants from both cohorts. To date, Oregon educators have not had opportunity to participate in a statewide mindfulness-based intervention, particularly within the constraints of a global pandemic. As a result, this study has a unique opportunity to analyze and understand data from a new program offered to Oregon educators during a profoundly stressful time. It will be useful to discern the perceived gains educators reported and themes disclosed from the survey responses relating to tools learned to combat stress and anxiety while promoting physical and mental wellbeing. This study builds upon the growing body of research promoting MBIs as an intervention to tackle burnout, stress, and anxiety using an exploratory analysis framework.

Educators are profoundly burnt out, and the consequences of the COVID-19 pandemic seem never-ending. To address the issue of burnout and the mass exodus from the field, educators need a research-based intervention to prevent additional catastrophic harm. Studies such as this are essential for understanding how well an MBI can support educators during a heightened time of stress, anxiety, and burnout. Given these potential negative and costly effects of educator stress, there is motive to identify effective interventions to support educators to stay physically and mentally healthy and remain within the profession.

Research Questions

Through an analysis of pre-existing survey data, this study will explore the following research questions:

1. What were the short-term impacts of the Pause® at Work Stress Resilience and Mindfulness program on educator participants' stress levels and their resilience and mindfulness levels?
2. What were program participants' self-identified changes observed from the Pause® at Work created survey?
3. What specific components of the program were perceived as beneficial to program participants? In addition, what components of the program can be improved?

Significance

As a participant in both cohorts of this intervention and an educational leader committed to the physical, emotional, and mental wellbeing of the educators I serve, I am personally and professionally interested in critically analyzing and summarizing the results of this intervention. This study is significant because educators experience a great deal of occupational stress, leading to larger problems of burnout, attrition, and disruption to educational systems. Stakeholders for this study need to understand whether the program met the intended outcomes in order to make informed decisions about future interventions designed to support educators. Educators are experiencing more stress that leads to increased burnout, turnover, and impacts wellbeing. In response to the growing need to address educator wellbeing, Pause® designed a program in collaboration with an educational leader committed to investing time and resources intended to strengthen wellbeing for educators. Stakeholders need to know the extent to which this program works and areas for improvement.

I have seen firsthand the detrimental effects of stress and burnout on teachers. Teachers who leave the field prematurely leave behind students, some of whom will never know how significantly a dedicated teacher can influence their lives. I believe educators deserve to work in environments that foster growth; it is heartbreaking to see educators suffer from burnout, stress, and exhaustion. I also recognize the ways educators often combat stress in unhealthy ways, with excessive alcohol consumption, unhealthy diet, and lack of sleep. To my knowledge, this is the first time a statewide intervention was offered to educators specifically to address stress and burnout. Moreover, the heightened stress associated with the COVID-19 pandemic provides a unique opportunity to analyze the results of a mindfulness-based intervention in a way that may make it possible to expand program offerings to others in the future.

To further distinguish this study from others, the intervention being analyzed was co-created and involved stakeholders during the design, promotion, and implementation phases of the cohorts. Further, Pause® facilitators have subsequently provided at least three more intervention cohorts specifically to Oregon educators namely due to the urgency needed to address the long-standing issues reviewed in previous sections. The intervention application continues to evolve in response to the reported experiences of the participants' and there are noticeable efforts to improve the program. This study aims to aid in the continuous improvement of the program by explicitly evaluating the mechanisms of the intervention concerning the benefits self-reported from program participants. Few research has focused on intervention design while reporting on the data revealed from participants to create a global understanding of how best to improve the quality and delivery of an intervention. While much is known about the positive impacts of mindfulness interventions, less is known about the associations among the intervention design and the reported experience surfaced from the data. This study seeks to

bridge that gap. The next section will touch on the definitions of terms used throughout this study.

Definition of Terms

Educator Stress and Burnout- "emotional exhaustion, low personal achievement, and depersonalization of students" (Roeser et al., 2013, p. 168). For the purposes of this study, educator stress and burnout are the emotional strain of occupational stress due to the relational, cognitive, and emotional demands of the profession.

Mindfulness- the awareness that emerges through paying intentional, nonjudgmental attention to the unfolding of experience moment-to-moment" Kabat-Zin, 2003).

Wellbeing – for the purposes of this study, wellbeing describes the psychological and physical balance of the work and home life. Wellbeing is comprised of positive emotions and attitudes associated with work and life. Wellbeing is characterized by a person's realization of their potential, purposeful engagement with life, and effective management of difficult life circumstances. (Ryff, 2019).

CHAPTER TWO: LITERATURE REVIEW

This literature review encompasses research on what is presently known about the impact of occupational stress for educators, effectiveness of mindfulness-based stress reduction (MBSR) interventions as a response to stress and burnout, and a review of the literature on existing gaps in the research regarding mindfulness-based interventions (MBI).

Occupational Stress and Burnout

Notions of burnout emerged as early as the fifteenth century, when William Shakespeare wrote The Passionate Pilgrim. For the first time in history, the term "burn'd out" was explicitly referenced as passion or a driving force that evokes love and exhaustion (Moss, 2021). In general, educators care deeply about their profession and are, as a result, highly susceptible to experiencing burnout, stress, fatigue, and anxiety. According to a report conducted by Teacher Stress and Health in 2016, high-stress levels affect teacher health and wellbeing, contributing to burnout, lack of engagement, job dissatisfaction, poor performance, and high turnover rates. Factors identified as influencing educator stress include lack of leadership support, the relational context of teaching (i.e. student teacher relationships), and education policy that sometimes negatively affects teachers' agency and approaches to teaching and learning (Collie et al., 2017).

Educators experience burnout at one of the highest rates of any profession (Travers, 2007); Johnson (2005) identifies teaching as one of the six most stressful occupations in a comparison of 26 social service disciplines. Research indicates educators are uniquely susceptible to burnout due to the occupation's heavy toll and emotional investment (Travers, 2007). The emotional nature of teaching requires planning, responding to the needs of students, and managing policy reform practices that typically increase demands on a teacher's time, without necessarily supporting the immediate needs of students (Roeser et al., 2013). Because

educators pay this unique emotional toll in their profession, researchers like Schutz & Zembyias (2009) argue "it is important that policymakers, teacher educators, and school leaders attend to teachers' own self of wellbeing and put in place specific processes that deal with the emotional management of teaching" (p. 368). The following section will describe what mitigation efforts have been attempted to address educator burnout and stress.

Educators seeking to combat the effects of occupational burnout and avoid the cascading consequences burnout has on their mental and physical wellbeing have a great resource in the power of breath, mindfulness, and presence. In measuring the self-perceived stress and burnout levels of over 1900 teachers, researchers found that mindfulness lessens the impact of stress and burnout (Guidetti et al., 2019). By deliberately intervening to increase stress management ability, researchers found that educators could mitigate the influence of stress on subsequent factors contributing to burnout. Indeed, it appeared that mindfulness interventions could support educators in reappraising stressful situations and provide a protective factor for them within their stressful occupation. However, this research misses a thorough analysis of the data collected from teachers participating in such interventions. Specifically, the researchers did not review what themes surfaced from the perceived impact of the intervention, leaving the holistic analysis of the program's impact incomplete.

Newer researchers indicate chronic stress can lead to occupational burnout (Roeser et al., 2013). *Burnout* as described by Friedman (2020) is a "work-related syndrome, stemming from the individual's perspective of a significant gap between expectations of successful professional performance and an observed, far less satisfactory reality" (p. 595). Occupational burnout can also include emotional exhaustion, withdrawal, and cynicism (Friedman, 2000). Those who suffer from occupational burnout have reduced capacity to access resources that buffer them

from stress (Maslach et al., 2001). Researchers interested in occupational burnout have constructed theories about burnout and yet have unsuccessfully developed a more defined and coherent set of interventions that mitigate burnout. Admiring the problem of occupational burnout will not foster and cultivate a solution to it. The next section reviews the research on the detrimental effects of occupational stress and burnout.

Impact of Occupational Stress and Burnout

Many researchers have studied the negative impacts of burnout (Schaufeli et al., 2009), and report burnout as depleting energy over time. Further, researchers report that employees experiencing burnout lose the capacity to make meaningful contributions to their work, furthering exacerbating stress and producing a dysfunctional cycle of insufficient energy affecting their sense of value (Schaufeli et al., 2009). Insufficient opportunities to rest and rejuvenate leads to imbalances, along with emotional and physical exhaustion (Friedman, 2000; Schaufeli et al., 2009). Taking this further, exhaustion can lead to additional detrimental physical and emotional impacts.

Occupational burnout can result in physical and emotional strain and lead people to rely on maladaptive coping tools (Schaufeli et al., 2009). Moreover, burnout often takes a physical toll, such as high blood pressure, anxiety, depression, and cardiovascular disease. When teachers experience these symptoms, they often lead to undesirable personal and professional outcomes associated with increased attrition (Roeser et al., 2013). Educator stress can also affect their financial resources; stressed teachers are absent more often, and experience diminished ability to work effectively with students. Research is clear that occupational burnout has detrimental effects on workplace outcomes; however, knowing the issue will not help solve it. Practical, useful, and feasible interventions are needed to foster change.

Educator Stress and COVID-19

The COVID-19 pandemic has significantly exasperated educator stress, influencing educators' physical health and mental wellness (Abhanom, 2020, p. 129). Data indicate a drastic increase in substance use and domestic violence since the onset of the pandemic, meaning students are experiencing increased stress and bringing that to school. According to Kurtz (2021), 92% of teachers reported teaching as more stressful now than before the pandemic. Indeed, "teacher morale has plummeted over the course of the pandemic" (Will, 2021, para. 9). To illustrate this further, social media blogs, posts, and daily articles can be found adding to the narrative that teaching is hard and has only gotten more difficult since the onset of COVID-19 pandemic. Educators need an effective way to protect themselves from the contagion of low morale, buffer themselves from the long-standing stress this pandemic has caused, and promote occupational wellbeing. With mask mandates political and social discord, an intervention is needed that offers educators a gleam of hope.

One answer to these challenges is the potential within mindfulness-based practices; extensive research over the past several decades indicates its effectiveness in combatting workplace stress and burnout. MBIs have been shown to yield positive results in increased wellbeing (Brown & Ryan, 2003), competent task performance (Dane & Brummel, 2014), and effective stress management (Roeser et al., 2013); these are not insignificant possibilities for educators, given the unique emotional demands of teaching. Research further suggests that teachers who have "stronger beliefs that they could regulate their negative moods reported experiencing less burnout and stress" (Mearns & Cain, 2003, p. 79). Historically, mindfulness practices were associated with Buddhist theory and have since evolved into non-secular

approaches in an effort to increase participants' awareness and attunement to the present moment.

The Foundations of Mindfulness Practice

Mindfulness has existed for over 2,500 years and has exploded in popular culture over the past decade (Janssen et al., 2018). With this movement into the cultural milieu, there are many definitions and conceptions of mindfulness contained in mainstream media and academic publications. This study relies of Kabat-Zinn's (2013) definition, articulated as "the awareness that emerges through paying attention, on purpose, in the present moment, and non-judgmentally to the unfolding experience moment by moment" (p. 145). Also helpful to defining mindfulness is the self-regulation of attention through an open, curious, and accepting attitude toward the present moment (Bishop et al., 2004). Taken together, these definitions indicate the purpose of mindfulness as a means for increasing awareness of the present moment and accepting emotions as they arise.

According to Kabat-Zinn (2013), seven attitudinal factors are essential building blocks for cultivating an engaged mindfulness practice. These include non-judging, characterized as an awareness of a situation just as it is, without judging, trying to change the moment, or reacting to what invariably comes up. The second notion is patience, or the ability to be open to the moment, however it arises. Beginner's mindset refers to the practice of experiencing sensations and thoughts as if for first time and suspending expectations of how something will unfold. This is the ability to trust oneself fully, and non-striving is an attitude of allowing anything and everything to arise. Acceptance is characterized by a willingness to see and engage with what arises, and finally, letting go is a practice of letting an experience be just as it is. These attitudinal building blocks, along with qualities of mind and heart, which include "non-harming, gratitude,

forbearance, forgiveness, kindness, compassion, empathetic joy, and equanimity," can accelerate the positive impact of a mindfulness practice (Kabat-Zinn, 2013, p. 31).

Despite its ancient history, mindfulness emerged as a means to address chronic health conditions several decades ago when Dr. Jon Kabat-Zinn established MBSR programs. He began as a molecular biologist, working at the University of Massachusetts Medical Center in the 1970s, when he developed a comprehensive 8-week mindfulness course to assist patients with chronic health conditions in alleviating their suffering. What emerged to become a traditional MBSR course consisted of 26 hours of group sessions (2-2.5-hour sessions over eight weeks) accompanied by a full-day retreat. Additionally, participants are required to engage in daily 45-minute homework. The structure of Kabat-Zinn's program includes such practices as body scans, sitting meditations, and Hatha yoga practice. This traditional MBSR designed by Kabat-Zinn is a foundational program and has become the most commonly used framework for mindfulness interventions in non-medical settings (Kabat-Zinn, 2013; Raerdon, 2016).

