

**AN EXPLORATION OF THE INFLUENCE OF SELF CARE AND  
MINDFULNESS PRACTICES ON EARLY CHILDHOOD TEACHERS'  
PERCEPTIONS OF STRESS AND JOB SATISFACTION**

A Doctoral Capstone Project

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Department of Secondary Education and Administrative Leadership

In Partial Fulfillment of the  
Requirements for the Degree of  
Doctor of Education

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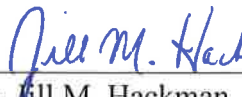
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**Dedication**

This doctoral capstone project is dedicated to My Village:

Family who supported me in any and all ways needed,

Friends who listened and cheered along way,

Mentors and colleagues who shared their knowledge, time, and love of learning,

Educators who took the time to be mindful and support this research,

And my daughters – Aubrey, Brielle, and Cayleigh who inspire me each day.

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## Table of Contents

Dedication	iv
Acknowledgments	v
List of Tables	xi
List of Figures	xii
Abstract	xiii
CHAPTER I. Introduction	1
CHAPTER II. Literature Review	6
Impact of High-Quality Early Childhood Education Programs	6
Stress	14
Definition and early models of teacher stress	15
Theoretical models of occupational stress	15
Stress factors	17
Impact of teacher stress	20
Self-Care	22
Mindfulness	26
Benefits of mindfulness-based interventions	28
<i>Mindfulness-Based Stress Reduction (MBSR)</i>	29
<i>Cultivating Awareness and Resilience in Education (CARE)</i>	30
<i>Stress Prevention and Mindfulness (SPAM) Program</i>	31
<i>Mindfulness training</i>	32
<i>Other mindfulness-based interventions</i>	33
Summary of mindfulness program characteristics	33
Strategies for teaching and promoting mindfulness	34
Recommendations for mindfulness practice	37
Practices for beginners	39
Summary	40
CHAPTER III. Methodology	41
Purpose of the Study	42

Setting	45
BCIU Child Care	45
Berks County Head Start	46
BCIU Pre-K Counts	47
BCIU Preschool Early Intervention	47
Participants	48
Intervention	49
General overview	49
Selection of resource materials	51
COVID-19 impact	53
Fiscal implications	53
Research Design, Methods and Data Collection	54
Research design	54
Data collection procedures	54
Data collection tools	56
<i>Teacher and classroom demographics</i>	56
<i>Stress measures</i>	57
<i>Job satisfaction and commitment</i>	58
<i>Self-care practices</i>	59
<i>Weekly intervention reflection</i>	60
<i>Post-intervention reflection</i>	61
Validity	61
Summary	65
CHAPTER IV. Data Analysis and Results	66
Research Question 1	67
Teacher characteristics and perceptions	67
<i>Score interpretation</i>	68
<i>Program affiliation</i>	69
<i>Teacher levels of education</i>	72
<i>Years of teaching experience</i>	75



Relationships between variables	79
Summary of existing relationships	81
Research Question 2	81
Teacher perceptions of stress	83
<i>Statistical analysis</i>	83
<i>Weekly ratings of stress</i>	86
<i>Post-intervention reflection</i>	87
Job satisfaction and commitment	88
<i>Statistical analysis</i>	88
<i>Post-intervention reflection</i>	88
Self-care	89
<i>Statistical analysis</i>	89
<i>Weekly and post-intervention reflections</i>	91
Fidelity of intervention	92
Correlational analysis: Time in practice and teacher perceptions	94
Summary of results	96
Research Question 3	97
Benefits of mindfulness	97
Challenges and barriers	99
<i>Time and schedules</i>	100
<i>Forgetfulness</i>	100
<i>Challenges with beginning practice</i>	100
<i>Other challenges</i>	101
Summary of Results	101
CHAPTER V. Conclusions and Recommendations	103
Research Question 1	103
Teacher characteristics	104
<i>Program affiliation</i>	104
<i>Teacher levels of education</i>	107

<i>Years of experience</i>	109
Relationships between variables	110
<i>Self-care practices and perceived stress</i>	110
<i>Stress and ability to cope</i>	111
<i>Stress and job satisfaction / commitment</i>	112
Summary	113
Research Question 2	114
Teacher perceptions of stress	114
Job satisfaction and commitment	120
Self-care practices	121
Summary	122
Research Question 3	123
Benefits of mindfulness	123
Challenges in implementation	125
Limitations of the Study	127
Recommendations for Research and Practice	129
Recommendations for research	129
Recommendations for practice	131
Fiscal implications	133
Summary	134
Final Conclusions	135
References	136
APPENDIX A. Institutional Review Board Approval	151
APPENDIX B. Informed Consent	152
APPENDIX C. Data Collection Tools	155

**List of Tables**

<b>Table 1.</b>	Teacher Demographics: Numbers and Percentages of Teachers Across Programs, Educational Levels and Years of Experience	49
<b>Table 2.</b>	Descriptive Statistics of Pre-Intervention Survey Results by Teachers' Program Affiliation	70
<b>Table 3.</b>	Descriptive Statistics of Pre-Intervention Survey Results by Teachers' Educational Level	73
<b>Table 4.</b>	Descriptive Statistics of Pre-Intervention Survey Results by Teachers' Years of Experience	76
<b>Table 5.</b>	Summary of Correlations for Early Childhood Teacher Ratings on Measures of Stress, Job Satisfaction / Commitment, and Self Care Practices	80
<b>Table 6.</b>	Summary of Means, Standard Deviations, and Paired Sample t-Test Statistical Analysis for Scores on Pre- and Post-Test Measures	82
<b>Table 7.</b>	Summary of Means, Standard Deviations and Paired Sample t-Test Statistical Analysis from Sources of Stress and Ability to Cope Subscales	85
<b>Table 8.</b>	Summary of Means, Standard Deviations, and Paired Sample t-Test Statistical Analysis on Types of Self-Care	90
<b>Table 9.</b>	Summary of Correlations between Total Time Engaged in Mindfulness Practice and Teacher Perceptions of Stress, Job Satisfaction / Commitment, and Self-Care	95

**List of Figures**

<b>Figure 1.</b>	Box Plot Comparison of EC and ECSE Pre-Intervention Total Scores on Perceived Stress Scale	72
<b>Figure 2.</b>	Box Plot Comparison of Pre-Intervention Total Scores on Perceived Stress Scale by Years of Teaching Experience	78
<b>Figure 3.</b>	Weekly Mean Ratings of Participants' Overall Stress Level and Frequency of Stress Over the Eight-Week Intervention Period	87
<b>Figure 4.</b>	Box Plot Comparison of Time Engaged in Mindfulness Practice Over the Eight-Week Intervention Period	93

### **Abstract**

This study explored the existing relationships between early childhood teachers' perceptions of stress, job satisfaction and commitment, and self-care behavior, both prior to and after participation in an eight-week mindfulness intervention. Quantitative data was collected through use of pre- and post-intervention surveys measuring perceived stress and one's ability to handle stress, general satisfaction and commitment to the field, and engagement in self-care behavior. Qualitative data was collected to evaluate participants' experiences in practicing mindfulness, including successes, challenges, or barriers that may inform future interventions. Findings indicate relationships between teacher demographics such as program affiliation, level of education, and years of experience and perceptions of stress, job satisfaction / commitment, and self-care practice. Correlational analysis also suggests relationships between variables such as stress, ability to cope, and job commitment. Results indicate daily, brief mindfulness practice yields benefits of varying degrees in teacher stress, confidence levels, job satisfaction, and self-care. Yet, limitations and challenges exist in implementation of such practices within an educational context. Recommendations for future research and practice include further investigation of duration and dosage as well as workforce variables in future implementation.

## **CHAPTER I**

### **Introduction**

As the Director of Early Childhood and Student Services at the Berks County Intermediate Unit (BCIU) in Reading, Pennsylvania, I hold responsibility for the leadership, supervision, and oversight of over 500 employees across multiple educational programs. Among these programs are four early childhood programs, Child Care, Preschool Early Intervention, Head Start, and Pre-K Counts, which serve students considered “at-risk” for future school success due to socioeconomic factors, background, and identified disabilities. In total, the BCIU serves over 3,500 children within our early childhood programs. These programs extend across Berks County and 18 school districts, which vary in demographics and can be classified as a mix of rural, suburban, and urban school districts. Our current early childhood workforce includes over 350 employees, including teachers, paraprofessionals or teacher assistants, and related service providers. As a professional, I have worked in the field of early childhood education for over fifteen years in a variety of roles and settings. Over time, I have witnessed changes in the field to improve the quality of services to children, yet challenges exist in implementation due to program structures and the funding available.

In short, educational research has demonstrated the significant positive effects of high-quality early childhood education on the future academic success of students. Early childhood teachers have a critical role in the provision of quality programs as they are responsible for developing strong relationships with students, creating positive environments, and teaching skills across developmental domains to promote school success. Yet, early childhood educators face high demands, a variety of work stressors, and daily challenges that lead to burnout, increased teacher absences, and teacher

turnover and attrition. Within our early childhood programs at the BCIU, teachers have identified difficulties with increased paperwork and documentation needs, challenging student behavior, limited resources to support students with complex needs, and turnover in staff and vacant positions. Program supervisors have commented about the increased levels of stress amongst teachers due to increased program requirements as well as challenges associated with the changing demographics and needs of our students. The concerns highlighted above have been reported over several years through employee engagement surveys and have prompted multiple initiatives to address work climate, employee morale, and staff wellness.