Kabat-Zinn's original MBSR program was designed to teach people that, rather than resisting the inevitable stressors life brings, to learn how to embrace and manage them. He writes,

> There is an art to facing difficulties in ways that lead to effective solutions and to inner peace and harmony. When we are able to mobilize our inner resources to face our problems artfully, we find we are usually able to orient ourselves in such a way that we can use the pressure of the problem itself to propel us through it. Just as a sailor can position a sail to make the best use of the pressure of the wind to propel a boat. You can't sail straight into the wind, and if you only know how to sail with the wind at your back, you will only go where the wind blows you. But if you know how to use the wind's

> energy and are patient, you can sometimes get to where you want to go. You can still be in control (Kabat-Zinn, 2013, p. 3).

The goal of a MBSR program is to help participants handle life and gain the power to access their own inner wisdom and strength. In so doing, they cultivate resilience during times of adversity. The benefits of MBSR are significant; a meta-analysis conducted by Vonderlin et al., (2020) examined 56 studies using an analysis of between-group effects. Interventions in the analysis included a broad range of programs across various occupational settings. The interventions averaged 7.5 weeks and examined results from over 5,000 participants. Results indicated clear evidence that MBI techniques can promote positive wellbeing outcomes for employees. Specifically, MBI improved stress levels and lessened health complaints while improving employees' work engagement, productivity, and job satisfaction. What is also compelling is Vonderlin et al., (2020) found these results sustained three months after the intervention.

Modified MBSR Program Structures

Variations of Kabat-Zinn's original MBSR structure include modifying the program's duration, frequency, length, and intervention delivery models via in-person formats, along with virtual ones (Mantzios & Giannou, 2019). Carmody and Baer (2009) argue the importance of studying whether programs with shortened time demands yield similar outcomes, since shorter programs could lead to greater participation. Indeed, modified program delivery is of particular interest to this study since educators typically do not have 26 hours of time over eight weeks to devote to their wellbeing, likely precluding participation. Therefore, mindfulness-based interventions geared to educators will likely need to be adapted from the original intensive MBSR program to promote participation.

According to several studies of modified mindfulness-based training programs, accessible formats could improve self-compassion, mindfulness, and stress reduction (Carmody & Baer, 2009; Reardon, 2016). Reardon's (2016) intervention, called Mindfulness for Teachers, was 120 total minutes in length; participants reported reductions in stress despite its abbreviated nature. This study indicates the possibility that programs do not have to be time-consuming or expensive interventions in order to yield positive outcomes.

There are several theories as to why modified MBI contributes to positive outcomes. First, the mechanisms of mindfulness are strengthened through deliberate practice. As some meditators might describe, such practice should be incorporated throughout the day and not just on the cushion. As such, short periods throughout the day provide windows of opportunity to cultivate the practice of mindfulness. Specific to this research, the weekly practice sessions as part of the curriculum encouraged participants to continue the training outside of the Core sessions. Fascinatingly, our minds wander so frequently that sitting for just five minutes while sustaining attention provides dozens if not hundreds of opportunities to notice the mind wandering and re-direct attention back to the breath (Brown & Ryan, 2013). The frequency of letting go and beginning again is the practice and because our minds wander so frequently, small intervals of time offer a lot of practice (Frank et al., 2013). The next sections will further describe how research supports the use the of modified MBI structures including a review of the gaps in existing research.

Additionally, the practice of mindfulness cultivates awareness and tools to respond to daily life stressors, which means that what is learned during the psychoeducational portion of the intervention should be used daily as a way to respond differently to adversity. As I have become more aware of my bodily sensations and my natural stress responses, I can anticipate the times in

which I will need more time to take breaks to slow down my habitual and often maladaptive stress response system.

Taken further, in analyzing the relationship between the number of class hours spent in MBIs and the effect size for measures of psychological distress, Carmody & Baer (2009) found no statistically significant relationship. The researchers also discovered no evidence that shortened MBIs are less effective than the standard format (Britwell, 2021; Carmody & Baer, 2009). Given this research, it could be helpful to better understand to what extent modified versions of MBSR can reduce teachers' stress, anxiety, and burnout.

Incorporating MBSR teachings into more accessible programs requires significant modifications to Kabat-Zinn's original design. This includes variations to program length, meeting durations, homework requirements, and methods most suitable for participants. Such program variations are generally referred to as MBI. Although the specifics of MBIs can vary, the overarching theme and intended outcome of the programs are consistent. Specifically, MBIs are designed to cultivate participants' receptive attention practices to help them nonjudgmentally attune to the present moment through compassionate and consistent practice (Shapiro et al., 2006).

Researchers who have looked at the effects of adapted MBSR interventions have found that diluted programs still benefited participants, as measured by decreased anxiety and stress levels (Call, et al., 2014; Frank et al., 2013). In examining cortisol levels for teachers who participated in one intervention, patterns indicated the MBI program buffered against the physiological influence of stress (Flock et al., 2013). Additional research found positive effects for participants who indicated increased attention and reduced feelings of burnout and emotional exhaustion (Flook et al., 2013).

Mindfulness in Organizations

Along with an increase in mindfulness programs over the past decade, research about these programs has surged (Dane & Brummel, 2014). Mindfulness interventions have great potential to boost workplace performance and promote attention, cognition, and emotional regulation (Good et al., 2016). Research by Good et al., (2016) notes, "mindfulness appears to shorten the life cycle reducing the time to reach peak emotional arousal and return to baseline" (p. 120), indicating increased ability for program participants to bounce back from disruptions to their workday. Being empowered to respond to disruptions in a more even-keeled way enables individuals to better cope with common stressors and better redirect their attention back to work (Good et al., 2016). These research efforts emphasized positive workplace performance outcomes, however, both lacked the ability to demonstrate specific causation, resulting in generalizability limitations.

Along these lines, several studies indicate evidence that mindfulness interventions effectiveness is robust (Copeland, 2021; Emerson et al., 2017). Using a systematic review, Emerson et al. (2017) found MBIs reduce stress and improve emotional regulation and self-efficacy. MBI in occupational settings indicates a reduction in healthcare workers' physiological and physical symptoms associated with stress and burnout (Emerson et al., 2017). Copeland's (2021) quasi-experimental design examined the impact of a six-week intervention for nurses assigned to participate in a brief mindfulness activity, such as meditation, journaling, or a nature break. Results indicate even five minutes of mindfulness practice during the day-reduced feelings of burnout for participants. Admittedly, these studies are limited in their scope in how research studies were selected as part of the systematic review. Specifically, the research above

was limited to include English-speaking counties, thus narrowing the scope of evidence supporting their claims.

Another example of abbreviated MBI comes from Zarate et al., (2019) research in which results from over 1,000 participants in an MBI where reviewed. The researchers found that mindful practice positively affected teacher wellbeing, with participants reporting decreased symptoms of stress, anxiety, burnout, and depression. Pérez et al. (2020) found MBIs improved employee engagement, resilience, and wellbeing while decreasing feelings of stress, anxiety, and depression. Taken together, these studies provide compelling evidence that even small dosages of mindfulness practice can reduce stress and prevent burnout (Copeland, 2021; Zarata et al., 2019). Intervention designs for all of these studies ranged in duration, methodology, and delivery (in-person/virtual). In reviewing the effectiveness of adaptive MBI formats, the most common training formats were derived from the MBSR framework and included lecture-style delivery of content followed by guided practices (Eby et al., 2019). Many of these studies have attempted to promote MBI as an effective intervention to combat stress and anxiety. The following section will identify the gaps in literature specific to educators.

Limitations within Existing Research for Educators

While the effectiveness of MBI is clear and some research has been conducted on its efficacy within educational settings, there are some significant limitations to existing research that indicate the need for this study. Schussler et al. (2020) conducted a study of middle school teachers who participated in an MBI designed to help them manage stress and improve emotional regulation. As a qualitative study, participants shared their opinions of the program in a focus group. Those who participated reported positive results in stress relief and increased camaraderie with co-workers. Yet several limitations are indicated within this study, namely that results from

a small sample size of 19 middle school educators cannot be generalized. It is possible that those who agreed to participate in the focus group likely agreed to do so because they had a positive experience, thus limiting a critical analysis of the program. The same program was also studied by Harris et al. (2015), in a study including 64 educators (classified and certified staff). Their research indicated participants found the intervention beneficial for managing stress and promoting wellbeing, but the sample only represented educators across two schools. The lack of a more diverse set of participants poses design limitations on generalizability outcomes.

Guss (2020) measured the perceived stress and anxiety of teachers who participated in a brief MBI. MBI program details were not stated clearly, making it difficult to discern the elements of the program. Using a mixed-model ANOVA methodology, Guss indicated a statistical difference in stress levels for those who participated vs. the control group. Yet the sample size of this study was limited to sixty certified teachers, limiting claims of statistical significance. Additionally, education staff includes many different roles, ranging from classified, certified, and administrative duties. Since the study only took place with certified teachers, claims of usefulness for education staff are questionable.

Another example examining MBI's effect on teacher stress and wellbeing was conducted by Ott et al. (2020). It explored stress and anxiety outcomes for participants who completed a 6-week mindfulness-training program with Mindful Schools. The sample size included 1,377 educators from various locations across the United States. Researchers found that participants experienced increased psychological wellbeing, resilience, and job satisfaction. However, the sample selected in this study was narrow since it only included educators already participating in the Mindful School curriculum. Participants who willingly engage in such courses on their own likely have a propensity for reporting positive results. Additionally, the specific, research-based

competency of mindfulness and how those elements were represented in intervention design were unclear. While researchers provided a syllabus for the six-week intervention, the alignment between the conceptual framework of mindfulness-based practices and the intervention sequence were not discussed.

Frank et al. (2013) implemented an adapted MBSR program designed to decrease educator stress and enhance wellbeing. Thirty-six high school teachers participated in the intervention and reported significant increases on emotional regulation and mindfulness upon conclusion of the program. While this study provided clear evidence of the feasibility of offering modified MBIs, it lacked a diverse and significant sample set.

Overall, these studies indicate the need for further study on how MBIs affect educator wellbeing, stress, and anxiety. Undoubtedly, the nature of education poses difficulty in providing optimal conditions for true experimental design. For example, it is difficult to create control groups, offer interventions to a wide range of participants, find the financial resources to implement time-intensive programs, and find participants willing to commit the time. Further, previous research falls short in insufficient sample sizes, narrow selection of study participants, and insufficient descriptions of the research-based mechanisms. Another notable lack in educator based MBI research is the absence of stakeholder involvement in program development (Birtwell, 2021). Moreover, studies support the need to address the social and emotional needs of educational staff, and some researchers have even affirmed that “schools and districts should consider a long-term investment in mindfulness professional development for educators,” yet the contextual details of how to do that are missing in the literature (Ott et al., 2020, p 140).

The proposed study seeks to address these research gaps by exploring the results of a MBI where educator stakeholders were involved in the implementation of a program in which

they participated. Further, this study will explore the specific design features of the MBI intervention and their connections to the research indicated here. This research intends to explore the features of an MBI and analyze its effectiveness and feasibility for the hundreds of educators who participated.

Summary

The stressful nature of the education system is well documented in research (Etxabarria et al., 2020), as is the detrimental effects of educator stress (Al Lily et al., 2020; Kurtz, 2021). With the current state of a global pandemic exacerbating stress in all populations, educator stress is anticipated to increase; addressing this issue is critical. As educators leave the field at alarming rates, this leaves educational staff who are left behind with increased workloads and greater burdens (Martin et. al., 2012; Ott et al, 2020). Without intervention, educators are facing an unprecedented tsunami of issues on top of historical challenge.

Mindfulness based interventions are a promising practice to support educators in tapping into inner resources of resilience (Copeland, 2021; Emerson et al., 2017). By supporting stress reduction, reducing anxiety, and cultivating educator wellbeing, MBIs have the potential to help educators redefine education as a fulfilling career choice, one that offers meaning rather than the prospect of burnout.

CHAPTER THREE: METHODOLOGY

This non-experimental, exploratory study is a retrospective analysis of existing survey data collected from a MBI program implemented during the 2020-2021 school year for Oregon educators. This study constitutes a unique opportunity to evaluate the results of an intervention offered to promote educator wellbeing. Never has there been a statewide effort aimed at promoting educator resilience during a global pandemic and never before has there been a study with the potential of this one to describe the results of that intervention. Educators deserve to work in conditions that promote career longevity to defy the odds of succumbing to the profession's propensity for stress, anxiety, and burnout (Travers, 2017). Studies such as this one seek to discern whether MBI interventions can contribute to those goals.

The Pause® at Work program was piloted with cohort one in September 2020 and based on the pre- and post-survey results from this cohort, the district offered a subsequent 6-week session to a greater number of participants across the state of Oregon. This study examined existing data from this MBI program in order to explore how Oregon educators responded to the opportunity to address their stress through the Pause® at Work intervention program.

Research Questions

This study explores the following research questions:

1. What were the short-term impacts of the Pause® at Work Stress Resilience and Mindfulness program on educator participants' stress levels and their resilience and mindfulness levels?
2. What were program participants' self-identified changes observed from the Pause® at Work created survey?
3. What were specific components of the program perceived beneficial to program participants? In addition, what components of the program can be improved?

Pause® Meditation & Program Components

Pause® Meditation is the company that designed the MBI at the center of this study. It was founded by owners Rena Satre Meloy and Ryan Kenny in 2010 and it was originally designed to provide in-person services to individuals wanting to learn scientifically based tools to promote happier, healthier, and more fulfilled lives (R. Kenny & R. Satre Meloy personal communication, October 20, 2021). At the outset of the COVID-19 pandemic, Rena and Ryan moved their courses online via Zoom, a web-based conference platform that became very popular when COVID restrictions disrupted typical educational services. Pause® Meditation has created Mindfulness-Based Resilience Training packages for companies such as Nike, Adidas, and Intel, along with other organizations interested in cultivating mindfulness practices in the workplace. This Oregon-based company has been cited in the Portland Business Journal and its owners have a combined experience of over 30 years' experience in meditation-based programs. Both Ryan and Rena trained in MBSR at Brown University and the University of Massachusetts Medical School, respectively. Their history in providing interventions to individuals, teams, small groups, and organizations is extensive. As indicated in Chapter 1, when the Willamette Educational Service District found Pause® Meditation and their Pause® at Work program, it was a good fit.

Pause® at Work

The Pause® at Work Stress Relief + Resilience program provides participants with evidence-based tools to reduce stress and anxiety, find a sense of calm, and proactively take care of their mental health. Program designers sought to address a profound need for educators during this remarkably stressful time, when teachers made a massive pivot to everything related to their practice. The change was evolving and ongoing, and continues to this day, creating a great deal

of stress. Pause® Meditation recognized these conditions intensify stress: “we know that ever-changing landscapes and uncertainty force humans to see the world as a threat” (R. Kenny, personal communication, October 20, 2021). He went on to write, “I am hoping people will experience relief from the feeling of being overwhelmed and out of control and empowered to take responsibility for their sense of wellbeing.” The intervention structure of this MBI was designed to promote a sense of connection for participants and help them sense the universality of their experience. As a mental health professional, Ryan Kenny facilitated the non-religious curriculum with mindfulness tools and strategies directly applied to modern life. Based on principles from neuroscience, positive psychology, and wellness research, the program was structured around six sessions:

Core Session 1- Discovering the power of mindfulness

Core Session 2- Skillfully navigating worrying distraction

Core Session 3- Cultivating focus and calm

Core Session 4- Tapping into inner wisdom and strength

Core Session 5 - Emotional intelligence and resilience

Core Session 6- Gentle persistence (This sixth session was added to cohort two based on feedback from cohort one participants.)

This six-week program was administered through weekly synchronous 60-minute Zoom sessions, which were focused on psychoeducation, meditative practice, and community building. Attendees were invited to practice skills, investigate, and notice what happened as they engaged in the practice. Sharing in small and large groups was invitational and not required. Additionally, all participants could access an online tool kit containing recorded sessions, audio meditations, a Pause® practice for the week, additional reading materials, and supplemental information. There

were 15-minute Practice Sessions following each CORE 60-minute session for those who wanted to stay and practice.

Program Design and Intended Outcomes

This section offers a more detailed description of the Pause® at Work Stress Relief + Resilience program. Rooted in the MBSR theory, the sequence of this MBI program was co-created between Pause® Meditation founders Rena and Ryan, and Keith Ussery at WESD. Together, the three of them designed a program that sought to address high levels of educator burnout and stress by teaching explicit instructional tools and strategies.

The intervention was designed to help participants navigate ongoing stressful and anxiety-provoking environments. Given the program's design, Rena and Ryan sought to introduce concepts, plant seeds of interest, and encourage curiosity to help participants cultivate their own inner resources. They offered a basic understanding of mindfulness through didactic learning, reflection, experience (guided mediation), and connection (breakout groups and whole group discussions).

Each session offered direct instruction on the week's theme, self-guided practice, materials (available in the toolkit), and a challenge for the week. The 15-minute practice sessions immediately following the main session offered a space for participants to practice skills together and reinforce concepts from the Core sessions. The program sought to cultivate outcomes in five domains of participants' wellbeing: stress relief, mindful awareness, resilience, emotional intelligence, and self-compassion.

Core Session 1

In the traditional MBSR sequence, Kabat-Zinn (2013) begins by teaching a body scan technique. According to Kabat-Zinn (2013), this practice is intentionally placed at the beginning

of the program to give participants and positive and comfortable experience. It involves focusing attention throughout regions of the body, which cultivates concentration and attention. Research conducted by Call et al., (2014) found that participants who engaged in a single 45-minute body scan intervention showed significant reductions in anxiety and stress compared to the control group who did no body scan.

The mental exercise of bringing awareness to the body is an essential precursor to establishing presence. According to Brown and Ryan (2003), being present in the body allows one to practice focused attention and is foundational to the practice of mindfulness. Pause® at Work builds from this foundational MBSR practice; Core Session 1 introduces the concept that wellbeing is a skill that can be cultivated. This session discusses neuroplasticity, body awareness, and has participants practice deep breathing along with a body scan exercise.

MBI research indicates that body awareness practices like those taught and practiced in Core Session 1 are associated with reduced pain symptoms (Ussher et al., 2014), improved sleep quality (Bootzin & Stevens, 2005), and more sustained and selective attention (Corbett et al., 2019; Napoli, et al., 2005). Ussher et al.'s (2014) study found participants who did a 10-minute mindfulness-based body scan reported a reduction of pain-related distress compared with the control group. Bootzin and Steven's (2005) study indicated participants who did a six-week intervention involving body scans noted improved sleep quality and length. As Reardon (2017) describes, body scans are the essential "ingredients" of mindfulness practice (p. 73).

Core Session 2

In foundational MBSR programs, Kabat-Zinn (2013) describes the habit of unawareness and discusses how "our awareness of the system as a whole will often prevent us from seeing new options and new ways of approaching problems" (p. 160). Session 2 of the Pause® at Work

program taught the difference between awareness and autopilot. This session helped participants stop the rapid response system, take a breath, observe, and proceed, all in service to the alternative of operating on autopilot. The session aimed to teach participants to reappraise stressful situations by reducing rumination. Conley et al. (2018) define rumination as dwelling on past events repetitively. Although rumination is common for individuals, when rumination continues excessively, it can obstruct the ability to see clearly through adversity. Thus, reducing rumination has a positive impact on the ability to see solution through hardships and is associated with decreased depression and anxiety. Fresco et al. (2002) found correlations between high levels of rumination and high levels of anxiety and depression. Gross (2002) defines reappraisal as "changing how we think about a situation in order to decrease its emotional impact" (p. 281). Core Session 2 focuses on helping participants understand they hold power to bounce back from experiences and maintain control by practicing a pause in order to better respond to emotional stimuli.

According to Gross (2002), reappraising a stressful situation is vital to developing self-regulation skills, which supports resilience. In this session, participants are asked to note their emotional reactions to a situation, take a few breaths, and respond mindfully. It is similar to the concepts taught in Jennings et al. (2013) Cultivating Awareness and Resilience in Education (CARE) model, which demonstrated that within an intensive 30-hour program, participants reported significant improvements in their reappraisal skills. Increased ability to regulate emotion was also confirmed in studies of a 15-minute breathing experiment conducted by Arch and Craske (2006).

Core Session 3

Session 3 materials provided participants with the practice of increasing tolerance for sustained attention. During the practice meditation for this session, participants were directed to intentionally note when their minds wandered and redirect attention to their breathing. Menezes et al. (2013) examined the results of a 6-week intervention aimed at emotional and attention practice through breathing. The research found that focused meditation positively affects attention and emotional regulation. This practice was mental training to avoid rumination, increased attentional control and reduce emotional reactions (Menezes et al., 2013). The goal of this session was to help participants gently bring their awareness into the present moment with kindness through a non-judgmental attitude. Research indicates mind-wandering interferes significantly in comprehension (Franklin, et al., 2014) and is associated with negative mood (Killingworth & Gilbert, 2010), so exercises to ameliorate it can support positive benefits for on one's personal and professional performance (Yasai, 2012).

Core Session 4

During Session 4, participants learned how habits are formed through deliberate practice and reinforcement. Since some habits are detrimental (rumination and mind-wandering), while others (taking mindful breaths) support the wellbeing of moods and emotions, this session taught participants how the brain builds systematic relationships between situations (such as work and stress) and action (ruminating or mindful breathing) through associations and practice.

Mantzios and Giannou (2019) research the importance of deliberately teaching habit formation to strengthen the relationship between knowledge and action. This research supports the content of Core Session 4 since the benefits of mindfulness come from daily practice. Participants are encouraged to infuse mindfulness throughout their day because making

mindfulness a habit requires lifestyle changes to shift from negative habits to ones that promote wellness and resilience (Mantzios & Giannou, 2019). This research also indicated short MBIs are beneficial to supporting lifestyle change, particularly when daily mindfulness practices are incorporated in the program.

Core Session 5

This session focused on the anatomy of emotions with information on the cycle of thoughts, feelings, impulses, and bodily sensations. The session also discusses emotional intelligence as a concept to support mindful regulation of emotional responses to stress. Roeser et al.'s (2013) eight-week, 11-session program structure emphasizing education about emotion resulted in significantly less occupational stress and burnout for its participants (Roeser et al., 2013). Similarly, the CARE model studied by Jennings et al. (2013) provided emotion skills instruction to promote resilience and self-regulation. The instruction included an introduction to emotions, how emotions affect teaching and learning, and exploring bodily awareness of emotions, resulting in reduced emotional reactivity for those who completed the program (Jennings et al., 2013).

Core Session 6

While the original Pause® at Work contained only five sessions, program instructors decided to add a sixth session after the pilot. This session was a review of all the tools introduced in the previous sessions. This was due to the fifth session containing new information on emotional intelligence along with a review of the whole program. Presenters prioritized additional space for participants to review the concepts and discuss ways to sustain their mindfulness practice over the long term.

Sample and Population

The program was piloted with cohort one in September 2020. An email was sent from the Deputy Superintendent of Willamette Education Service District to superintendents within the region inviting participants to attend the program (Appendix C). A total of 84 participants registered for the pilot program and included Oregon educators from the Salem metropolitan Oregon area including Marion, Polk, and Yamhill counties. Participants included licensed, classified, and administrative school and Education Service District (ESD) personnel.

The second cohort was comprised of 494 participants who registered for the program once the first cohort had completed. Participants signed up for the program after receiving an email from the High Desert ESD Superintendent to the Oregon Association of ESD (OAESD) members inviting educators to attend the program (Appendix D). OAESD members include 19 regions from Clackamas, Columbia Gorge, Douglas, Grant County, Harney, High Desert, InterMountain, Jefferson County, Lake, Lane, Linn Benton, Malheur, Multnomah, North Central, NW Regional, Region 18- Wallowa, South Coast, Southern Oregon, and Willamette ESDs. Participants included certified, classified, and administrative personnel across many school districts and several ESDs in Oregon. The Pause® at Work program price was based on 500 or more participants; several participants were also solicited from mental health agencies in Central Oregon to reach the 500-quota set by the vendor for the price point.

The Criterion for Survey Analysis

Participants in both programs completed a pre-program questionnaire (Appendix E) and survey (Appendix F) indicating their prior experience with mindfulness and their self-reported openness to change in response to program participation. Upon program completion, they were

also invited to complete a post-program questionnaire (Appendix E) and survey (Appendix F) to register their feedback on the experience. These instruments were sent and received via email.

This study examined the results of those who completed both the pre- and post- surveys. Cohort one had 53 participants out of 85 complete both the pre- and post-tests. Cohort two had 154 participants out of 484 participants complete the pre- and post-tests. It is worth noting the attrition rates for each cohort: 57% of participants in cohort one completed both pre- and post-surveys, and 28.5% of participants in cohort two completed both pre- and post-surveys. 207 program participants were included in the analysis of this study. The response rate for cohort two indicates a higher attrition rate for the program; analysis of why this may have been the case will be discussed in findings.

Instruments

Pause® created a survey for this MBI aimed at accessing the program effectiveness; they also solicited feedback on it from Mr. Ussery prior to the start of each cohort. According to Ryan Kenny and Rena Satre Meloy, the survey questions were designed primarily to help the facilitators of the intervention assess any subjective changes participants reported in their wellbeing. Questions from the survey were adapted from a variety of preexisting sources such as Brief Resilience Scale, Mindful Attention Awareness Scale, and the Five Facet Mindfulness Questionnaire. Pause® at Work facilitators reviewed the intervention sessions and selected items for the survey that were most relevant to the curriculum and intended outcomes. Admittedly, Rena Satre Maloy and Ryan Kenny created an instrument for participants to report on their feelings as well as their perceptions of how the intervention is changing their feelings and experienced.