I became interested in investigating teacher stress and potential interventions to support our educational teams as they directly support and interact with our students. Through my initial reading, I found that research indicates that teacher perceptions of their environment, their students, and their work influences vital factors such as teacher-student interactions, classroom climate, and overall job satisfaction (Center on the Developing Child at Harvard University, 2010; Clunies-Ross, Little, & Kienhuis, 2008; Hastings & Bham, 2003). In turn, these perceptions, as well as one's ability to manage stress, can have a profound effect on the quality of the educational environment, educational experiences, and future success of students. Through this initial exploration, the topics of teacher self-care and mindfulness gained attention in the media as well as educational literature and periodicals. In sum, the research suggests that the implementation of such practices may support teachers' ability to manage stress and overall job satisfaction if applied in their daily work (Flook, Goldberg, Pinger, Bonus, & Davidson, 2013; Jennings, Frank, Snowberg, Coccia, & Greenberg, 2013; Singh,

Lancioni, Winston, Karazsia, & Singh, 2013). Yet, despite the potential benefits, these practices were not widely or consistently promoted or used in the daily practice of early childhood educators at the BCIU.

As our leadership team works to promote high-quality education and employee wellness, this project will provide information regarding teacher stress within our programs, teacher engagement in self-care, and the potential effects of mindfulness practice on teachers' perceptions of stress and job satisfaction. As the organization recognizes that the demands on teacher time and their core responsibilities could be a potential barrier to the implementation of a wellness initiative, this study is designed to investigate the impact of brief, daily mindfulness practices on teacher perceptions of stress, overall job satisfaction, and engagement in self-care practices. To frame this investigation, the following questions have been identified:

1. What relationships exist between BCIU early childhood teachers' perceptions of stress, job satisfaction / commitment, and engagement in self-care?
2. What effect does the inclusion of brief, mindfulness activities into the daily routine have on BCIU early childhood teachers' (a) perceptions of stress, (b) job satisfaction / commitment, and (c) self-care practices?
3. What do BCIU early childhood teachers who participate in the eight-week intervention perceive as benefits and challenges to regularly engaging in mindfulness practices in their daily work?

Based on my preliminary research and investigation, I expect to find correlations between perceptions of stress, reports of job satisfaction, and engagement in self-care practices. Further, I anticipate that teachers who participate in the daily practice of



mindfulness will self-report decreased levels of stress, increased job satisfaction, and increased self-care practices following the eight-week intervention program. However, as mindfulness is a practice that requires consistency and commitment, I anticipate some challenges in developing new practices, which should be identified to support future implementation of mindfulness practices. The intervention was designed to be sensitive to teacher time and supportive of a personal journey towards mindfulness and overall self-care. Participants were asked to attend a one-hour informational session where they were provided tools and resources and asked to commit to a practice of mindfulness for up to five minutes a day, five days per week.

The project lends itself as an intervention to be utilized within all BCIU Early Childhood Programs and could be implemented across school-age programs to support teacher health and wellness, which in turn, would support the overall organizational health of the BCIU. The practice of mindfulness is a promising, low-cost intervention that has the potential impact of positively influencing teacher wellness as well as multiple cost factors within the early childhood education budgets as they relate to teacher attendance, health care costs, and retention of employees. Most importantly, the intervention may have positive effects on overall program quality, student learning experiences, and student success.

In summary, the following project will explore relationships between teacher perceptions of stress, job satisfaction and commitment, and self-care practices. In addition, it will investigate the influence of daily, brief mindfulness practices on these perceptions and behaviors over an eight-week period. Benefits and barriers to mindfulness practice will be explored. The subsequent chapters will provide a review of

the literature, research methodology, data results and analysis, and final conclusions and recommendations.

## CHAPTER II

### Literature Review

Early childhood educators play a significant role in the provision of high-quality programs and educational experiences for young children. Yet, they face high demands and unique challenges in their work that can lead to high levels of occupational stress or even teacher burnout. Consequently, teacher stress can negatively influence student-teacher relationships, student growth and success, and the classroom culture and climate. Preventative strategies or interventions, such as self-care or mindfulness practices, have the potential to alleviate teacher stress and support the development and use of healthy coping mechanisms. This literature review further discusses the impact of high-quality early childhood education programs such as child care, Head Start, Pre-K Counts, and preschool early intervention on young learners, the concept of teacher stress and its influence on the educational environment, and the research surrounding self-care with a specific focus on mindfulness-based programs as an intervention for teacher stress.

#### **Impact of High-Quality Early Childhood Education Programs**

Quality is a critical topic in the discussion of early childhood education across the nation as research finds that high-quality early learning experiences have significant positive impacts on children's growth, development and future success (National Institute of Child Health and Human Development [NICHD], 1998; NICHD Early Childhood Care Network, 1999). Educational research demonstrates that high-quality early learning experiences positively impact children's behavior, social and emotional regulation skills, cognitive and language development, preacademic skills in literacy and math, and early achievement and progress in school (NICHD, 1998; Smolensky & Gootman, 2003).

While early childhood education benefits all students and families, research suggests the impact of high-quality early learning experiences is most significant for students who live in poverty or in homes of low socioeconomic status (Adams, Tout, & Zaslow, 2007; Schweinhart et al., 2005).

In the Commonwealth of Pennsylvania, multiple program options exist to meet the early learning and developmental needs of preschool-age students characterized as at-risk. These include child care, Head Start, Pre-K Counts, and preschool early intervention programs. In Pennsylvania, child care programs are operated as businesses by a variety of individuals and agencies and are regulated through the Department of Human Services' child care certification program (Pennsylvania Office of Child Development and Early Learning, 2017). The Commonwealth prioritizes access to high-quality early childhood educational programs for all children through administration of Keystone STARS (Standards, Training, Assistance, Resources, and Support) and Child Care Works programs. These programs, administered by the Office of Child Development and Early Learning (OCDEL), are designed to both incentivize programs to engage in continuous quality improvement and ensure families in need of financial support have equitable access to high-quality programs. Keystone STARS is a quality rating system that focuses on the continuous improvement of service to children and families (Pennsylvania Office of Child Development and Early Learning, 2017). Using a scale of one to four STARS, this system provides a tool to gauge the quality of early care and education programs related to quality standards for teacher credentials, learning environment, and program administration (Pennsylvania Office of Child Development and Early Learning, 2017). Child Care Works is a subsidized child care program that

provides financial support to low-income families to pay child care fees. This program assists families in accessing quality programs and stable environments for children, which in turn supports families with retaining employment and being productive at work (Pennsylvania Office of Child Development and Early Learning, 2017). The value of these programs has been supported through data indicating significant gains in academic proficiency and social skills of four-year-old children attending STAR 3 or STAR 4 center-based programs (Pennsylvania Office of Child Development and Early Learning, 2017).

Head Start is a federal grant program administered within local communities to support the school readiness of children from low-income families. Head Start programs provide comprehensive services across a variety of settings to support the early learning, health, and family well-being of preschool age students. Many studies investigating the effectiveness and societal impacts of Head Start have been conducted since the program's inception (U.S. Department of Health and Human Services, 2010). These studies highlight the positive impact of high-quality early childhood education and services on children and families. In the most recent Head Start Impact Study, researchers found that preschoolers who participated in a Head Start program gained access to positive preschool experiences and showed gains in school readiness skills, language development, social-emotional development, and preacademic skills (U.S. Department of Health and Human Services, 2010). Beyond the direct classroom experience, Head Start program participation also had positive impacts on student health, parent engagement, and family relations (U.S. Department of Health and Human Services, 2010). In Pennsylvania, the state provides supplemental assistance and funding to expand the reach

of the federal Head Start program and serve additional children under the Head Start guidelines (Pennsylvania Department of Human Services, 2019).

The Pennsylvania Pre-K Counts program provides services to children ages three to age of kindergarten entry, who are considered most at-risk of school failure (Pennsylvania Key, 2018). The Pre-K Counts program is a state-funded, competitive grant funded-program designed to provide high-quality pre-kindergarten opportunities for students throughout the Commonwealth. Eligibility is based on income level (300% of the federal poverty rate), English proficiency, and at-risk community factors, academic difficulties or economic disadvantage (Pennsylvania Department of Education, 2018). A systematic program evaluation of the Pennsylvania Pre-K Counts program found that high-risk children who participated in the program achieved competencies for early school and life success and made gains in language, reading, math, behavior, and daily living skills. Students participating in Pre-K Counts also showed improved social-emotional competencies, while reducing social behavior problems (Bagnato, Salaway, & Suen, 2009). In addition, students who entered Pre-K Counts programs with developmental delays were found to show accelerated growth resulting in reduced risks of later delays as well as more typical rates of performance following participation. Further, Pre-K Counts children, who participated in this study, were found to successfully transition to kindergarten with average to above average performance and with fewer needs for placement in special education (Bagnato et al., 2009).

The Preschool Early Intervention program is governed by OCDEL as a collaboration between Pennsylvania's Departments of Education and Human Services. Preschool Early Intervention encompasses services and supports designed to promote the

development, growth, and education of students with disabilities or developmental delays, beginning at age three until their entry into kindergarten (Pennsylvania Office of Child Development and Early Learning, 2019). Eligibility is determined through an evaluation process, governed by federal and state regulations for special education. Preschoolers who demonstrate a 25 percent or greater delay in one or more developmental areas or meet the criteria of a physical or mental disability qualify for early intervention programs if they also demonstrate a need for specially designed instruction and/or related services (Pennsylvania Office of Child Development and Early Learning, 2019). Early intervention supports and services may encompass direct instruction and/or consultative services in a variety of settings such as specialized classrooms, child care programs, Head Start, or Pre-K Counts programs. Research surrounding early intervention programs highlight benefits of high-quality services, individualized programming, and family supports in student academic achievement, behavior, and educational progression (Karoly, Kilburn, & Cannon, 2005).

Overall, much of the research surrounding high-quality early childhood education highlights the potential of such programs in supporting students at-risk for school failure or other social challenges (Bagnato et al., 2009). Quality indicators include program factors such as teacher demographics (e.g. years of education, years of experience), center variables (e.g. class size, teacher to student ratios, organization, materials), and teacher-student relationships (Jennings, 2015; NICHD, 1998). While there is complexity in the dynamics of early learning environments and the relationships between quality indicators, teacher characteristics and behaviors are critical to program quality, thus the success and outcomes of students (Jennings, 2015). Jennings (2015) proposed that

teacher's social-emotional competence and well-being is a critical component in predicting the quality of early learning experiences as these factors mediate teacher-student relationships and interactions.