Participants from both cohorts who attended the Pause® at Work program received a self-administered computer assisted survey prior to attending the program and upon completion of the program. For the pre-survey, an email was sent from Pause® at Work facilitator Ryan Kenny before the first session, along with an introductory email. Post-test surveys were sent via email from the Pause® at Work facilitator Ryan Kenny upon completion of the final session. This study plans to conduct a retrospective analysis of this preexisting survey data. The survey included Likert and open-ended questions regarding the five major components of the program: stress relief, mindful awareness, resilience, emotional intelligence, and self-compassion. Post survey open-ended questions included questions regarding program implementation and ideas for improvement.

Data Collection

Upon my dissertation committee's proposal and IRB approval, Pause® at Work facilitators shared complete and anonymized survey data collected on this MBI program. Data sets for this study will include preexisting data in the form of pre- and post-survey results for both cohorts (Kenny & Meloy, 2021).

Data Analysis

Survey results provided by Pause® at Work cofounders were analyzed using descriptive data analysis techniques, including with measures of central tendency. Using a descriptive analysis, I evaluated measures of central tendencies for the forced-choice survey results and conducted dependent samples t-test to comparing answers from pre- and post-test responses (Appendices C & D). To complement the measures of central tendency, I conducted a qualitative thematic analysis for the open-ended survey results (five questions from pre-survey and six questions from the post-survey (Appendices C & D). As described by Rae and Parker (2014)

surveys provide a way to ascertain participants' attitudes and opinions in order to ascertain one element of program effectiveness. Using survey results, I provided a comprehensive descriptive analysis to summarize themes from the open-ended responses.

Ethical Considerations

This research design poses some ethical dilemmas, as is the case for most program evaluations. It is important to acknowledge my own role and potential biases in conducting this study. In my current role, I serve as the Executive Director of Special Education with High Desert Education Service District. As such, I have access to information about this program and helped solicit interested participants and educators. My involvement with the program design was minimal during the pilot intervention; however, I was involved in recruiting participants for the second cohort. There was no incentive for participating nor were there adverse consequences for not signing up.

I also joined both cohorts as a participant and subsequently have experienced the profound impact mindfulness has had on my life. I have a personal interest in providing mindfulness-based interventions to educators and therefore understand I must be highly cautious when evaluating the effectiveness of this program. Even though I have inherited bias, I also have a deep desire to provide interventions to educators that demonstrate merit and value. Selecting this methodology will allow me the opportunity to both consider objectively how well this intervention alleviated educator stress while offering critical recommendations appropriate for increasing the program's value and merit. As I evaluate this program, I am aware of the need to practice neutrality while acknowledging my enthusiasm for it; I perceive it an important tool in addressing the current state of educator burnout. I want to better understand why participants

may have stopped the program in cohort two and try to understand whether the data indicates what may induce future participants to complete the program at higher rates.

Pause® has already provided these survey results to each participating district. No identifiable participant information is linked to the survey results. I have an interest in reporting the analyzed results with objectivity as I see effective and cost-effective ways to combat educator stress. I understood that it is possible the results of the surveys would yield results that the program is ineffective, which is just as useful as learning about a program's effectiveness. Educator funding is limited; public education does not have resources to allocate funds for a program that does not yield a return on investment. I reviewed the data ethically and critically, sharing all results accordingly. I can acknowledge my hope that the program made a difference since I seek to support educators; a program evaluation such as this has the potential to offer valuable insight to the significant problem of educator stress, anxiety, and burnout.

CHAPTER FOUR: RESULTS

The next section reviews the results of the following research questions: What were the short-term impacts of the Pause® at Work Stress Resilience and Mindfulness program on educator participants' stress levels and their resilience and mindfulness levels? What were program participants' self-identified changes observed from the Pause® at Work created survey? What were specific components of the program perceived beneficial to program participants? In addition, what components of the program can be improved?

I begin by briefly describing how I organized the data sets. Following that, I review the quantitative data results, followed by the qualitative data results. Within the quantitative data results, I provide descriptive statistics of the pre and post-survey scores for both cohorts pointing out the scores I deemed as worth noting. Then, the results of the dependent samples t-test are presented. For the qualitative data analysis, I present the results of the thematic analysis from the open-ended survey responses and summarize the exploratory analysis using a visual representation I refer to as a Mind Map (Figure 1). This chapter concludes by references the correlation table found in the Appendices E through J.

Upon IRB approval, I was provided with survey results via a google suite folder for both intervention cohorts. I transferred the data from google sheets into excel as a master data set to conduct the data analysis. Using formulas within excel, I linked spreadsheets to ensure that unique participate ID only included data from the participants who completed both the pre and post-surveys. The following sections include the descriptive statistics for both intervention cohorts including mean, modes, and standard deviations.

Cohort One Descriptive

The descriptive statistics for cohort one are included below in Table 1. What stands out from the data specifically are the results from questions 4, 7, 8, 9, 10, 11, and 12. For question four pretest $M = 4.21$ ($SD = 1.94$) and posttest $M = 6.00$ ($SD = 2.23$). Question seven pretest $M = 4.53$ ($SD = 1.83$) posttest $M = 6.66$ ($SD = 1.64$). For question eight pretest $M = 4.38$ ($SD = 2.07$) posttest $M = 5.94$ ($SD = 1.84$). Question nine pretest $M = 4.47$ ($SD = 2.69$) and posttest $M = 7.28$ ($SD = 1.98$). Question 10 pretest $M = 6.30$ ($SD = 2.52$) and posttest $M = 7.38$ ($SD = 1.58$). Question 11 pretest $M = 5.02$ ($SD = 2.08$) posttest $M = 7.58$ ($SD = 1.81$). For question 12 pretest $M = 5.40$ ($SD = 1.68$) posttest $M = 7.00$ ($SD = 1.56$).

The results above stand out specifically because of the difference between group means were above 1.0 and the modes increased from pre to post-test results. Specifically, for question 4 "when I'm upset, I take time to explore how my body feels," participant's average score was lower for the pretest score compared to posttest score by more than one data point and the mode went from 3 to 6 respectively. Likewise, the mean scores for questions 7, 8, 9, 10, 11, and 12 were greater in the post-test results than in the pretest results by more than one data point. Question 9 "I remember to pause and take a few deep breaths throughout the day," was the largest increase when looking at the mode in pretest being 0 compared to post-test mode of 8 respectively. To test the significance levels, I conducted dependent samples t-test described later in this chapter.

Table 1

Descriptive Statistics Closed Ended Survey Responses Cohort One

Survey Question	Pretest			Posttest		
	Mean	Mode	SD	Mean	Mode	SD
1. I am often on "auto pilot" with little awareness of what I am doing.	5.13	5.00	2.35	5.28	6.00	2.11
2. I am able to stay focused on the task at hand.	6.42	7.00	1.65	7.08	7.00	1.57
3. When I experience strong emotion, I am aware of the physical changes in my body.	6.68	8.00	1.92	7.49	7.00	1.56
4. When I'm upset, I take time to explore how my body feels.	4.21	3.00	1.94	6.00	6.00	2.23
5. When I feel pain or discomfort, I try to suppress or ignore it.	6.64	8.00	2.39	5.51	4.00	2.41
6. I feel that I can bounce back quickly after a challenging situation.	5.92	7.00	1.95	7.06	7.00	1.57
7. I know how to skillfully manage the stress I experience.	4.53	3.00	1.83	6.66	6.00	1.64
8. I am friendly to myself when things go wrong.	4.38	4.00	2.07	5.94	7.00	1.84
9. I remember to pause and take a few deep breaths throughout the day.	4.47	1.00	2.69	7.28	8.00	1.98
10. I noticed when I was holding tension in my body.	6.30	7.00	2.52	7.38	8.00	1.58
11. I consciously made efforts to relax tension in my body.	5.02	5.00	2.08	7.58	8.00	1.81
12. In a difficult situation, I was able to pause without immediately reacting.	5.40	5.00	1.68	7.00	8.00	1.56
13. I noticed when I was ruminating on troubling thoughts.	6.19	7.00	1.94	7.30	8.00	1.95
14. I found myself preoccupied with the future or the past.	7.28	8.00	1.75	6.38	8.00	1.91
15. I used a deliberate technique to calm myself when I experienced a stressful situation.	5.17	8.00	2.49	7.51	8.00	1.79

Note N = 53

Cohort Two Descriptive

Descriptive statistics for cohort two seen in Table 2. Of these results, what stands out (means responses among group differences greater than 1.0 point) are questions 4, 7, 8, 9, 10, 11, 12, and 15. For question four pretest *M* = 4.42 (*SD* = 2.22) and posttest *M* = 6.19 (*SD* = 1.92). Question seven pretest *M* = 4.98 (*SD* = 1.99) posttest *M* = 6.85 (*SD* =1.62). For question eight pretest *M* = 4.96 (*SD* = 2.12) posttest *M* = 6.47 (*SD* = 2.00). Question nine pretest *M* = 5.65 (*SD* = 2.33) and posttest *M* = 7.12 (*SD* = 1.83). Question 10 pretest *M* = 6.58 (*SD* = 2.41) and posttest *M* = 7.69 (*SD* = 1.51). Question 11 pretest *M* = 5.68 (*SD* = 2.26) posttest *M* = 7.48 (*SD* = 1.69). For question 12 pretest *M* = 5.50 (*SD* = 2.13) posttest *M* = 6.65 (*SD* = 1.77). Question 15 pretest *M* = 5.71 (*SD* = 2.47) posttest *M* = 7.68 (*SD* = 1.76).

The results above stand out specifically because of the difference between group means were above 1.0 and the modes increased from pre to post-test results. To test the significance levels, I conducted dependent samples t-test described later in this chapter.

Table 2
Descriptive Statistics Closed Ended Survey Responses Cohort Two

Survey Question	Pretest			Posttest		
	Mean	Mode	SD	Mean	Mode	SD
1. I am often on "auto pilot" with little awareness of what I am doing.	5.26	6.00	2.15	4.86	5.00	2.05
2. I am able to stay focused on the task at hand.	6.60	8.00	1.96	7.02	7.00	1.60
3. When I experience strong emotion, I am aware of the physical changes in my body.	6.66	7.00	2.15	7.66	8.00	1.69
4. When I'm upset, I take time to explore how my body feels.	4.42	3.00	2.22	6.19	7.00	1.92
5. When I feel pain or discomfort, I try to suppress or ignore it.	6.07	7.00	2.38	5.12	6.00	2.28
6. I feel that I can bounce back quickly after a challenging situation.	6.29	8.00	2.02	6.82	8.00	1.75
7. I know how to skillfully manage the stress I experience.	4.98	5.00	1.99	6.85	7.00	1.62
8. I am friendly to myself when things go wrong.	4.96	5.00	2.12	6.47	7.00	2.00
9. I remember to pause and take a few deep breaths throughout the day.	5.65	3.00	2.33	7.12	8.00	1.83
10. I noticed when I was holding tension in my body.	6.58	8.00	2.41	7.69	9.00	1.51
11. I consciously made efforts to relax tension in my body.	5.68	5.00	2.26	7.48	8.00	1.69
12. In a difficult situation, I was able to pause without immediately reacting.	5.50	5.00	2.13	6.65	7.00	1.77
13. I noticed when I was ruminating on troubling thoughts.	7.16	8.00	1.91	7.99	8.00	1.42
14. I found myself preoccupied with the future or the past.	7.11	9.00	2.19	6.30	6.00	2.15
15. I used a deliberate technique to calm myself when I experienced a stressful situation.	5.71	7.00	2.47	7.68	8.00	1.76

Note N =154

T test Scores Cohort One

As illustrated in Table 3, the data resulting in the dependent t-test for Cohort one, shows there was a statistically significant difference between the pre and posttest dependent scores found in all but one survey question in Cohort one. Negative t-test results indicate an increase in mean scores and positive t-test results indicate a decrease in mean scores. For example, all t-test results indicate positive changes (i.e. increases from pre to post scores) with the exception of question 5. For question 5, reverse coding was used meaning that a decreased score was associated with positive results as further explained in chapter 5. There was no statistically significant difference between the pre and posttest dependent scores for question one, $t(53) = -.35$, $p = .73$. There was a statistically significant difference between the pre and posttest dependent scores, when examining question two, $t(53) = -2.12$, $p = .04$. There was a statistically significant difference between the pre and posttest dependent scores for question three, $t(53) = -2.39$, $p = .02$. There was a statistically significant difference between the pre and posttest dependent scores for question four $t(53) = -4.41$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question five, $t(53) = 2.42$, $p = 0.02$. There was a statistically significant difference between the pre and posttest dependent scores for question six $t(53) = -3.29$, $p = 0.00$. There was a statistically significant difference between the pre and posttest dependent scores for question seven $t(53) = -6.33$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question eight $t(53) = -4.10$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question nine, $t(53) = -6.13$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question ten, $t(154) = -2.63$, $p = 0.01$. There was a statistically significant difference between the pre and posttest

dependent scores for question 11, $t(53) = -6.77$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question 12, $t(53) = -5.10$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question 13, $t(53) = -2.95$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question 14, $t(53) = -2.54$, $p = 0.01$. There was a statistically significant difference between the pre and posttest dependent scores for question 15, $t(53) = -5.54$, $p < .001$.