The prosocial classroom theoretical model developed by Jennings and Greenberg (2009) recognizes the role of teacher social and emotional competence as a factor influencing student and classroom outcomes. In brief, this model proposes that increased levels of social and emotional competence amongst teachers will lead to more supportive relationships with students, more effective use of classroom management strategies, and more effective instruction in social and emotional curricula (Jennings, 2015). Enhanced skills and practice across the above identified areas have been found to yield positive outcomes for students. Of most significant importance in this model, research has emphasized the power of positive relationships, highlighting that children need consistent, sensitive, caring and stable relationships with adults to successfully combat risk factors and thrive (Center on the Developing Child at Harvard University, 2010). Further, research has indicated that educators who are healthy, both physically and mentally, are more likely to build positive relationships with students when compared to adults who struggle with physical illness, mental health disorders, or other challenges such as emotional exhaustion, burnout, or stress (Center on the Developing Child at Harvard University, 2010). Yet, there are many factors in the field of early childhood education that can impact a teacher's perceptions of stress and their overall well-being.

Early childhood educators face several of the same stressors as K-12 teachers in respect to increased accountability for student achievement. Specifically, as educational research has highlighted the importance of early childhood education with an emphasis



on the benefits of high-quality programs, teachers in the field have experienced increased pressures related to accountability for their own professional growth and development as well as student outcomes (Gagnon, Huelsman, Kidder-Ashley, & Lewis, 2019; Hall-Kenyon, Bullough, MacKay, & Marshall, 2014). As a result, teachers encounter increased requirements for professional education, higher standards for students specific to curriculum, instruction, and assessments, and overall paperwork in the field (Gagnon, et al, 2019; Hall-Kenyon et al., 2014). In addition, as do K-12 teachers, early childhood teachers face challenges related to working conditions such as poor school climate, insufficient supports and resources, and child behavior problems (Gagnon et al., 2019).

Early childhood educators also face unique challenges based on student demographics and the scope of early childhood programs (Gagnon et al., 2019; Jeon, Buettner, & Hur, 2016). Many early childhood classrooms include groups of students who vary in age and developmental level. This grouping requires teachers to plan and instruct students with varied skills levels, methods, and needs for individualized attention. Further, as students in preschool are developing a variety of self-help skills, teachers must also attend to their personal safety and nurturance of self-help skills such as dressing, feeding, and toileting (Gagnon et al., 2019). Teachers also report that challenging student behavior impacts their levels of stress in the early childhood classroom. In turn, stress can negatively impact teachers' abilities to manage these behaviors and build positive relationships with young children in the classroom (Buettner, Jeon, Hur, & Garcia, 2016; Jeon et al., 2016).

In addition to the factors explored above, early childhood educators report stress due to a lack of control and job autonomy, lack of administrative support, and low

salaries in the field (Buettner et al., 2016; Gagnon et al., 2019). Further, time pressures related to job responsibilities and heavy workloads have been found to impact both teacher well-being and time spent interacting and engaging with children (Buettner et al., 2016; McGrath & Huntington, 2007). To cope with job demands, teachers may turn to working additional hours to meet expectations. Yet, in studies of teacher stress, those who worked longer hours were found to report higher levels of stress (Wagner et al., 2013). This pattern may have negative implications as working additional hours may result in decreased time to foster self-care practices, which in turn can lead to emotional exhaustion, job dissatisfaction, teacher mobility, and teacher attrition (Grant, Jeon, & Buettner, 2019; Wagner et al., 2013).

Teacher attrition and mobility within the field of early education is concerning as it has been observed at high rates and impacts the quality and functioning of early childhood programs (Gagnon et al., 2019; Grant et al., 2019; Wagner et al., 2013). Statistics indicate that close to 30% of preschool teachers in the United States leave the field each year with many attributing this decision to stress or workload (Wells, 2015). Studies investigating teacher attrition indicate that teachers' working conditions, psychological functioning, and motivation are related to their intentions to remain at their job or the field of early childhood education (Grant et al., 2019). In review of the literature, multiple predictors of teachers' decisions to leave the field have been identified (Grant et al., 2019). These include factors such as poor working conditions, poor compensation, and a lack of benefits, which have also been identified as sources of stress. Studies have also recognized the role of individual attributes, teacher's coping strategies, and intrinsic motivation in supporting well-being and commitment to the field

(Cumming, 2017; Grant et al., 2019). While there are many factors contributing to teacher job satisfaction and attrition within the field of early childhood education, these factors are often first identified as a source of stress and are further explored in the following section.

### **Stress**

As defined by the Oxford University Press (2019), stress is “a state of mental or emotional strain or tension resulting from adverse or demanding circumstances.” This definition highlights the role that external factors in the environment can have on an individual’s feelings or experiences. Since the 1970s, researchers have studied stress across a variety of contexts and individuals as a means of understanding its impact and developing interventions to support individual’s overall well-being (Kyriacou, 2001). Emerging from stress research, occupational stress was identified by Warr and Wall (1975) and defined as “an individual’s experience of psychological discomfort and associated disorders that result from general working conditions” (von der Embse, Ryan, Gibbs, & Mankin, 2019, p. 1328). Several models of occupational stress have been conceptualized and discussed in the literature to describe the way in which individuals experience and cope with feelings of stress (Curbow, Spratt, Ungaretti, McDonnel, & Breckler, 2000). In the educational literature, specific attention has been given to teacher stress as it has been recognized by scholars as unique in its dimensions and context-specific manifestations (Ingersoll, 2001; Kyriacou & Sutcliffe, 1977). The section below reviews definitions of teacher stress, models of occupational stress, factors influencing teacher stress and the impact of stress.

**Definition and early models of teacher stress.** The concept of teacher stress was first identified in the literature by Kyriacou and Sutcliffe in 1977. In their early work, they defined teacher stress as an individual's experience of unpleasant, negative feelings in response to their experiences in their work as an educator. In this model, stress is described as "a negative emotional experience being triggered by a teacher's perception that their work situation is a threat to their self-esteem or well-being" (Kyriacou, 2001, p. 28). As a result of the perceived threat, teachers may experience feelings of depression, anxiety, anger, or frustration (Kyriacou, 2001). These feelings may also be accompanied by physiological or biological changes in response to the working conditions (Kyriacou & Sutcliffe, 1978). This model builds on the concept of occupational stress, but with a focus on the unique characteristics of the school context and demands of teaching. Since this early conceptualization, multiple models of occupational stress have been developed.

**Theoretical models of occupational stress.** The concept of teacher stress can be further explained in review of common models of occupational stress. A review of stress models was conducted by Curbow, Spratt, Ungaretti, McDonnel, & Brekler (2000) in the development of a tool to identify sources of teacher stress amongst early childhood educators. In this review, the following models were identified as relevant to teacher stress: (a) person-environment fit, (b) demand-control model, (c) effort-reward imbalance, and (d) transactional model. Each of these models provide a framework to understand how external factors influence one's experiences and feelings related to stress.

In the person-environment fit approach, theorists suggest that the goodness of fit between the person's abilities, beliefs, and values and the environmental demands and

resources can impact experiences of stress (Caplan, Cobb, French, Harrison, & Pinneau, 1975). In short, if there is not a good fit between personal beliefs of the teacher and the program philosophy or job demands, this conflict will result in negative stress. Stress may result in negative psychological, physiological, or behavioral outcomes.

In the demand-control model, stress is conceptualized as a relationship between the demands of the job (e.g. workload, numbers of students) and the teachers' ability to control such demands (Karasek et al., 1998). In further conceptualization, this model has been identified as the demand-control-social support (DCSS) model and recognizes the teacher's ability to access support to complete this work as a factor in managing stress (Karasek et al., 1998; Wagner et al., 2013). In this model, it is suggested that teachers who experience high demands with little control or low levels of support will experience higher levels of stress. Further, the intensity and number of demands relative to the teacher's perception of control can influence experiences.

The effort-reward imbalance model also focuses on work demands, but in the respect of how much effort the teacher must put forth in their position to meet such demands (Vagg & Spielberger, 1998). This model views stress as the balance, or imbalance, of effort towards work and rewards or benefits that result. If the level of effort is higher than the perceived benefit or rewards reaped, teachers will experience higher levels of stress (Vagg & Spielberger, 1998).

Finally, the transactional model developed by Lazarus (1991) highlights the professional and personal resources available that support one's ability to cope with work demands. In this model, those who appraised classroom demands as outweighing the available resources are most vulnerable to negative stress experiences (Lazarus, 1991;

Lazarus & Folkman, 1984). This model also highlights the role of demands in evoking stress.

Recognizing the models' shared features, Curbow et al. (2000) integrates these perspectives of stress into one model and highlight the relationships between multiple factors in an individual's experience of occupational stress. In this approach, the researchers recognize the influence of work demands and rewards, personal characteristics of the individual, and the supports or resources available to mediate job stress. In this model, the interplay of these factors in predicting stress are considered. For instance, in situations where a teacher experiences high demand, the integrated approach highlights how additional support and resources may minimize the impact of such stressors (Curbow et al., 2000). Through the lens of this approach, scholars further explore the factors related to stress and individual's experiences within the field of education.

**Stress factors.** The models explored above recognize the various factors that contribute to one's experiences and ability to cope with work stress or demands. These include factors specific to an individual as well as external factors in the environment or related to work conditions. In a review of teacher stress, Prilleltensky, Neff, and Bessell (2016) view stress through an ecological perspective highlighting the personal, interpersonal, and organizational factors that contribute to one's experiences. In their work, they identify stress as an imbalance between risk and protective factors. In brief, risk factors are those that hinder or increase chances of a negative outcome, while protective factors are those that help an individual or enhance the likelihood of a positive outcome. When risks outweigh protective factors, one's ability to cope may be

diminished, which in turn may result in stress or negative feelings, behaviors, and thoughts (Prilleltensky et al., 2016). Within the educational environment, risk and protective factors exist at multiple levels and have unique characteristics compared to other fields of work. Personal, interpersonal, and organizational factors are further discussed below.

Personal and psychological risk factors include feelings inherent to the teacher such as isolation, inadequacy, and anxiety (Prilleltensky et al., 2016). These feelings can have a negative impact on teachers' self-esteem and self-efficacy, which in turn can impact stress levels and teacher performance. Studies suggest that teachers' perceptions of their ability to balance work and access resources influence their feelings of stress and job satisfaction. The teacher's coping skills also impact their perceptions of stress in such that those with higher levels of social-emotional capacity often fare better when faced with high demands. Overall, how teachers think about and perceive their work may have a direct impact on feelings of stress and vice versa. Protective factors that may support teacher well-being in this domain include self-care behaviors such as proper sleep, nutrition, and exercise, engagement in well-being activities, and acceptance and mindful meditation (Prilleltensky et al., 2016). In terms of personal factors, one's ability to balance the demands of the job and potential challenges within the early childhood workplace is associated with their psychological and emotional well-being (Cumming, 2017).

At the interpersonal level, workplace relationships with parents, colleagues, and students can impact teacher stress and job satisfaction. First, discrepancies between parent and teacher beliefs and expectations can lead to conflict or strained interactions in

the workplace, which can be a significant source of stress for teachers (Faulkner, Gerstenblatt, Lee, Vallejo, & Travis, 2014; Prilleltensky et al., 2016). Second, relationships with colleagues play an integral role in teacher's perceptions of stress. For instance, teachers who work in teams that share the same philosophy, have close relationships, and have well-defined roles and tasks can better regulate stress and work together (Cumming, 2017). In contrast, challenging relationships with colleagues or conflicts are associated with early childhood teachers' feelings of emotional exhaustion, burnout, and negative attitudes towards self and others (Rentzou, 2012). Negative interactions with coworkers and colleagues can increase feelings of stress and anxiety (Cumming, 2017). Finally, challenges with student discipline or strained interactions between teachers and students can be another major source of stress for early childhood educators. Protective factors include development of interpersonal skills, but most important a caring and compassionate working environment. Empathy and support are critical factors for stress prevention or reduction. Overall, positive relationships with parents, colleagues, and students can assist in preventing burnout (Prilleltensky et al., 2016).

At the organizational level, the management structure, quality of the work environment and work climate has clear effects on early childhood educator's well-being and can influence teacher stress (Cumming, 2017; Prilleltensky et al., 2016). In terms of management structure and work environment, financial stability is a critical organizational factor that influences stress or well-being. Financial stability includes compensation, fair pay or wages, and job security. Research finds that financial well-being, defined as wages and perceptions to meet expenses, can influence a teacher's



emotional availability to interact with students. While an important factor, compensation alone does not appear to relate directly to emotional exhaustion or attitude to work (Jeon et al., 2016). Overall, financial stability appears to lead to lower general stress or higher self-worth or efficacy. An imbalance of work effort and compensation can negatively impact psychological, physical, and financial well-being (Boyd, 2013).

In terms of work climate, organizational factors such as supportive working environments and relationships (e.g. administrative support) as well as job autonomy, influence teacher stress and well-being (Cumming, 2017). Specifically, research indicates that perceptions of positive relationships and greater job autonomy are associated with higher ratings of job satisfaction, lower stress, and greater job commitment amongst teachers (Hur, Jeon, & Buettner, 2016; Schreyer & Krause, 2016). In contrast, when teachers report imbalance in their work demands and supports available, they also report more depressive symptoms, higher stress, and more conflict within teacher-student relationships (Whitaker, Dearth-Wesley, & Gooze, 2015). The imbalance of organizational demands and personal control contributes to tension, stress, and teacher turnover (Ingersoll, 2001; Prilleltensky et al., 2016). Overall, organizational factors are strongly linked to employee motivation, commitment, and turnover (Ingersoll, 2001).

**Impact of teacher stress.** Teacher stress can have a negative impact on student success and achievement, school climate and culture, and overall teacher well-being. While most of the discussion in this literature review involves how teacher's experience stress, this experience or negative feeling of stress can also impact those in the working environment or the environment itself. First, research finds that teacher stress impacts

teaching and decision-making in the classroom, which in turn can influence student achievement and success (Collie, Shapka, & Perry, 2012; von der Embse, Pendergast, Segool, Saeki, & Ryan, 2016; von der Embse, Sandalos, Pendergast, & Mankin, 2016). Further, teacher stress is associated with more significant challenges with student behavior and strain in teacher-student relationships (Clunies-Ross et al., 2008; Hastings & Bham, 2003).

At the school level, teacher stress can influence the overall culture and climate as stress is linked to higher rates of teacher attrition and teacher absenteeism (Collie et al., 2012; von der Embse, Pendergast, et al., 2016; von der Embse, Sandalos, et al., 2016). Research on teacher attrition finds that reductions in the number of experienced teachers disrupts consistency in schools for students, but also has potential impacts on the stress of teachers who remain in the organization (Cumming, 2017). Finally, extreme levels of stress have significant impacts on teachers' self-perceptions and overall well-being. Specifically, teachers who experience extreme stress are more likely to detach from their feelings and negatively perceive their self-worth, autonomy, and personal accomplishments (Maslach, Jackson, & Leiter, 1996; McCarthy, Lambert, & Reiser, 2014). In addition, they are at greater risk for emotional exhaustion or burnout (Maslach et al., 1996). Teacher burnout, an extreme state of emotional, physical, and attitudinal exhaustion, may develop as a result of ineffectively coping with stress over a significant period (Guglielmi & Tatrow, 1998; Kyriacou, 2001; Vandenberghe & Huberman, 1999). Burnout leads to increased absenteeism and attrition, which as explained above has influences on school culture and student achievement (Bertoret, 2006; Darling-Hammond, 2000). Finally, high levels of stress can negatively impact teachers' overall

health and well-being (McCarthy et al., 2014; Prilleltensky et al., 2016; Roeser et al., 2013).

Because teacher stress can have a negative impact on students, teachers, and systems, research surrounding stress interventions, or self-care programs, has emerged in the literature. As models have identified several protective factors across the personal, interpersonal, and organizational levels of the work environment, further exploration of self-care practices and a focus on mindfulness practices in supporting teachers at each level will be further discussed in the next sections.

### **Self-Care**

The topic of self-care is one that is discussed often in the helping professions and has received attention in education, yet it is not widely discussed in the educational literature under the term, “self-care.” Self-care is more often discussed in the psychological or social work literature and specific to those working with clients who have experienced significant mental health challenges or trauma. Specific to this field, scholars have suggested the following areas of self-care practice to enhance one’s functioning and well-being: physical, emotional, cognitive, social, and spiritual (Saakvitne & Pearlman, 1996; Walsh 2011). In a recent publication, Butler, Mercer, McClain-Meeder, Horne, and Dudler (2019) proposed six domains of self-care based on Abraham Maslow’s hierarchy of needs. The purpose of this publication was to provide a framework for self-care that could more readily be investigated and discussed among scholars.

In this work, Butler et al. (2019) cites the Oxford Living Dictionary’s definition of self-care as “the practice of taking action to preserve or improve one’s own

health...well-being and happiness, in particular during periods of stress” (p. 107).

Building on this definition, researchers identify two critical goals of self-care practice.

The first goal of self-care is to protect or guard oneself from the adverse consequences of stress through the development of coping behaviors; while the second is to maintain or enhance one’s well-being or overall functioning (Butler et al., 2019). With Maslow’s hierarchy of needs as the foundation, this theoretical framework of self-care recognizes the basic, psychological, and self-fulfillment needs of individuals as identified in the well-known pyramid. At the base of the pyramid, Maslow (1943) identifies basic needs, physiological (e.g. food, water, warmth, rest) and safety (e.g. security), as foundational. Above these basic needs are psychological needs such as belongingness and love (e.g. relationships with others) and esteem (e.g. feelings of self-esteem and accomplishment). At the top of the pyramid is self-actualization or achieving one’s full potential (Maslow, 1943).

In their typology of self-care, Butler et al. (2019) identified the following six domains: (a) physical, (b) professional, (c) relational, (d) emotional, (e) psychological, and (f) spiritual. Similar to the needs at the base of Maslow’s pyramid model, physical needs and safety are at the foundation of self-care. Physical self-care encompasses practices, behaviors, or strategies that one engages in to support their physical health and well-being. Primary, common strategies for practicing physical self-care include getting adequate sleep, ensuring a well-balanced diet and good nutrition, engaging in physical exercise, and attending to preventative and ameliorative health interventions (Butler et al., 2019). By engaging in such practices, an individual tends to their primary needs

while both enhancing health or functioning and preventing breakdowns or deterioration (Butler et al., 2019).

Professional self-care refers to behaviors that one uses in the work setting to manage or prevent work-related stress, reduce the risk of burnout, and maximize performance and job satisfaction (Butler et al., 2019). Professional self-care includes strategies employed by an individual to support a healthy work-life balance. Examples include social-emotional competencies such as setting mindful limits, engaging in self-advocacy, developing and using effective coping strategies, and seeking support when needed. Professional self-care practices have the potential to combat factors identified in well-known stress models and are integrated into well-researched stress models (von der Embse et al., 2019). Professional self-care can be bolstered by engaging in strategies from the other domains as well (Butler et al., 2019).

Relational self-care recognizes the importance of positive interpersonal relationships or social connections in promoting well-being and reducing stress (Butler et al., 2019). Grounded in Maslow's identification of belongingness as a psychological need, Butler et al. (2019) highlights the importance of social connections in self-care. Specifically, an individual's relationships with family, close friends, and even peers in the work setting can have a positive impact on one's well-being across domains of happiness, quality of life, resilience and cognitive capacity (Walsh, 2011). In contrast, social isolation has been viewed as potentially harmful to one's well-being (Butler et al., 2019). Relational self-care practices that may benefit educators include building social networks and supports, prioritizing relationships with others and practicing altruism (Butler et al., 2019).