Table 3

T-test Scores Cohort One

Survey Question	T stat	2 tailed p
1. I am often on "auto pilot" with little awareness of what I am doing.	-.35	0.73
2. I am able to stay focused on the task at hand.	-2.12	0.04*
3. When I experience strong emotion, I am aware of the physical changes in my body.	-2.39	0.02*
4. When I'm upset, I take time to explore how my body feels.	-4.41	0.00*
5. When I feel pain or discomfort, I try to suppress or ignore it.	2.42	0.02*
6. I feel that I can bounce back quickly after a challenging situation.	-3.29	< .001*
7. I know how to skillfully manage the stress I experience.	-6.33	< .001*
8. I am friendly to myself when things go wrong.	-4.10	< .001*
9. I remember to pause and take a few deep breaths throughout the day.	-6.13	< .001*
10. I noticed when I was holding tension in my body.	-2.63	0.01*
11. I consciously made efforts to relax tension in my body.	-6.77	< .001*
12. In a difficult situation, I was able to pause without immediately reacting.	-5.10	< .001*
13. I noticed when I was ruminating on troubling thoughts.	-2.95	< .001*
14. I found myself preoccupied with the future or the past.	-2.54	0.01*
15. I used a deliberate technique to calm myself when I experienced a stressful situation.	-5.54	< .001*

*Note N= 53, * significant, p <.05*

T-test Scores Cohort Two

The data resulting from the analysis, as illustrated in Table 4 shows there was a statistically significant difference between the pretest and posttest dependent scores in Cohort two for all questions. Negative t-test results indicate an increase in mean scores and positive t-test results indicate a decrease in mean scores. For example, all t-test results indicate positive changes (i.e. increases from pre to post scores) with the exception of question 5. The results are consistent with those from cohort one. There was a statistically significant difference between the pre and posttest dependent scores for question one, $t(154) = 2.44$, $p = 0.02$. There was a statistically significant difference between the pre and posttest dependent scores for question two, $t(154) = -2.07$, $p = 0.04$. There was a statistically significant difference between the pre and posttest dependent scores for question three, $t(154) = 3.42$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question four, $t(154) = -7.48$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question five, $t(154) = 3.58$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores, for question six $t(154) = -2.51$, $p = 0.01$. There was a statistically significant difference between the pre and posttest dependent scores for question seven, $t(154) = -9.04$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question eight, $t(154) = -6.44$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question nine, $t(154) = -6.17$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question 10, $t(154) = -4.84$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question 11, $t(154) = -7.91$, $p < .001$. There was a statistically significant difference between the pre and

posttest dependent scores for question 12, $t(154) = -5.14$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question 13, $t(154) = -4.30$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question 14, $t(154) = 3.28$, $p < .001$. There was a statistically significant difference between the pre and posttest dependent scores for question 15, $t(154) = -8.04$, $p < .001$.

Table 4
T-test Scores Cohort Two

	T stat	2 tailed p
1. I am often on "auto pilot" with little awareness of what I am doing.	2.44	0.02*
2. I am able to stay focused on the task at hand.	-2.07	0.04*
3. When I experience strong emotion, I am aware of the physical changes in my body.	3.42	< .001*
4. When I'm upset, I take time to explore how my body feels.	-7.48	< .001*
5. When I feel pain or discomfort, I try to suppress or ignore it.	3.58	< .001*
6. I feel that I can bounce back quickly after a challenging situation.	-2.51	0.01*
7. I know how to skillfully manage the stress I experience.	-9.04	< .001*
8. I am friendly to myself when things go wrong.	-6.44	< .001*
9. I remember to pause and take a few deep breaths throughout the day.	-6.17	< .001*
10. I noticed when I was holding tension in my body.	-4.84	< .001*
11. I consciously made efforts to relax tension in my body.	-7.91	< .001*
12. In a difficult situation, I was able to pause without immediately reacting.	-5.14	< .001*
13. I noticed when I was ruminating on troubling thoughts.	-4.30	< .001*
14. I found myself preoccupied with the future or the past.	3.28	0.00*
15. I used a deliberate technique to calm myself when I experienced a stressful situation.	-8.04	0.00*

*Note N = 154, * significant, p <.05*

Qualitative Results

The following section will review the coding results from the thematic analysis specific to the open-ended survey results. Table 5 provides a summary the initial results of thematic analysis for both intervention cohorts. Due to the exploratory nature of this research study, I chose to compliment the quantitative closed-ended questions of the pre- and post-survey results with a thematic analysis of the open-ended questions found in Appendix E. As Braun and Clark (2006) describe, thematic analysis is a method to delineate and report on patterns within qualitative data. This analysis allows a deeper dive into the process that combined the responses from both cohorts into an excel spreadsheet. I then took the answers from each question and formatted the spreadsheet by separating each word into its cell. From there, I used conditional formatting to highlight the duplicated terms. I noted codes that I then grouped by scanning the highlighted texts. I operationalized codes as a level of pattern responses concerning my research questions as articulated in Braun and Clark (2006). Specifically, I was looking for the frequency of words related to resilience, mindfulness, and stress. By allowing the responses to shape the dataset and codes, I could discern examples from each code-shared frequently among participants.

Correlation Matrixes

Appendix G through L presents correlations for pre and posttest items of the survey for cohort one, cohort two, and a combined report.

Table 5
Open Ended Coding and Examples

Code	Example
Stress	• I am handling the changes and stress much better and transitioning from work to home much easier. • Work continues to be the primary stressor in my life. This program helps me to individually be able to cope with that. • It will help me when times are stressful and let go of things that I cannot control. • It definitely helped me to manage the stress I often feel. • I am able to better respond when I am holding stress or tension in my body. • Significantly reduced levels of stressful rumination. I've found I have the space and presence to be deliberately kinder to myself and others.
Impact	• Very impactful. It helped me look at tasks and stressors with a calmer attitude and with the confidence that I can handle it. • Impactful, I've been sharing little bits of what we learned with colleagues and families that we work with who are also stressed and overwhelmed. I especially love to share the small actions overtime build strong skills for both adults and children. • This was probably the most impactful thing I've done for myself in years. I have spent the past 7 years making my former couch potato self-become more physically active. I feel like I need to approach my mental health the same way. • It was very impactful and I even shared many of the things I learned with my husband who has struggled with the same stuff working from home since the pandemic started. It was a great resource for him and I to use individually and together (as a family and as a whole). • The sense of community had a noticeable impact.
Breath	• I take more purposeful breaths now and notice how my body reacts. I try harder to be present. • I am breathing before responding to angry parents. I started talking without listening to Ted Talks/podcasts, just to take in the sounds around me instead of eating and working. • Going through the program empowered me to pause, breath, and take small breaks in order to prevent stress overload. • I didn't take much stock into taking deep breaths before. I didn't they had much of an impact since my mind would still be racing afterwards. Learning that deep breaths help the body was meaningful to me, so I know that even if my mind doesn't feel much calmer, my body does and that helps. • Deep breaths have become a habit.

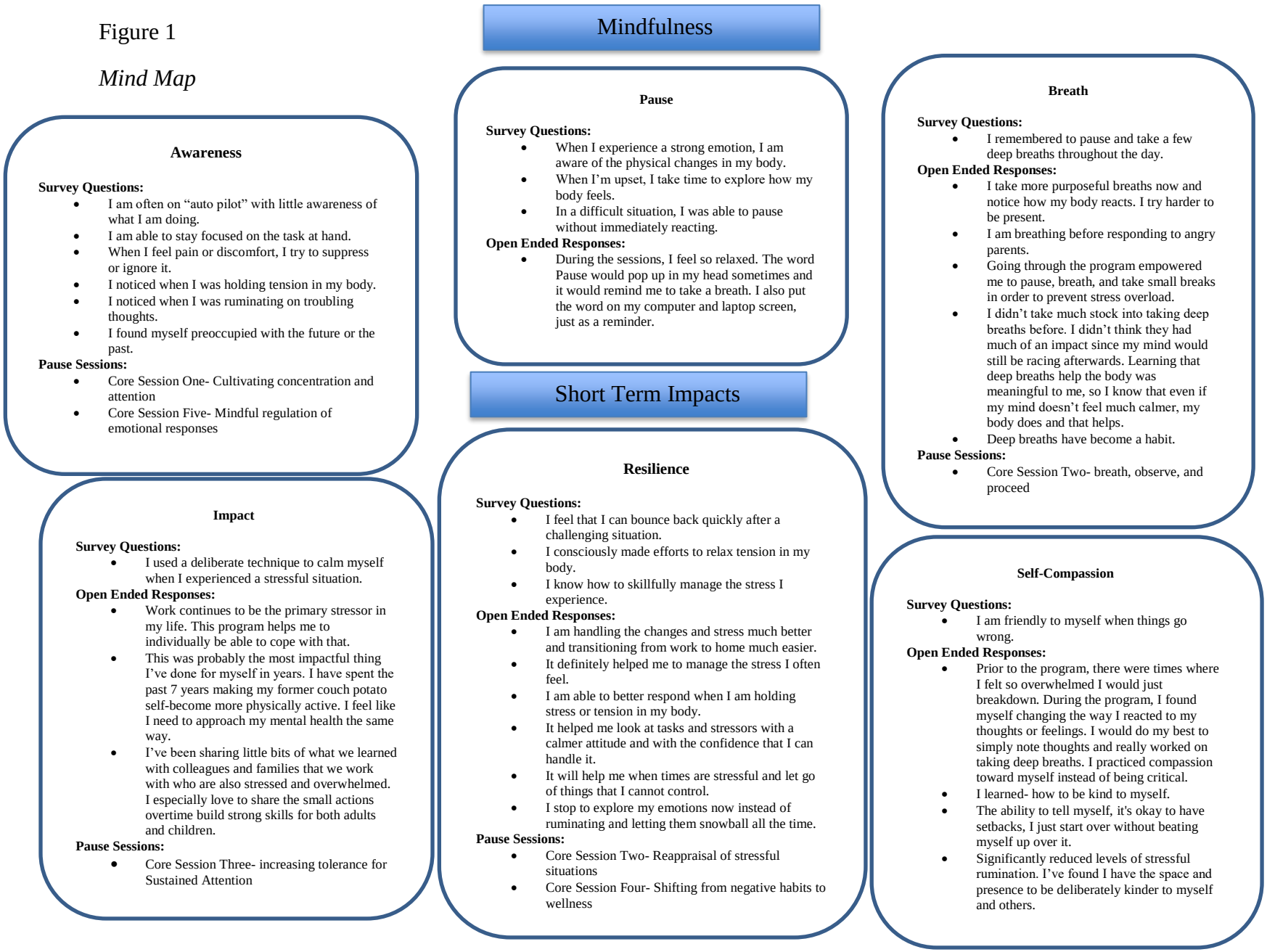
	• Taking breaths daily to do deep breathing.
Awareness	• More awareness on a daily basis. • More aware of my body tension. • Helped me become aware of the negative voice in my head and change them to positive. • I am able to be more aware and change my response to stress. • Awareness of the breath as a tool to connect with the body and decrease stress.
Mindfulness	• I think about mindfulness when I am feeling stressed and really try hard to practice it. • Remembering again that mindfulness can be every moment, every day. • More mindfulness of my emotions.
Pause	• During the sessions, I feel so relaxed. The word Pause would pop up in my head sometimes and it would remind me to take a breath. I also put the word on my computer and laptop screen, just a reminder. • I stop to explore my emotions now, instead of ruminating and letting them snowball all the time.
Self- Compassion	• Stressed level decreased immensely. Prior to the program, there were times where I felt so overwhelmed I would just breakdown. During the program, I found myself changing the way I reacted to my thoughts or feelings. I would do my best to simply note thoughts and really worked on taking deep breaths. I practiced compassion toward myself instead of being critical. • How to be kind to myself.
Community	• Strategies and awesome community. • Sense of community.

Mind Map

This next section reviews the last step in the data analysis. Due to the iterative process of an exploratory analyses research design, I began noticing themes and alignment derived from data sets, and I needed to capture the themes using a visual format. I chose to illustrate the triangulation of the results using a mind map. As illustrated in Figure 1, the mind map is a summary of the concepts taught during the intervention sessions, in combination with both the closed and open-ended survey results. In noticing themes that surfaced from the data points, Figure 1 illustrates the alignment of the themes during the exploratory analysis and are presented as awareness, breath, and pause, with the short-term impacts of the intervention being categorized as self-compassion, impact, and resilience.

Figure 1

Mind Map



CHAPTER FIVE: DISCUSSION

The study aimed to determine the short-term impact of an intervention seeking to address the exasperating stress among educators during the 2020-21 school year. The Pause® at Work program was offered to over 500 educators across Oregon during a highly stressful time in history. As the COVID-19 pandemic persisted, educators were faced with significant constraints beyond their control, having to alter learning conditions dramatically, and stress exasperated the need to address educator wellbeing and resilience (Kurtz, 2021). The program intervention design explored in this study is based on the traditional MBSR framework and comprises two cohort intervention groups. Eighty-four educators registered for the first cohort intervention and were offered five one-hour cores sessions with five 15-minute practices session., while the second cohort (494 registered participants) included six one-hour core sessions and six 15-minute practice sessions. Each cohort was provided with materials to complement the lessons and audio meditations through an online tool kit.