Emotional self-care practices are those used to protect oneself from negative emotional experiences as well as enhance positive emotional experiences to support overall well-being (Butler et al., 2019). Emotional self-care includes practices such as meditation, yoga, progressive muscle relaxation, or mindfulness, which are designed to assist one in identifying and replacing potentially destructive coping behaviors, reducing negative emotional experiences, and increasing well-being and happiness (Butler et al., 2019; Walsh, 2011). In the practice of emotional self-care, Butler et al. (2019) highlight the importance of setting intentions for self-care to enhance their outcome and engaging in activities to promote happiness.

Psychological self-care is related to emotional self-care but has a more defined focus on personal self-fulfillment in its practice. Psychological self-care practices include activities that satisfy intellectual needs or are purposeful and reflective to the individual (Butler et al., 2019). Examples include pursuit of intellectually stimulating activities such as music, visual arts, literature, or games. Psychological self-care may also include participating in enjoyable activities that support ones' happiness and experience of positive emotions (Walsh, 2011). The intentional practice of mindfulness also contributes to psychological self-care as it promotes well-being, self-awareness and reflection. Mindfulness also has potential to decrease negative experiences related to stress and negative affect (Butler et al., 2019).

Finally, spiritual self-care involves practices of one's faith or engagement in meditation for the purpose of reflecting on one's own inner needs and place in the world or universe. Spiritual self-care practices involve religious participation, prayer, spiritual

meditation, and connecting with nature. This is the highest level of self-care, yet one that may be underutilized or reached (Butler et al., 2019).

Overall, self-care encompasses a variety of practices to meet a range of individual needs. Research finds that practicing self-care is effective in promoting health and well-being across physical and mental health. Regular practice of self-care across domains may help safeguard one from the potentially negative impact of teacher stress. To benefit from self-care, research suggests that the practice be intentional, include self-awareness, and mindful reflection. As these are key components to the practice of mindfulness, these components will be further discussed in a review of mindfulness.

### **Mindfulness**

Mindfulness has become popular intervention for mental health conditions such as anxiety and depression as well as self-care strategy in the helping professions over the past few decades (Klingbeil & Renshaw, 2018; von der Embse et al., 2019). In the literature, the term “mindfulness” has been used to refer both to a “state or quality of mind” as well as a specific form of meditation that enables one to reach this “state or quality of mind” (Lomas, Medina, Ivtzan, Rupprecht, & Eiroa-Orosa, 2017). In the most widely used definition developed by Kabat-Zinn (2003), mindfulness is operationalized as “the awareness that arises through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (p. 145). Simply put, mindfulness, as initially described by Kabat-Zinn (2003), is an experience of awareness and acceptance without judgement.

Building upon this work, Bishop et al. (2004) further operationalized this definition with a two-component model. Bishop et al. (2004) described the first

component of this model as “the self-regulation of attention so that it is maintained on immediate experience, thereby allowing for increased recognition of mental events in the present moment” (p. 232). In this model, mindfulness practices require metacognition skills such as monitoring, sustained attention, attention switching, and inhibition of elaborative thinking processes (Bishop et al., 2004). These practices prevent past reflection or speculation of the future at the time stressors are present. The second component involves adopting an orientation of one’s present experience with curiosity, openness, and acceptance. This orientation again focuses on the present experience but does so without judgement or feelings that lead to negative stress (Bishop et al., 2004). In further investigation of mindfulness, Shapiro, Carlson, Astin, and Freedman (2006) developed a three key component framework. In this model, Shapiro et al. (2006) identified intention, attention, and attitude as critical attributes that combine to allow for “reperceiving” or a “fundamental shift in perspective.” In brief, this model highlights that by intentionally shifting one’s perspective with openness and awareness, one shifts their mindset to approach challenging situations with an open mind. This reperceiving is thought to have a positive impact on well-being, while decreasing one’s feelings of stress, anxiety, and depression at times where stressful conditions exist.

A secondary definition for mindfulness highlights the forms of meditation practice which can facilitate this “mindful” state or quality of mind. Meditation practices include a range of mental activities that focus on the self-regulation of attention and awareness, with the goal of enhancing one’s control over mental processes and increasing well-being (Lomas, Ivtzan & Fu, 2015; Walsh & Shapiro, 2006). These



practices will be further discussed in a review of mindfulness-based interventions and programs.

**Benefits of mindfulness-based interventions.** Mindfulness practices have potential benefits for both increasing well-being and decreasing challenges related to stress. For instance, research conducted by Flook, Goldberg, Pinger, Bonus and Davidson (2013) found that teachers' practice of mindfulness increased self-compassion, states of mindfulness, focused attention, and working memory capacity. Jennings, Frank, Snowberg, Coccia, and Greenberg (2013) found that mindfulness increases teacher well-being as well as effectiveness in teaching mindfulness practices to students. Mindfulness has also been found to have a positive effect on teacher-student relationships (Singh et al., 2013).

Regarding interventions for stress, mindfulness practices have also been found to reduce symptoms of burnout and time related stress (Flook et al., 2013; Jennings et al., 2013). In addition, mindfulness-based interventions reduce symptoms of stress, depression, and anxiety (Flook et al., 2013). Indirectly, studies found that teacher engagement in mindfulness practices have been correlated with a decrease in challenging student behaviors.

In a review of stress interventions, von der Embse, Ryan, Gibbs, and Mankin (2019) identified mindfulness-based interventions as a viable treatment approach, but one with mixed results depending on program structure, measures, and components. In this review, the researchers identified multiple programs based in mindfulness interventions. Since this time, additional interventions have been identified as potential resources and effective interventions for teachers at all levels of education. The following section will

provide an overview of the following programs and their impact on teacher stress and well-being: (a) Mindfulness-Based Stress Reduction (MBSR); (b) Cultivating Awareness and Resilience in Education (CARE); (c) Stress Prevention and Mindfulness Program (SPAM); (d) Mindfulness Training, and (e) other mindfulness interventions.

*Mindfulness-Based Stress Reduction (MBSR).* Mindfulness-Based Stress Reduction (MBSR), initially developed by Kabat-Zinn (1990), has been used in a variety of settings and with individuals facing a wide range of challenges. MBSR is based on training attention through straightforward, secular, meditation techniques with the intent to change one's relationship with stressful conditions by decreasing emotional reactivity and enhancing cognitive appraisal (Teasdale, Segal, & Williams, 1995). In the traditional administration of this program, researchers found positive effects on participants' reported pain, body image, activity levels, mood, medical symptoms, affect, anxiety, depression, and self-esteem (Kabat-Zinn, 1994, 2003). Other studies have reported benefits in helping people cope with challenges such as chronic pain and stress reduction (Kabat-Zinn, Lipworth, & Burney, 1985). Physiological benefits have also been reported in terms of management of heart disease, Type 2 diabetes, and insomnia. MBSR has also been utilized in educational settings with adaptations for teachers.

In a study focused on the effects of MBSR on teachers, Gold et al. (2010) engaged primary level teachers in an eight-week course facilitated by an experienced MBSR instructor. The course was delivered immediately after school and included 2.5-hour weekly sessions as well as one five-hour silent day conducted on a Saturday. The course syllabus followed the protocol by Kabat-Zinn (1990) in the original MBSR intervention. In sum, this included multiple forms of mindfulness practice, both formal

and informal, as well as yoga (Kabat-Zinn, 1990). The formal practice includes breathing exercises, body scans, and open monitoring of routine experiences such as walking and eating. Such practices are designed to focus attention to bodily sensations and sensory experiences as a means of enhancing one's overall awareness of the moment. Informal practices include brief pauses of shifting attention to focus on present moment awareness (Kabat-Zinn, 1990, 1994). Gold et al. (2010) found improvement for most primary school teachers' reported levels of anxiety, depression, and stress, with significant improvements for depression and stress. Further, results indicated significant improvements in "accepting without judgment" on the mindfulness rating scale.

Flook et al. (2013) conducted a pilot study using a version of MBSR, modified specifically for teachers. The modifications included increasing the number of meetings, adding specific school-related activities and practices, and providing teachers with varied options for guided mindfulness practice. Outside of class, teachers were encouraged to practice between 15 and 45 minutes per day for six days per week. Guided recordings were provided to support their practice outside of the sessions. The course lasted eight weeks, 2.5 hours per week, and included a day-long immersion totaling approximately 26 hours of group practice and instruction. Findings from this pilot study found that teachers in the intervention group reported fewer negative feelings, psychological symptoms, or signs of burnout following participation in the study. They also reported increases in mindfulness and self-compassion. Further notable improvement in observer rated classroom behavior and affective attentional bias was found (Flook et al., 2013).

*Cultivating Awareness and Resilience in Education (CARE)*. CARE is a professional development program designed to improve teacher's social-emotional

competence and reduce their emotional stress through the provision of emotion skills instruction, mindful awareness practices, and compassion building activities (Jennings et al., 2013). The program is delivered as an intensive 30-hour training over four day-long sessions to occur within a four to six-week period. The program includes intersession phone coaching and a follow up session after two months (Jennings et al., 2013). The mindfulness practices highlighted within this program include basic breathing exercises, body awareness reflection, and the integration of mindfulness practice into daily routines, movement, thoughts, and emotions. The CARE program also incorporates practice of mindfulness in group situations (e.g. in front of a classroom, in meetings) and role plays for practicing mindfulness in classroom situations that may evoke strong emotions. Mindfulness is just one of the program components combined with emotion skills instruction and compassion practices. Research finds that the teacher participation in the CARE program yields positive outcomes specific to teacher well-being, mindfulness, and self-efficacy when compared to control groups. The CARE program has also been found effective in decreasing teachers' feelings of burnout and time-related stress (Jennings et al., 2013). Results suggest that the impact of this program can be especially beneficial for those working in challenging classroom settings.

***Stress Prevention and Mindfulness (SPAM) Program.*** Reiser and McCarthy (2018) developed an intervention for teachers referred to as the Stress Prevention and Mindfulness (SPAM) group. This intervention was designed to be brief in nature and was investigated to determine the results of an intervention less time-intensive than the traditional MBSR model. In this program, teachers participated in the six-session structured group, which ran for a total of six to eight weeks for one hour per week. The

group intervention provided teachers with the opportunity to engage in psychoeducational lessons and a support group among colleagues. Goals included increasing knowledge of the stress process, introducing and practicing mindfulness, and increasing social support by providing a therapeutic group environment. Each session incorporated education about stress, cognition and emotion as well as practice of mindfulness skills. The teachers were encouraged to complete homework or practice outside of the group setting. In this mixed-methods research design, the researchers found that teachers who participated in the SPAM group reported greater increases in mindfulness than teachers in the comparison condition. Qualitative data found that group members used the skills and content of SPAM sessions outside of the group, felt they benefitted from the program and described the group as valuable experiences. Overall, the results suggest this as a possible short-term intervention to support wellness in schools (Reiser & McCarthy, 2018).

***Mindfulness training.*** Roeser et al. (2013) investigated the effects of a mindfulness training program that included an eight-week, 11-session program that met after school for a total of 36 hours. This program employed activities designed to foster mindfulness and self-compassion to support participants' coping skills and emotional resilience. This program incorporated five main teaching activities to achieve the goals: guided mindfulness and yoga practices, group discussions of mindfulness practice, small-group activities to practice in real-life scenarios, lecture and guided home practices, and homework assignments. Mindfulness practices included body scans, focused attention meditation, open-monitoring meditation, and loving kindness meditation. Results from this study found that teachers randomized to mindfulness training showed greater

metacognition specific to focused attention and working memory. In addition, participation in mindfulness was correlated to increases in teachers' self-compassion and decreases in their reports of occupational stress. At post-program follow-up, participants reported lower levels of stress and burnout than those in the control group. Group analyses showed significant differences in measures of mindfulness, self-compassion, stress, burnout, anxiety, and depression post-program and at follow-up.

*Other mindfulness-based interventions.* In addition to these core programs, literature reviews have identified other programs or options for teachers specific to mindfulness. For instance, research studies have indicated some effectiveness with yoga practices and flow meditation (Ancona & Mendelson, 2014; Franco, Manas, Cangas, Moreno, & Gallego, 2010). However, few studies specific to these practices focused on teachers or educators' well-being. Scholars have also recognized the availability of general resources available to teachers and educators through free applications on cellular phones, online guided practices, and books, which are not widely studied as compared to the mindfulness-based interventions outlined above (Eva & Thayer, 2017).

*Summary of mindfulness program characteristics.* In review of the programs studied, the interventions consisted of a combination of practices that included psychoeducational lessons to enhance participants' understanding of stress and its influences, engagement in mindfulness practices such as breathing exercises and body awareness to identify stress, and group sessions that entailed a 20 to 40-hour commitment over a six to eight-week period. In addition, the programs reviewed required a commitment to formal and informal practice outside of the intervention group. This structure highlights positive effects of intensive interventions for teachers specific to

stress reduction and improvement in overall well-being. The duration and dosage for other stress interventions are similar as highlighted by von der Embse et al. (2019) in their systematic review. In summary, von der Embse et al. (2019) found that interventions for stress required eight to ten sessions in duration, regular weekly meetings, and sessions of 60 to 90 minutes to obtain significant, positive outcomes. While it appears that with a consistent duration and length of treatment mindfulness approaches can be useful in reducing teacher stress and burnout, the time commitment can be significant for participants who are working to achieve work-life balance.

**Strategies for teaching and promoting mindfulness.** Mindfulness has been referred to as an innate or inherent human quality in the early research and instruction of practice (Albrecht, Albrecht, & Cohen, 2012). Yet, it may be a practice that is not often used or conflicts with the demands of today's outcome driven or fast-paced world. In an early literature review of mindfulness practices in the classroom, Albrecht, Albrecht, and Cohen (2012) suggest that mindfulness practice does not require formal training as it is an innate quality. Yet, in their review, they suggest that further reading and a deepening of one's understanding can enhance one's experiences and practice. Further, studies surrounding stress interventions acknowledge the importance of key components to behavior change, self-assessment, goal setting, and action planning, in achieving positive results and sustained change (Roeser et al., 2013; von der Embse et al., 2019). These concepts will be discussed further below.

A review of Shapiro et al. (2006) three key components of mindfulness can assist in deepening one's understanding and practice of mindfulness. While this model was developed for the purpose of further inquiry and investigation, there may be benefits to

its incorporation into a model for teaching educators about mindfulness practices. In this framework, Shapiro et al. (2006) highlight intention, attention, and attitude as key components to mindfulness. In brief, an understanding of these principles can assist teachers in understanding the concept of mindfulness, its purpose, and potential benefits. An understanding of these concepts can assist teachers in their personal action plan for self-care or mindfulness practices. Examples of such connections are described below in further exploration of self-assessment, goal setting, and action-planning.

First, in terms of self-assessment, mindfulness develops awareness of both antecedents that trigger an emotional response or stress as well as warning signs, such as bodily sensations that accompany feelings of stress. The process of developing self-awareness of these indicators is a critical component to managing stress level and practicing mindfulness (Roeser et al., 2013). Further, mindfulness supports the development of strategies for coping with stress. Examples of such strategies may include taking a break and breathing deeply prior to doing something, letting go of one's high expectations when appropriate, or reflecting on other's needs or pain in challenging interactions. Intention, as described by Shapiro et al. (2006), can play an important role in the self-assessment process. In brief, intention refers to one's individual vision or purpose for practicing mindfulness, which can be a critical part of self-assessment and motivation to practice. For educators to begin their journey with mindfulness, it is important that they know their intentions for practice and acknowledge the practice as personal or unique to their own circumstances (Albrecht et al., 2012). Similarly, an understanding of attention and attitude can be supportive in self-assessment as one can deepen their understanding of the stress responses and attitudes toward stress conditions.



Goal setting is also linked to each component. Intention provides a purpose for practice. However, goal setting should also incorporate additional components to support success. A first step to action planning, includes setting a challenging, but attainable goal (Galla, Baelen, Duckworth, & Baime, 2016). An understanding of attention in mindfulness can be supportive in goal setting as it describes the state or quality of mind one hopes to achieve. In Shapiro et al. (2006) description, attention refers to paying attention in the moment to both one's internal and external experience. In early practices of mindfulness, one may participate in guided activities to draw their attention to experiences such as eating, walking, or other routine activities. As mindfulness was earlier defined, the practice of mindfulness involves suspending judgment and focusing one's attention to thoughts, feelings, and sensations as they occur in the mind and body (Albrecht et al., 2012). Attitude plays a role in this as well as it involves the qualities one brings to their attention. In terms of goal setting, an understanding of focused, sustained attention can be supportive in achieving a state of mind that does not entail worry about the future or fixating on the past. This extends beyond the when and where of practice and focuses on the "how."

The action-planning process may also be enhanced by understanding key components of mindfulness such as intention, attention, and attitude. In turn, this may support follow through and behavior change. In a study specific to mindfulness practices with students, Galla, Baelen, Duckworth, and Baime (2016) found that action planning boosts meditation frequency among those with a strong personal commitment. Components of successful action plans include the following steps: (a) setting a challenging, but attainable goal; (b) identifying a place and time to practice meditation;

and (c) identifying obstacles and developing a plan for working through obstacles. Action planning ties the process of self-assessment, goal setting, and practice together and requires ongoing reflection across the domains of intention, attention, and attitude. With support of self-regulation strategies such as action plans and coping plans, participants can overcome common challenges to successful behavior change (e.g. forgetting intentions, competing time commitments, missed opportunities, or fatigue) (Galla et al., 2016). Reflection, which is inherent in the practice, is important to ensuring that one is gaining from mindfulness practice through openness versus becoming distant from those experiences as an observer. A reflection on intentions and benefits such as compassion, kindness, and overall feelings of stress can be supportive in this process (Albrecht et al., 2012).

While the description above discusses the concept of self-awareness, goal setting, and action planning in terms of key components of mindfulness, these concepts apply to beginning the practice of mindfulness and can be used in terms of the logistics of practice. For instance, one can use the self-assessment, goal setting, and action-planning phases to identify the who, what, when, and where of practice.

**Recommendations for mindfulness practice.** In review of mindfulness exercises, Eva and Thayer (2017) provide recommendations for daily activities for teachers. In their article, they identified sitting meditations and body scans as the most common practices for incorporation into a weekly routine. According to Eva and Thayer (2017), sitting meditation includes maintaining “an alert but relaxed body posture while anchoring one’s attention to the breath – breathing in and out” (p. 23). In addition to breathing, sitting meditations can include attention to sounds or body sensations. Body

scan is another common mindfulness practice, which includes one focusing on relaxing body parts from head to toe (or vice versa) to enhance both focus and body awareness of somatic or emotional experiences (Eva & Thayer, 2017; Kabat-Zinn, 1990).

Additional practices utilized in the programs described include focused-attention meditation and open-monitoring meditation. Focused-attention meditation involves drawing one's attention and focus to a single object such as one's breathing or a sound. This technique is used to develop concentration and practice sustained attention. When one's mind wanders, the goal of this activities is to redirect one's attention to the single object to refocus attention (Roeser et al., 2013). In brief, focused-attention meditation involves focusing on one thing only with the intention of eliminating distractions. Open-monitoring meditation involves one attending to their surroundings, thoughts, and feelings with the simple goal of moment-to-moment awareness. In open-monitoring meditation, the goal is to become aware of one's thoughts and feelings surrounding an experience without engaging in judgement, emotion, or elaborative thinking (Kabat-Zinn, 1990; Roeser et al., 2013). For instance, while practicing open-monitoring meditation, you allow thoughts and feelings to flow without trying to stop, avoid, or react to them. Finally, loving kindness meditation is also used in mindfulness practice. Loving kindness meditation includes elements of focused attention and incorporates recitation of positive phrases focused on love and kindness (e.g. "May I be happy, may you be happy"). This specific mindfulness practice is designed to enhance compassion towards oneself and others through rehearsal of positive thoughts and emotions (Kabat-Zinn, 1990; Roeser et al., 2013).