This research aims to explore the results of the interventions offered to Oregon educators during the 2020-21 school year. Modified MBIs have been investigated and appear to yield promising results in lowering stress and anxiety levels while improving decision-making and emotional responses (Brown & Ryan, 2003; Guidetti et al., 2019). However, such studies lack sufficient sample sizes, including a limited selection of study participants, and provide short descriptions of the research-based mechanisms. Additionally, these studies do not include stakeholder involvement, limiting implementation success and buy-in among participants. The proposed study seeks to address these research gaps by exploring the results of an MBI program where educator stakeholders were involved in implementing a program in which they participated.

Discussion of Findings

In the following sections, I summarize the common themes found during this exploratory analysis. Themes were compiled from the content of the Pause® intervention sessions, the survey questions responses, and the open-ended responses provided from all 207 participants.

Mindfulness

As defined in chapter one, mindfulness is the awareness that emerges through paying intentional, nonjudgmental attention to the unfolding of experience moment-to-moment" Kabat-Zin, 2003). With this definition in mind, and in examining the data sets, I found three themes emerging from the data relating to mindfulness-specifically, awareness, pause, and breath.

Awareness

Awareness emerged as a theme among the data sets, including participants' open-ended responses, the survey questions, and the Pause® intervention sessions. As captured in the data, awareness relates to intentional concentration and includes attention. Awareness surfaced by way of the survey question asking, "I am able to stay focused on the task at hand," and, "I noticed when I am holding tension in my body, and, "I notice when I am ruminating on troubling thoughts," and, "I found myself preoccupied with the future of the past." Dependent samples t-test results found statistically significant differences between group means for all questions above.

Based on these themes, I suspect the components from core sessions one and five and psychoeducational teachings coupled with the practices supported participants' ability to cultivate greater awareness. Additionally, when asked for feedback about the impact of the program, participants responded "helped me create an awareness" and "my awareness of noticing my physical tension and being mindful of using tools to release tension easily at work

and at home." Many examples such as this provide strong evidence that awareness, as reported by program participants, was a skill cultivated from both the program sessions and the practice sessions.

As described in chapter two, awareness is the precursor to presence and one of the building blocks to cultivating mindfulness. Through the thematic analysis, I saw awareness emerge from the data as a convincing example of how the interplay between the learning of the content (i.e., through the session lecture format) and the practice strongly supports awareness as a concept emerging as a short-term impact from the program.

As Menezes et al., (2013) research demonstrates, increasing sustained attention reduces emotional reactivity when presented with challenging situations. Brown and Ryan (2013) further validate the benefits of sustained attention by theorizing that the convergence of attention and awareness of ones' attention facilitates wellbeing. Taken together, the data emerging from the theme of attention supports the short-term positive impact of this intervention on participants' ability to cultivate increased awareness.

Pause

In reviewing the data sources, it became clear that "pausing" intentionally was a tool defined by participants' to describe the time between an event and the response to that event. Taken from a program participant, "the space between an event and a reaction, to pause and breathe," was the response when asked- what was most valuable or beneficial about the program. This example indicates the program provided a directional compass (and supplemental practice) to slow down, breath, and take a broader perspective when confronted with difficulty. This theme also emerges in the data from the survey question asking, "In a difficult situation, I was

able to pause without immediately reacting." This question resulted in statistically significant findings using dependent samples t-test from pre and post-survey results.

Emotional regulation can be categorized through several mechanisms as identified in the literature. According to the literature, the feature of emotional regulation most salient to the theme of pausing before reacting to an event is the ability to decrease reactivity in the face of stressors (Luong et al., 2019). The space or pause between the stressor and the reaction is critical to allow time to think through, check-in with the body and brain, and respond appropriately. The respondent can proceed with increased mental clarity and less reactivity (Luong et al., 2019).

Breath

During core session two of the program, participants are taught how to use the breath as an anchor to reappraise a situation and respond more clearly. As participants noted upon the conclusion of the program "I wasn't so reactionary to things that made me upset, even in the slightest way." Another participant described the benefits of the program as "taking just a moment before a task or when the buildup of stress comes on, to take a breath and reset." Related to the idea of breath are more responses from participants including "I take more purposeful breaths now and notice how my body reacts. I try harder to be present." Breath as a tool was also expressed by way of survey question, which resulted in statistically significant findings using a dependent samples t-test from this pre and post-survey question asking, "I remembered to pause and take a few breaths throughout the days."

During session two, participants are taught how to breathe, observe, and proceed as a tool to lengthen the time between stimulus and response. In doing so, participants practice this skill and share their reactions within the community of participants.

As Arch and Craske (2006), research reveals compelling evidence that participants in a breathing intervention group demonstrated greater adaptive responses when presented with negative stimulus than the control group. Given the research and the feedback from this study, there is evidence to suggest that teaching and practicing deliberate breathing exercises might encourage people to use the breath as a tool to lengthen the distance between stimulus and response. The increased distance might be just enough time to reappraise a situation and respond more clearly.

Short Term Impacts

In reviewing the data, I began noticing themes associated with the impact or change the program had on participants. During session three of the program, participants are asked to engage in concentration practices while increasing their tolerance for sustaining concentration. This technique is working the muscle memory of attention in an attempt to train the brain to be more resilient. Pieces from the data that emerged in this area were specifically noted as resilience, self-compassion, and impact or change on the participants' habits.

Resilience.

Taken from the survey questions, qualities relating to resilience include "I feel I can bounce back quickly after a challenging situation," and "I know how to skillfully manage the stress I experience". Both survey questions yielded statistically significant results using a dependent samples t-test from the pre and post responses.

As defined in the literature *resilience* is "a phenomenon that occurs when teachers experience stress but continue to maintain a sense of purpose or ability to flourish," (Schussler et al., 2020, p.3). This research further purports that educators build resilience when they demonstrate an increase of emotional awareness coupled with the ability to respond

productively. Examples of participant's comments that related to this theme include "I am feeling less stress when I am getting pulled in many directions," and "on days I meditate before work, I am much more focused on tasks and able to move from one task to the next without feeling overwhelmed." These are examples that participants at least in the short term reported greater ability to rebound after stressful events and proceed with a more balanced perspective.

Self-Compassion

Self-compassion as defined in the literature refers to "being touched by one's suffering, generating a desire to alleviate one's suffering and treat oneself with understanding and concern," (Neff & Germer, 2013, p. 28). Upon conclusion of the intervention program, several participants noted feelings of increased self-compassion. For example, according to one participant this course was a "reminder to take care of myself," and "recognizing that 'thinking' is normal and to accept that and more on." Additional comments such as "I've found I have the space and presence to be deliberately kinder to myself," illustrates that self-compassion surfaced as an impact for some participants. Self-compassion was also expressed by way of the survey question, which resulted in statistically significant findings using dependent samples t-test from this pre and post survey result asking, "I am friendly to myself when things go wrong." Additional comments such as "I liked the reminder to be kinder to myself. I have high expectations for myself and feel like I constantly fall short. I was reminded to look at the successes, and use a kind complementary tone with myself. It was calming and left me feeling less stressed" provide evidence that self-compassion was cultivated as a noticeable short term outcome of the intervention.

Research on the importance of cultivating self-compassion is dense (Luo et al., 2018; Neff & Germer, 2013; Olson & Kemper, 2013). Specifically self-compassion is linked to the

willingness to acknowledge negative emotions as valid and the ability to cope with life stressors (Neff & Germer, 2013). Moreover, having a self-compassionate mindset is linked to positive workplace outcomes including increased resilience and reducing negative appraisals of the teaching profession, resulting in increased self-efficacy (Luo et al., 2018; Olson & Kemper, 2013). Taken together, the compelling evidence on the importance of self-compassion and the findings as described by program participants suggest self-compassion as a theme arising a positive short-term outcome from the program.

Impact

The last theme that surfaced from the association of data sources was one of overall impact of change noted from the participants. Specific examples of this are "going through the program allowed me to give myself permission to pause, breath, and take small breaks in order to prevent stress overload." Another participant example that illustrates overall impact, "I am managing my teams differently and instead of covering up emotions, I'm talking about them within meetings. I am trying to lead mindfully and it's taken some time to do but it's helpful in alleviating my personal burnout." In conclusion, the following is a statement worth noting for the theme of overall impact

> "Of all the things are district has focused on this year with regard to mental health, this was hands down the best choice they could have made. As educators, we are taught to sacrifice often and burn the candle at both ends. This program truly was about doing something for yourself. That was the main focus. It is a simple idea: a healthier adult makes for a healthier adult for children. Start at the root! Which is what made this so fantastic! Of course I was thinking about how I could use things with kids and their families, but I was mostly thinking about really taking the time for myself and extending

that kindness to me to begin with. Thank you so very much for the coming to us with your warmth and generosity. It was exactly what I needed."

Summary

When taken together, the results provided and analyzed by the participants' of the Pause® at Work intervention program reveal the intended outcomes were met at least for the short term. Specifically, the program aimed to cultivate outcomes in five domains of participants' wellbeing: stress relief, mindful awareness, resilience, emotional intelligence, and self-compassion. Based on the themes illustrated in Figure 1: awareness, self-compassion, and resilience surfaced as unique themes. Whereas, stress relief and emotional intelligence did not surface as distinct themes. Despite these findings, examples of stress relief and emotional intelligence are embedded within the data. For example, a participant noted, "work continues to be the primary stressor in my life. This program helps me to individually be able to cope with that." Although not a distinct theme, examples such as this were noted throughout the open-ended data responses. Additionally, emotional intelligence as a construct includes self-awareness (noted as a unique them) and emotional regulation (noted from open-ended responses). Therefore, when looking holistically at the participants' comments of the program, there are many examples of stress relief and emotional intelligence throughout the data, even though those constructs were not explicitly called out.

As described in the sections above, themes associated in the literature complemented by the data revealed during this exploratory analysis provide evidence that this intervention promoted well-being and resilience. Such themes include those noted in Good et al., (2016) research supporting MBIs as an intervention that teaches participants how to respond to disruptions throughout their day from a balanced, even-keeled response resulting in greater

coping skills. Additionally, the findings of this study reinforce that mindfulness interventions have great potential to boost workplace wellbeing.

Limitations

This section summarizes the limitations of this study. This study yielded statistically significant results using dependent samples t-tests for pre and post-survey questions for all but one question. However, this study is not without limitations. First, the study did not include a traditional control group, thus limiting the generalizability of the results. Not offering a control group, proclaiming the results could generalize to a greater population of educators is impossible. If this study included a control group, it would have strengthened the results and provided a more convincing argument that the intervention was effective.

Another limitation in this study is the lack of a validated survey instrument for the pre and post-tests. Pause® at Work created the instrument used as a tool, and at this time, there are no reliability and validity measures included making the instrument itself weaker as opposed to one backed by psychometric research. Questions from the survey were adapted from various preexisting sources such as the Brief Resilience Scale, Mindful Attention Awareness Scale, and the Five Facet Mindfulness Questionnaire. Pause® at Work facilitators reviewed the intervention sessions and selected survey items that were most relevant to the curriculum and intended outcomes. Admittedly, the co-founders of Pause® at Work, Rena, and Ryan, created an instrument for participants to report on their feelings and their perceptions of how the intervention is changing their feelings and experiences. The items from the instrument are subjective. The instrument is not scientifically validated (using a control group), and it has not been rigorously tested on sample sizes large enough to affirm its validity.

The completion rate for the program participants is another limitation of this study. Many participants were not included in the analysis because they did not complete the pre and post-survey results. The results presented in chapter four only included an analysis of the participants who completed pre and post-survey questions. Another limitation is noted in the lack of demographic information taken from the participants. It is unknown how those factors might have contributed to the overarching results without knowing basic demographics. In addition to the limitations described above, survey data collection methods have the potential to pose social desirability biases.

Social desirability as defined in the literature refers to "a tendency to present reality to what is perceived to be socially acceptable," (Bergen, & Labonté, 2020, p. 783). Given that participants were a part of a large group, it is possible that social desirability affected their responses. Being involved in an intervention such as this might lead others to overestimate the positive effects of the program intervention to conform to the group expectations. However, the effect of this bias was minimized by collecting anonymous results and using self-administered survey collection procedures.

Another limitation of this study is my involvement in the delivery of the intervention cohorts. It is unclear how my involvement affected the results of this study. For example, given my role as an educational leader in Oregon, it is unknown how my position influenced program participants to sign up to be involved with the intervention. Participants volunteered for the program; however, there is no way of knowing how my professional status influenced their decisions.

Despite the statistically significant findings for most survey questions, for cohort one, the following question asking, "I am often on 'auto pilot' with little awareness of what I am doing,"

did not yield statistically significant results. It is possible that program participants did not receive as explicit instruction on noticing autopilot in contrast to those who attended cohort two. Because of this, it might be worth enhancing the psychoeducational lesson on this matter for future participants. Alternatively, this question may have been answered by participants in such a way that they perceived awareness of being on autopilot as a positive outcome of the program. As mentioned earlier, awareness is one of the foundational components of mindfulness. As such, being more aware and therefore an increase in being on autopilot can also be interpreted as a positive impact. Survey question design influences how participants respond and this will be addressed further in the recommendations for further research section.

Lastly, by using a thematic analysis of the open-ended survey responses, it is unavoidable that my perspective and beliefs guide the interpretation. However, this is not necessarily a disadvantage, especially given that the thematic analysis was a complements the quantitative data results. However, it is worth noting that the coders' bias might influence how the data is organized and presented. To account for the potential bias yielded through the thematic analysis, examples of the participant's responses were offered to the reader. The following section will provide considerations for future research in this area.

Future Directions

This section reviews how the findings from this study can aid in future directions of research. Educators have experienced heightened levels of occupational stress and anxiety for eons. As such, they need proactive measures to combat the cascading and alarming effects of burnout. To do so, I believe school districts and those who manage educators should prioritize educator wellbeing. Beyond suggesting self-care and placing the burden on educators, I believe mindfulness practices at least be considered as a potentially beneficial option for new educators.

Even better, I believe it would behoove the education system to offer MBI professional develop opportunities for pre-service teachers as a program option.

When examining feedback from program participants, some asked for additional sessions. It might be worth offering an extended intervention cycle for those interested in strengthening their practice. Perhaps booster sessions or maintenance groups for those who wish to continue the practice of mindfulness in a community format might bolster sustained practice.

Another area of future study could be in strengthening the psychometric foundations of the survey administered. This would aid in generalizing the findings and bolster the validity of the survey findings. Additionally, future research might want to examine the program sessions to more closely align with questions from the pre and post survey. This would enhance the credibility of the program components as measured by the survey instrument. Additionally, further researchers may want to analyze the survey design including how the questions are worded. This would strengthen the results yielded from the survey question results.

Although this study has notable limitations as described, some very salient findings surfaced from program participants. As such, it is worth exploring the findings in more detail. Specifically, since Pause® has offered subsequent programs, perhaps using a Grounded Theory methodology and engaging in-depth interviews with program participants would yield interesting findings.

While traditional researchers focus on critiquing study limitations, I chose an exploratory analysis approach because I believe most decision-makers in education are most interested in hearing stories of impact from program participants. I believe there is sufficient evidence to consider MBI programs as a worthwhile investment. Moreover, the intervention can potentially change lives, impact students, and greatly diminish the consequences of the great resignation.

The time is now to combat educator stress. Stakeholders do not have a choice. The cost of implementing MBIs is pennies on the dollar compared to the costs of losing good teachers, not to mention what burnout does for the reputation of teaching. If we are to learn anything from this nightmare COVID-19 pandemic, I hope we learn to take care of each other better. We learn prioritize mental health, wellbeing, and resilience for the caring professionals. We can do better and frankly must. If not now, then when.

Conclusions

This study has many limitations, especially when critiqued through a stickily research-based lens. However, the problem of educator burnout is longstanding and cannot wait to be addressed. I am not convinced we will find a better cost-effective solution that supports building inner resources. The value of bringing mindfulness to others suffering or struggling cannot be quantified. By offering a program that has the potential to foster resilience and wellbeing, we are sending the message to educators that we care about them. There is an immeasurable value in helping people feel supported and empowered to take care of themselves (Rena, S.M., personal communication, January 25, 2022). When reviewing the qualitative feedback provided by program participants, it is clear to me those statements such as, “I feel happy that I have a peaceful place to go that is always with me! It has been with me. I needed to be reminded and taught how to access it,” might not yield psychometrically sound evidence, however, the words are convincing.

The stories in the hearts of educators far surpass what can be analyzed through statistical analysis. Mindfulness can bring back the heart of the work, to the workers themselves who give everything to their profession. Mindfulness is full of potential promise. The promise to impact educators positively, the promise to combat burnout by building up inner resources, and the

promise to potentially impact the field. What if educators were more engaged? What if educators were happier? What if educators felt truly fulfilled? I believe we have a tool right at our disposal to offer the heart of our educators, and I believe it is our obligation to provide educators with a tool that already lives inside themselves and see what could happen.

Teaching is stressful and difficult, yet mindfulness may serve to protect educators from this stress. By offering educators a portable tool such as mindfulness, awareness, breath, and pause, it is possible to empower educators to see that they have the tools to manage the stress of teaching well within their grasp. Mindfulness will not fix the fact that education is stressful, but it has the potential to offer hope. It has the potential to lessen the impact stress has on those who pursue their love of teaching. It has the potential to buffer the stress and protect educators from being burned out and might assist educators stay in the field longer.

In conclusion, my study is not without its limitations. However, when taken in the totality of the research supporting mindfulness as a promising intervention, I believe there is merit in the promise of this intervention. As part of the research for this study, I read countless peer reviewed articles supporting that mindfulness has immense promise and when I think back on all that research combined with the statements of lived experiences as described in this research, I believe there is enough data to support that mindfulness has a place in the world of education. I believe this intervention holds enormous potential to change the trajectory of burnout, stress, and anxiety for educators. What do we have to lose when we have everything to gain? I believe it is worth taking that chance.

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APPENDIX A

CONSENT FORM

Project Title: A Descriptive Analysis of the Impact of Mindfulness-Based Intervention for Public Educators During COVID-19

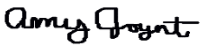
You are being asked to have your name referenced in the above dissertation research project being conducted by Amy Joynt at George Fox University Department of Educational Leadership Department.

The purpose of this research is to examine the short term impact of the mindfulness-based intervention for Oregon educators during the 2020-21 school year.

If you agree, your name will be used in the dissertation document.

Your signature below indicates your consent for your name to use in the dissertation document.

Signature of Investigator: Date: 3/9/2022



Signature of Participant Date: 3/9/2022

APPENDIX B

CONSENT FORM

Project Title: A Descriptive Analysis of the Impact of Mindfulness-Based Intervention for Public Educators During COVID-19

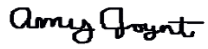
You are being asked to have your name and the intervention you facilitated (Pause® at Work Stress Resilience and Mindfulness program) referenced in the above dissertation research project being conducted by Amy Joynt at George Fox University Department of Educational Leadership Department.

The purpose of this research is to examine the short term impact of the mindfulness-based intervention for Oregon educators during the 2020-21 school year.

If you agree, your name will be used in the dissertation document.

Your signature below indicates your consent for your name to use in the dissertation document.

Signature of Investigator: Date: 3/15/22



Signature of Participant Date: 3/15/22

Signature of Participant Date: 3/15/22

APPENDIX C

Email Sent to Superintendents for Cohort One

Good Morning,

As part of our approved ESSER plan, we've been considering providing some training in Mindfulness Based Stress Reduction. MBSR is a secular mindfulness approach that has about 40 years of history and research behind it, and we believe stress among the licensed, classified, and administrative ranks will be extraordinarily high this coming school year.

Our current thinking is to run a pilot group through the training and have the Center conduct some pre and post assessments to determine effectiveness of the program in our context. The WESD Cabinet participated in a demonstration session with Pause, a small Portland based company, last week, and we were all impressed and encouraged by what was shared. We are currently communicating with our own licensed and classified associations to get a sense of their interest.

There has been a lot of information in the press recently about MBSR and other mindfulness techniques. I've pasted a few links below for you to pursue. Our hope is that we may be able to test the waters with some WESD staff and staff from component districts before we jump in with both feet. The question is: do you have a few influential staff *(Licensed, Classified, or Administrators)* in your district who may be open to engaging in this work? There wouldn't be a cost to participating, as we would cover it with our ESSER funds—unless the demand in the agency and region exceeded our resources.

Frankly, I'm concerned that without practical, effective tools to deal with the stress and anxiety that has accompanied the pandemic, we will see substantial impacts on everything from absenteeism to creativity to interpersonal relationships. I plan to host a brief meeting next week to discuss our preliminary plans, and we hope to follow that meeting with a demonstration/participatory session with a Pause® instructor—on-line of course.

Please let me know your gut reaction and give me some indication if you may want to include some influencers from your district in the pilot—assuming we find sufficient support.

Keith Ussery
Deputy Superintendent Willamette ESD

APPENDIX D

Email Sent to Superintendents for Cohort Two

Sent to: Superintendent Colleagues
Subject: Stress management program for Oregon ESDs and district staff

I'm reaching out to see if you are interested in participating in a unique opportunity to offer stress management and resilience training to staff within our agencies and component districts.

There is no question that we are all feeling the rising tide of stress and anxiety among educators, and many of us have felt ill equipped to provide concrete, research-based tools to help educators across our state.

High Desert ESD and Willamette ESD are partnering with Portland-based provider Pause Meditation to offer a 6-week Stress Relief + Resilience Program called Wellness Wednesdays. The program includes 2 weekly (live and recorded) Zoom sessions for 6 weeks (one 60-minute core session and one 15-minute practice).

Our partnership allows us to offer this opportunity at a dramatically discounted rate of $95 per participant (82% less than the standard cost), and we want to extend the invitation to your ESDs as well as your region's educators.

Pause Meditation's program, based on more than forty years of research on mindfulness, traces its origins to Jon Kabat Zin's work at the University of Massachusetts Medical School.

Participants will meet weekly as follows:

- Core Trainings: Wednesdays 4-5pm
  - 1/20, 1/27, 2/3, 2/10, 2/17, 2/24
- Practice Sessions: Mondays 4-4:15pm
  - 1/25, 2/1, 2/8, 2/15, 2/22, 3/1

The power of Wellness Wednesdays came to light this fall when the Willamette ESD conducted a 5-week pilot study that included 86 licensed, classified, and administrative staff from WESD and several component districts.

The results were very promising:

- 92% of participants reported that the program was helpful in reducing stress levels; and
- 87% of participants reported that the program was helpful in relation to their work life.

Here is what a few participants had to say:

"Of all the things our district has focused on this year with regard to mental health, this was hands down the best choice they could have made… The program truly was about doing something for yourself. Thank you so very much for coming to us with your warmth and generosity. It was exactly what I needed."

"Honestly, most of the stress I have been experiencing has been related to family/home life. I know that the tools had a positive impact on my work life, but I use them more in response to home situations. So, as a result, having tools for home struggles probably allowed a better home/work balance."

If you are interested in joining us in this effort, here is how it works:

- **HDESD** will manage signups and **WESD** will process payments
- **WESD** will provide training on a strict cost recovery model for interested ESDs or school districts
- **HDESD** and **WESD** will provide all outreach and communications materials for your use
- **Pause Mediation** will provide:
    - a quality website for participants to access sessions and tools provided
    - Pre & post assessments and analysis to measure impact

Thank you for considering this opportunity to join us in supporting our state's educators and staff during these extraordinary and challenging times. If you are interested in participating, we are collecting an estimate of registration numbers by completing this form.

I look forward to hearing from you as we move forward.

APPENDIX E

Pre- and Post-participation Survey Questions

Pre-Program Questions:

- How would you rate your previous experience with mindfulness or meditation training?
- How often do you currently practice meditation or mindfulness?
- How optimistic are you regarding the potential benefits of mindfulness and meditation training?
- What do you anticipate will be the greatest benefit by participating in this pilot program?
- What do you think might block you from obtaining that benefit?
- What do you anticipate will the impact of your work by participating in this pilot program?

Post-Program Questions:

- How many core training sessions (60 minutes) did you attend?
- How many Pause practice session (15 minutes) did you attend?
- On average, how often did you practice outside of the weekly Pause sessions (on your worn or using the digital tool kit or recommended practices)?
- What did you find most valuable or beneficial about the program?
- What did you find most challenging?
- How would you change the program to make it better?
- How impactful was the program on your work life?
- Are you interested in additional mindfulness programming (on a variety of stress reduction + resilience + wellbeing topics)?

- If you are interested in additional programming, which of the following topics are of MBSR interest to you? (Please check all that apply)
    - Mindful movement/stretching
    - Mindful eating
    - Creating work/life balance
    - Preventing burnout
    - Managing digital overwhelm
    - Mindfulness for better sleep
    - Unlocking creativity + flow
    - Wise communication
    - Happiness
    - Supporting others in building their mindfulness practice
- Are you interested in attending additional 15-minute guided medication practice session if they are offered?
- If additional programming or practices session were offered, what time of day would you prefer?
- Do you have any other feedback about potential ongoing mindfulness or wellbeing programming that would be most supportive for you?

APPENDIX F

Pre- and Post-participation Survey Questions

GENERALLY IN DAILY LIFE, do you agree or disagree with the following?