Finally, mindfulness programs often include walking and/or eating meditations to practice awareness and focus. In these practices, one focuses on the elements of walking or eating and the sensory experiences of each (Kabat-Zinn, 1990). Systematic and intentional practices can assist participants with stress reduction at any time of the day (Eva & Thayer, 2017). These practices can also be used at set times of the day within a routine to manage stress. In addition to these core practices, the use of “check-ins” can be effective practices for stress management. These include noticing ones’ body sensations and taking steps to breathe and relax areas of stress or tension. Another example would be to choose an activity daily in which one observes their body sensations, thoughts, or feelings while engaging in the activities. Pausing during transitions during the day and taking slow, deliberate breaths may also be an effective check-in technique grounded in mindfulness (Eva & Thayer, 2017). Finally, in Flook et al. (2013) pilot program, the researcher provided cards on lanyards as reminders for teachers to engage in informal practices such as caring practices, noticing body sensations, reflecting on emotions, and more.

**Practices for beginners.** In review of the mindfulness programs outlined, didactic instruction serves a role in supporting teachers in identifying and practicing mindfulness (Jennings et al., 2013; Roeser et al., 2013). In beginning mindfulness practices, many guided meditations and online programs are available to assist one in developing a personal practice in such cases that formalized programs are not available. For beginners, Eva and Thayer (2017) suggest setting aside 20 minutes a day for practicing mindfulness. Within studies of mindfulness, Soler et al. (2014) found that while there are recommendations for the length of time spent each day, one’s consistency

and frequency of practice over time may be more important than the amount of time spent each day. This suggests that one may benefit from engaging in mindfulness practices at less than 20 minutes, if one commits to a regular, daily practice.

### **Summary**

In summary, early childhood teachers often face high demands and working conditions that put them at risk for high levels of teacher stress, emotional exhaustion, or even burnout. In turn, teacher stress and burnout may compromise the quality of early childhood education as a result of teacher mobility, teacher attrition, or low-quality interactions resulting from negative emotions, time pressures, and an inability to cope with stress in a healthy way. The literature surrounding stress models and intervention, self-care, and mindfulness practices offers potential prevention strategies and interventions for early childhood teachers who work with students across early childhood programs such as child care, early intervention, Pre-K Counts, and Head Start. The following study will investigate the effects of brief, daily mindfulness practices on early childhood teacher perceptions of stress, self-care practices, and job satisfaction / commitment.

## **CHAPTER III**

### **Methodology**

This mixed-methods action research study was designed to investigate the effects of mindfulness instruction and practice on early childhood teachers' perceptions of stress, job satisfaction and commitment, and self-care behavior. Quantitative methods were used to explore the existing relationships between teacher characteristics, perceptions of stress, feelings of job satisfaction and commitment, and engagement in self-care practices. In addition, the study investigated the impact that daily, brief mindfulness practice may have on teachers' perceptions of stress, job satisfaction and commitment, and engagement in self-care practices over eight weeks. An analysis of the data was conducted to both identify potential relationships between stress, job satisfaction, and commitment, and self-care behavior as well as understand teachers' experiences with mindfulness practice and determine whether engagement in brief, daily mindfulness activity impacts teachers' perceptions in each of these areas. Qualitative methods were integrated into the study to provide the researcher with a deeper understanding of teachers' experiences with mindfulness practice as well as the potential barriers and challenges to practicing this type of self-care.

This chapter will describe the methodology utilized to answer the identified research questions. The first section reviews the purpose of the study and articulates the research questions. The second section provides detail specific to the context of the study, specifically the setting and participants. Next, the researcher provides a comprehensive overview of the eight-week mindfulness intervention, including the selection of materials and fiscal implications. Subsequently, the overarching research

plan for exploring the relationships between early childhood teachers' perceptions of stress, job satisfaction, and self-care practices, both pre- and post-intervention, is provided. The final section includes details specific to the research design, including the selection or development of data collection tools and procedures for gathering qualitative and quantitative data. The methodology chapter consists of the following sections: (a) purpose of the study, (b) setting, (c) participants, (d) intervention, and (e) research design, including methods and data collection.

### **Purpose of the Study**

Teachers working in the field of early childhood education often face high demands and conditions that place them at risk for elevated levels of teacher stress, emotional exhaustion, or burnout (Collie et al., 2012; Gagnon et al., 2019; Grant et al., 2019; Maslach et al., 1996). Due to such stress experiences, early childhood teachers may feel less satisfied and/or committed to their work as an educator, thus leading to challenges in early childhood education associated with teacher mobility and attrition in the field (Grant et al., 2019; Wagner et al., 2013). Further, stress experiences may also yield low-quality teacher-student interactions resulting from teachers' feelings of negativity, time pressures, or an inability to cope with stress in a healthy way (Collie et al., 2012; von der Embse, Pendergast, et al., 2016; von der Embse, Sandalos, et al., 2016). In either respect, the quality of early childhood education for our young learners may be compromised as a result of teacher stress and job satisfaction, thus highlighting a need for preventative strategies or targeted interventions specific to building healthy coping strategies or promoting self-care practices.

In studies of stress and treatment interventions, self-care practices emerge as effective prevention and intervention strategies for positively coping with stress (Butler et al., 2019; Walsh, 2011; von der Embse et al., 2019). Recent research on mindfulness has suggested that regular, consistent engagement in mindfulness practice may be effective for reducing stress even if the practice is brief such as 5-10 minutes per day (Soler et al., 2014). The following five practices have been identified in the mindfulness research as foundational for beginners: (a) breathing exercises, (b) body scans, (c) focused attention, (d) open monitoring, and (e) loving-kindness meditation (Kabat-Zinn, 1990; Gold et al., 2010; Jennings et al., 2013, Roeser, et al., 2013; Eva & Thayer, 2017). Further, research has highlighted that the identification of goals, development of action plans, and engagement in reflective practices can support beginners in committing to new practices or habits, thus increasing one's participation in regular mindfulness practice (Galla et al., 2016). To maximize participants' experiences and engagement in this study, the above-identified components were integrated into the intervention and research plan.

As outlined above, this study explores the relationships between early childhood teachers' perceptions of stress, their feelings of job satisfaction and commitment, and their engagement in self-care practices. The first research question, "What relationships exist between BCIU early childhood teachers' perceptions of stress, job satisfaction / commitment, and engagement in self-care?" was considered to provide the researcher with insight into current teacher stress levels, feelings toward work, and self-care practices. As the BCIU has developed programs and initiatives specific to staff wellness over the past five years, this initial research question was included to establish a baseline



for understanding the current context and experiences of early childhood teachers within the organization.

The second research question, "What effect does the inclusion of brief, mindfulness activities into the daily routine have on BCIU early childhood teachers' (a) perceptions of stress, (b) job satisfaction / commitment, and (c) self-care practices?" is central to this study as it addresses the potential effects of mindfulness practices on stress, job satisfaction / commitment, and self-care. Although mindfulness research has found that such interventions are effective in reducing stress, anxiety, and depression, and increasing feelings of self-efficacy and wellness, the interventions studied required significant time commitments on behalf of participants (e.g., multiple training sessions, 30-40 minutes of daily practice). As this time commitment was considered a potential barrier to participation by the researcher based on the knowledge of teacher schedules, the intervention was designed to investigate the impact of daily, brief practice (e.g., 5 minutes per day) over eight weeks on teachers' perceptions, feelings, and behaviors.

Finally, this study was designed to provide insight into the potential benefits and challenges experienced by teachers in the implementation of the intervention and their personal mindfulness journey. Thus, the third question, "What do BCIU early childhood teachers who participate in the eight-week intervention perceive as benefits and challenges to regularly engaging in mindfulness practices in their daily work?" was included in this study to inform the researcher of elements of the intervention that were viewed as effective as well as those that would warrant further attention or consideration in future endeavors.

In summary, the purpose of this study is to inform the researcher of the current experiences of BCIU early childhood teachers as it relates to their perceptions of stress, job satisfaction and commitment, and self-care practices. Also, this study serves to evaluate the effects of a mindfulness intervention that provides a brief introduction to practice and requires a minimal time commitment for daily practice when compared to previously researched programs. Finally, this study is designed to understand the potential benefits and challenges faced by teachers in their practice of mindfulness.

### **Setting**

The Berks County Intermediate Unit (BCIU) is an educational service agency located in Reading, Pennsylvania. The BCIU administers four early childhood programs designed to meet the educational needs of preschool-age students identified as at-risk across the 18 school districts in Berks County, Pennsylvania. The four programs include BCIU Child Care, Head Start, Pre-K Counts, and Early Intervention. While all four programs share some commonalities in purpose and design, differences exist across programs relative to student eligibility criteria, classroom schedules, teacher-to-student staffing ratios, teacher roles and responsibilities, and teacher demographics. Early childhood teachers from each of these four programs were invited to participate in this study. To provide further context and understanding of each educational setting, a brief description of each program is outlined below.

**BCIU Child Care.** The BCIU Child Care program operates five preschool classrooms across three sites within the county. The program is available to interested families as a fee-for-service option, but also partners with several agencies within the county to provide services to students considered at-risk due to socioeconomic status or

identified disabilities. Student enrollment and schedules fluctuate as they are based on parental needs for care or special education recommendations. Each of the child care classrooms maintains licensing by the Department of Human Services and a minimum of a STAR 3 status as indicated by the PA Keystone STARS quality rating program. Services are provided to students with individualized educational programs (IEPs) in collaboration with the BCIU Early Intervention program. The program also serves students and families who receive subsidized child care funding through the Early Learning Resource Center or United Way of Berks County.