1. I am often on "auto pilot" with little awareness of what I am doing.

	1	2	3	4	5	6	7	8	9	10	
Strongly Disagree	●	●	●	●	●	●	●	●	●	●	Strong Agree

2. I am able to stay focused on the task at hand.

	1	2	3	4	5	6	7	8	9	10	
Strongly Disagree	●	●	●	●	●	●	●	●	●	●	Strong Agree

3. When I experience strong emotion, I am aware of the physical changes in my body.

	1	2	3	4	5	6	7	8	9	10	
Strongly Disagree	●	●	●	●	●	●	●	●	●	●	Strong Agree

4. When I'm upset, I take time to explore how my body feels.

	1	2	3	4	5	6	7	8	9	10	
Strongly Disagree	●	●	●	●	●	●	●	●	●	●	Strong Agree

5. When I feel pain or discomfort, I try to suppress or ignore it.

	1	2	3	4	5	6	7	8	9	10	
Strongly Disagree	●	●	●	●	●	●	●	●	●	●	Strong Agree

6. I feel that I can bounce back quickly after a challenging situation.

1 2 3 4 5 6 7 8 9 10

Strongly Disagree ● ● ● ● ● ● ● ● ● ● Strong Agree

7. I know how to skillfully manage the stress I experience.

1 2 3 4 5 6 7 8 9 10

Strongly Disagree ● ● ● ● ● ● ● ● ● ● Strong Agree

8. I am friendly to myself when things go wrong.

1 2 3 4 5 6 7 8 9 10

Strongly Disagree ● ● ● ● ● ● ● ● ● ● Strong Agree

<u>OVER THE PAST WEEK, how often did you experience the following?</u>

9. I remembered to pause and take a few deep breaths throughout the day.

1 2 3 4 5 6 7 8 9 10

Very Rarely ● ● ● ● ● ● ● ● ● ● Very Frequently

10. I noticed when I was holding tension in my body.

1 2 3 4 5 6 7 8 9 10

Very Rarely ● ● ● ● ● ● ● ● ● ● Very Frequently

11. I consciously made efforts to relax tension in my body.

1 2 3 4 5 6 7 8 9 10

Very Rarely ● ● ● ● ● ● ● ● ● ● Very Frequently

12. In a difficult situation, I was able to pause without immediately reacting.

1 2 3 4 5 6 7 8 9 10

Very Rarely ● ● ● ● ● ● ● ● ● ● Very Frequently

13. I noticed when I was ruminating on troubling thoughts.

1 2 3 4 5 6 7 8 9 10

Very Rarely ● ● ● ● ● ● ● ● ● ● Very Frequently

14. I found myself preoccupied with the future or the past.

1 2 3 4 5 6 7 8 9 10

Very Rarely ● ● ● ● ● ● ● ● ● ● Very Frequently

15. I used a deliberate technique to calm myself when I experienced a stressful situation.

1 2 3 4 5 6 7 8 9 10

Very Rarely ● ● ● ● ● ● ● ● ● ● Very Frequently

APPENDIX G

Correlation Matrix Pre-Test Cohort One Survey Items

	Pre 1	Pre 2	Pre 3	Pre 4	Pre 5	Pre 6	Pre 7	Pre 8	Pre 9	Pre 10	Pre 11	Pre 12	Pre 13	Pre 14	Pre 15
Pre 1	1.00														
Pre 2	-0.38	1.00													
Pre 3	-0.20	0.12	1.00												
Pre 4	0.09	0.12	0.29	1.00											
Pre 5	0.20	0.03	-0.11	-0.05	1.00										
Pre 6	-0.04	0.20	0.33	0.37	0.28	1.00									
Pre 7	-0.16	0.26	0.35	0.29	-0.28	0.47	1.00								
Pre 8	-0.18	0.15	0.26	0.05	-0.01	0.45	0.47	1.00							
Pre 9	-0.19	-0.06	0.24	0.25	-0.27	0.16	0.12	0.13	1.00						
Pre 10	-0.41	0.18	0.19	-0.04	-0.15	-0.04	0.30	0.26	0.27	1.00					
Pre 11	-0.37	0.08	0.31	0.29	-0.35	0.10	0.26	0.29	0.71	0.37	1.00				
Pre 12	-0.21	0.13	0.25	0.15	-0.26	0.26	0.34	0.22	0.28	0.02	0.43	1.00			
Pre 13	-.024	0.19	0.29	0.08	-0.22	0.01	0.31	0.06	0.38	0.53	0.46	0.29	1.00		
Pre 14	-0.09	0.01	0.28	0.19	0.03	0.11	0.06	-0.14	0.25	0.32	0.23	0.22	0.41	1.00	
Pre 15	-0.12	0.17	0.32	0.25	-0.23	0.19	0.31	0.05	0.49	0.21	0.54	0.40	0.38	0.24	1.00

APPENDIX H

Correlation Matrix Pre -Test Cohort Two Survey Items

	Pre 1	Pre 2	Pre 3	Pre 4	Pre 5	Pre 6	Pre 7	Pre 8	Pre 9	Pre 10	Pre 11	Pre 12	Pre 13	Pre 14	Pre 15
Pre 1	1.00														
Pre 2	-0.08	1.00													
Pre 3	-0.11	0.15	1.00												
Pre 4	-0.03	-0.02	0.56	1.00											
Pre 5	0.38	0.10	-0.15	-0.26	1.00										
Pre 6	-0.02	0.29	0.13	0.03	0.09	1.00									
Pre 7	-.013	0.13	0.24	0.29	-0.20	0.56	1.00								
Pre 8	-0.05	0.10	0.15	0.23	-0.20	0.46	0.43	1.00							
Pre 9	0.02	-0.11	0.28	0.51	-0.21	0.10	0.31	0.36	1.00						
Pre 10	-0.05	0.20	0.53	0.44	-0.17	0.19	0.34	0.16	0.38	1.00					
Pre 11	-0.03	0.06	0.44	0.55	-0.29	0.15	0.39	0.21	0.64	0.56	1.00				
Pre 12	0.04	0.01	0.24	0.24	0.04	0.32	0.25	0.44	0.40	0.22	0.27	1.00			
Pre 13	-0.19	0.13	0.48	0.23	-0.21	0.24	0.24	0.15	0.22	0.48	0.35	0.20	1.00		
Pre 14	0.08	-0.08	0.07	0.01	0.19	-0.17	-0.14	-0.33	-0.01	0.10	0.09	-0.21	0.09	1.00	
Pre 15	-0.05	-0.02	0.47	0.56	-0.29	0.14	0.39	0.20	0.58	0.44	0.58	0.27	0.32	0.07	1.00

APPENDIX I

Correlation Matrix Pre-Test Combined Survey Items

	Pre 1	Pre 2	Pre 3	Pre 4	Pre 5	Pre 6	Pre 7	Pre 8	Pre 9	Pre 10	Pre 11	Pre 12	Pre 13	Pre 14	Pre 15
Pre 1	1.00														
Pre 2	-0.15	1.00													
Pre 3	-0.13	0.14	1.00												
Pre 4	0.00	0.01	0.50	1.00											
Pre 5	0.33	0.08	-0.14	-0.22	1.00										
Pre 6	-0.02	0.27	0.17	0.11	0.13	1.00									
Pre 7	-0.13	0.16	0.26	0.29	-0.23	0.54	1.00								
Pre 8	-0.08	0.11	0.18	0.19	-0.16	0.46	0.44	1.00							
Pre 9	-0.04	-0.09	0.26	0.44	-0.24	0.13	0.27	0.31	1.00						
Pre 10	-0.15	0.20	0.45	0.33	-0.17	0.14	0.33	0.19	0.35	1.00					
Pre 11	-0.11	0.07	0.41	0.50	-0.32	0.15	0.37	0.24	0.66	0.52	1.00				
Pre 12	-0.02	0.03	0.25	0.23	-0.03	0.31	0.27	0.39	0.36	0.18	0.30	1.00			
Pre 13	-0.19	0.14	0.42	0.20	-0.23	0.20	0.27	0.15	0.30	0.49	0.39	0.22	1.00		
Pre 14	0.04	-0.06	0.11	0.04	0.16	-0.11	-0.10	-0.29	0.04	0.14	0.11	-0.13	0.15	1.00	
Pre 15	-0.07	0.02	0.44	0.49	-0.28	0.16	0.38	0.17	0.56	0.39	0.58	0.30	0.34	0.10	1.00

APPENDIX J

Correlation Matrix Post-Test Cohort One Survey Items

	Post 1	Post 2	Post 3	Post 4	Post 5	Post 6	Post 7	Post 8	Post 9	Post 10	Post 11	Post 12	Post 13	Post 14	Post 15
Post 1	1.00														
Post 2	-0.18	1.00													
Post 3	-0.17	0.40	1.00												
Post 4	-0.18	0.03	0.57	1.00											
Post 5	0.25	0.16	-0.12	-0.37	1.00										
Post 6	0.06	0.09	0.51	0.55	-0.03	1.00									
Post 7	-0.07	0.17	0.55	0.69	-0.23	0.71	1.00								
Post 8	-0.03	0.24	0.39	0.59	-0.25	0.44	0.44	1.00							
Post 9	-0.18	0.04	0.47	0.60	-0.19	0.43	0.47	0.52	1.00						
Post 10	-0.11	0.02	0.54	0.61	-0.14	0.50	0.49	0.56	0.72	1.00					
Post 11	0.03	-0.04	0.53	0.47	-0.28	0.53	0.53	0.45	0.72	0.75	1.00				
Post 12	-0.17	0.24	0.62	0.42	-0.25	0.27	0.41	0.40	0.57	0.51	0.60	1.00			
Post 13	-0.05	0.01	0.47	0.57	-0.30	0.57	0.63	0.57	0.65	0.64	0.78	0.60	1.00		
Post 14	0.08	-0.05	0.13	-0.03	0.30	0.05	0.20	-0.16	0.10	0.14	0.01	0.16	0.20	1.00	
Post 15	-0.12	0.13	0.49	0.58	-0.41	0.36	0.45	0.59	0.74	0.65	0.68	0.63	0.67	0.04	1.00

APPENDIX K

Correlation Matrix Post-Test Cohort Two Survey Items

	Post 1	Post 2	Post 3	Post 4	Post 5	Post 6	Post 7	Post 8	Post 9	Post 10	Post 11	Post 12	Post 13	Post 14	Post 15
Post 1	1.00														
Post 2	-0.13	1.00													
Post 3	0.02	0.29	1.00												
Post 4	-0.09	0.13	0.54	1.00											
Post 5	0.47	0.02	-0.01	-0.28	1.00										
Post 6	-0.08	0.32	0.18	0.25	-0.12	1.00									
Post 7	-0.06	0.18	0.30	0.42	-0.19	0.56	1.00								
Post 8	-0.13	0.06	0.12	0.36	-0.36	0.38	0.53	1.00							
Post 9	-0.12	0.06	0.30	0.51	-0.28	0.23	0.48	0.39	1.00						
Post 10	-0.09	0.11	0.56	0.47	0.04	0.23	0.34	0.14	0.44	1.00					
Post 11	-0.07	0.07	0.40	0.49	-0.17	0.22	0.49	0.38	0.61	0.54	1.00				
Post 12	-0.06	00.0	0.25	0.44	-0.19	0.31	0.44	0.54	0.44	0.25	0.45	1.00			
Post 13	0.03	0.03	0.41	0.43	-0.06	0.16	0.35	0.17	0.47	0.48	0.44	0.27	1.00		
Post 14	0.43	0.09	0.13	-0.04	0.31	-0.08	-0.11	-0.29	-0.09	0.10	-0.01	-0.12	0.16	1.00	
Post 15	-0.05	0.04	0.45	0.49	-0.16	0.26	0.59	0.49	0.51	0.38	0.51	0.58	0.45	-0.13	1.00

APPENDIX L

Correlation Matrix Post-Test Cohort Combined Survey Items

	Post 1	Post 2	Post 3	Post 4	Post 5	Post 6	Post 7	Post 8	Post 9	Post 10	Post 11	Post 12	Post 13	Post 14	Post 15
Post 1	1.00														
Post 2	-0.14	1.00													
Post 3	-0.03	0.31	1.00												
Post 4	-0.12	0.10	0.55	1.00											
Post 5	0.42	0.05	-0.04	-0.31	1.00										
Post 6	-0.04	0.26	0.25	0.33	-0.10	1.00									
Post 7	-0.07	0.17	0.36	0.50	-0.20	0.59	1.00								
Post 8	-0.12	0.10	0.18	0.42	-0.34	0.39	0.51	1.00							
Post 9	-0.13	0.06	0.34	0.53	-0.25	0.28	0.48	0.42	1.00						
Post 10	-0.11	0.08	0.55	0.51	-0.08	0.29	0.38	0.25	0.51	1.00					
Post 11	-0.04	0.04	0.43	0.48	-0.20	0.30	0.50	0.39	0.64	0.60	1.00				
Post 12	-0.08	0.05	0.32	0.43	-0.19	0.31	0.42	0.49	0.47	0.30	0.49	1.00			
Post 13	-0.02	0.02	0.42	0.48	-0.14	0.26	0.44	0.30	0.51	0.54	0.53	0.33	1.00		
Post 14	0.35	0.06	0.13	-0.04	0.31	-0.05	-0.03	-0.26	-0.04	0.11	-0.01	-0.06	0.16	1.00	
Post 15	-0.07	0.06	0.46	0.52	-0.23	0.28	0.56	0.46	0.63	0.45	0.56	0.58	0.51	-0.09	1.00