**Berk County Head Start.** The Berks County Head Start program serves 695 students across 40 classrooms in 17 sites within the county. The program provides comprehensive services, free of charge, to qualifying students and families. Student eligibility for this program is based on the family's income and prioritizes students whose family income falls at the 100% poverty level per federal guidelines. Other risk factors, such as disability, parent incarceration, foster care status, and homelessness are also considered as priority factors for eligibility and enrollment. Comprehensive services provided through this program include school readiness development, family engagement, social services, mental health, physical health, nutrition, and supports for students with disabilities. Classroom schedules and staffing ratios vary across sites dependent on the funding stream. At a minimum, students attend four days per week, four hours per day, from September through May. At maximum, students attend five days per week, six hours per day, from September through May. Each classroom serves approximately 20 students with staffing, including one teacher and one or two paraeducators.

**BCIU Pre-K Counts.** The Pre-K Counts program serves 290 students across 16 classrooms in Berks County. This program provides a five day per week, full-day preschool option to eligible students. Eligibility for this program is primarily based on income with a threshold of family income at the 300% poverty level. Additional eligibility factors include student age, family demographics (e.g., single parent, military families, teenage parents), special needs, and social or domestic concerns (e.g., court referrals, foster care, homelessness, parent incarceration). Class sizes in this program range from 16-20 students per classroom with one teacher and one paraeducator.

**BCIU Preschool Early Intervention.** Finally, the Preschool Early Intervention Program serves over 2,500 students in Berks County identified with disabilities and in need special education services as outlined by the IDEA and Pennsylvania's Chapter 14 regulations. The program employs 38 teachers who hold a variety of roles and responsibilities. Teachers within this program provide services in either a classroom-based model or on an itinerant-support level in which they travel to other preschool programs or student homes to provide direct or consultative services. In the classroom-based model, the class size maximum is set at 11 students per session. Classrooms operate as half-day programs; 2.5 hours per day, four days per week, with varying student schedules. Staffing within this model includes one teacher, two paraeducators, and therapist support as determined by students' individualized education plans. Itinerant teachers may offer group services with similar ratios as outlined for special education classrooms. Teacher caseloads vary based on position and need of students but range from 30 to 65 students.

## **Participants**

Participants in this study were recruited from each of the four BCIU Early Childhood Programs. To recruit volunteers, an email was sent to approximately 95 early childhood teachers across the four programs on three separate occasions. The email provided each participant with an overview of the study, the potential time requirements and commitment, and an informed consent form for review. Program supervisors supported the recruitment efforts by sending emails, interacting with staff, and encouraging participation. Multiple session dates were offered to increase participation as supervisors and potential volunteers reported scheduling conflicts. All participants signed an Informed Consent Form, which was approved by the Institutional Review Board (see Appendix A and B). The informed consent included an overview of the study, expectations of participants, anticipated time frame and duration, confidentiality procedures, and potential risks and benefits. The form also provided the researchers' contact information and how to end participation at any time.

In total, 19 early childhood teachers from the four programs volunteered to participate in the study. The following data was collected regarding their program affiliation. From the regular early childhood (EC) programs, three Child Care Teachers (15.8%), three Head Start Teachers (15.8%), and four Pre-K Counts Teachers (21.1%) joined the study. From the early childhood special education program (ECSE), nine Preschool Early Intervention Teachers (47.4%) participated. Across these programs, as reported by participants, class sizes ranged from 10 to 29 students at one time and caseloads ranged from 15 to 43 students total. Teacher educational levels ranged from associate to graduate degrees with self-reported highest education as follows: two

associate degrees (10.5%), seven bachelor's degrees (36.8%), and 10 graduate degrees (52.6%). Years of teaching experience also ranged from less than one year to 26 years, with teachers falling in the following categories: less than 5 years (21.1%), 5-12 years (21.1%), 13-19 years (36.8%), and more than 20 years (21.1%). A summary of these findings is depicted in Table 1.

**Table 1**

*Teacher Demographics: Numbers and Percentages of Teachers Across Programs, Educational Levels and Years of Experience*

Characteristic	No. Teachers (n = 19)	% Participants
<b>Program Affiliation</b>		
Child Care (EC)	3	15.8%
Head Start (EC)	3	15.8%
Pre-K Counts (EC)	4	21.1%
Early Intervention (ECSE)	9	47.4%
<b>Educational Level</b>		
Associate Degree	2	10.5%
Bachelor's Degree	7	36.8%
Graduate Degree	10	52.6%
<b>Years of Experience</b>		
Less than 5 years	4	21.1%
5-12 years	4	21.1%
13-19 years	7	36.8%
More than 20 years	4	21.1%

## **Intervention**

**General overview.** The intervention phase of this study began with a one-hour professional development session to educate participants on mindfulness practices. The presentation was developed to include the following key elements: (a) a definition of mindfulness, highlighting it as a state of mind centered on acceptance, awareness, and no

judgment (Kabat-Zinn, 1990); (b) benefits of mindfulness practices for individuals and early childhood education; (c) a brief introduction for five core mindfulness practices as identified in the literature (e.g., breathing exercises, body scans, focused attention, open-monitoring, and loving kindness meditation); (d) the benefits of action planning and tips to get started; and (e) a review of free resources provided at the session. The resource packet included a list of free mobile applications that offer guided meditations, videos to further educate participants about mindfulness, brief articles and tip sheets, scripted guided mindfulness activities, and sample action planning calendars and forms for guiding ones' personal practice. The introductory session was also used to provide direction regarding the completion of the weekly check-in or journaling activity used as a means of data collection.

The intervention was planned to occur over eight weeks. Over this time, participants were asked to practice self-selected, mindfulness activities for a minimum of five minutes, five days per week. Participants were asked to reflect weekly on their practice by completing an online reflection or journaling activity. The questions asked participants to record how often and total minutes of practice over the week. Questions were included that prompted participants to reflect on their personal goal for practice, challenges or barriers to practice, and plans for the next week. The journaling prompt also served to collect data on overall stress level and frequency of stress experiences. Weekly notifications were sent to remind participants to complete the reflection. Additional email tips or resources were shared as a result of themes or challenges noted in the reflections. A shared library of resources was developed on an online Microsoft SharePoint site for all participants to access.

**Selection of resource materials.** The resource materials were selected by the researcher following the literature review through a two-step review process. In the first step, the researcher consulted with two researchers who had conducted studies in this field to discuss resources and materials utilized in their work and practice. Consultation occurred with a researcher from the University of Pennsylvania with shared interests and a colleague serving as the Director of the PA Key program, who completed her doctoral dissertation on mindfulness. The materials recommended were reviewed in relationship to the core practices identified in the literature review. Materials and resources were included as a potential resource if they encompassed examples or activities specific to the following practices: breathing exercises, body scans, focused attention, open-monitoring, and loving-kindness meditation. In the second step, resource materials were reviewed by a school counselor and two administrators within the Office of Early Childhood and Student Services for input regarding practical use and adaptability for school or classroom use in the future. All resources were designed to support beginners in the practice of mindfulness. As the introductory session of the intervention was designed to be a short, brief introduction, the researcher included additional resources and information for participants to learn more about mindfulness and explore if they would so choose.

The first set of materials included articles and tips for participants to "get started." The articles were located via a search through Google using the terms "mindfulness," "five minutes," and "beginner." The articles, both from online magazines (e.g., Time and Psychology Today), were selected to be brief and easy to read (Esposito, 2015; Pickert, 2014). In addition to these articles, an informational sheet describing the foundations of



mindfulness was included with the intent to define further attitudes such as non-judgment, patience, beginner's mind, trust, non-striving, and letting go (Black & Grey, 2020). This document was a resource obtained through a professional development session sponsored by the Council on Exceptional Children entitled "Mindfulness Practices in Early Childhood" and copyrighted by Anna Black and Catherine Grey (2020). Permissions were granted within the training for participants to use the resources. A list of informational, free videos produced by TED Talks and available on YouTube was also provided to participants in the event they were interested in more information than was covered in the one-hour introductory session (Brewer, 2015; Iyer, 2014; TEDx Talks, 2017; Puddicombe, 2012; Ricard, 2004).

The second set of materials were comprised of tools that the participants could use to guide their practice of mindfulness. First, links of all example videos reviewed in the one-hour introductory session were provided to the participants. These short videos modeled breathing exercises, body scans, focused-attention, open monitoring, and loving-kindness meditation. In addition, the resource list provided brief descriptions of the following apps that offer guided meditations: Headspace, Calm, Insight Timer, Simple Habit, and Stop, Breathe, and Think. Printed booklets of activities available from the Strategic Education Research Partnership (SERP) Institute (2016), entitled *Focus 5*, were provided as an alternative to applications or digital media in the event those resources would be limited or restricted and a barrier to practice. The *Focus 5* booklets included activities aligned with the five core practices presented in the introductory lesson (SERP Institute, 2016).

The third set of tools made for participants incorporated sample action plans and calendars for participants to use to plan or record their practices with the intent to support consistency in practice. A monthly and weekly calendar option was offered for use. Calendars included prompts for goal setting and planning, mindfulness practices, options for practice, and reminders. The calendars also prompted participants to list possible obstacles and plans to overcome them. The Action Planning tool was developed in consideration of the research done by Galla et al. (2016) to prompt participants to identify goals and potential obstacles then develop if/then plans to accomplish the goals if barriers presented themselves.

**COVID-19 impact.** The eight-week mindfulness intervention was initiated over the course of three weeks beginning in late January 2020. In early March 2020, the Commonwealth of Pennsylvania as well as the BCIU began to closely monitor, prepare for, and respond to the COVID-19 emergency health pandemic. On March 13, 2020, Pennsylvania schools were closed by order of the Governor, which resulted in two-week period where educators faced uncertainty regarding future wages, employment, and the overarching context of education. The spread of the COVID-19 virus, school closures, and rapid shift to remote learning overlapped with the final two to four weeks of the mindfulness intervention and data collection period, thus potentially impacting teachers' experiences in both mindfulness practice and perceptions of stress.

**Fiscal implications.** The above-designed mindfulness teacher education model is a promising, low-cost intervention that is hypothesized to have potentially positive impacts on both organizational health and employee engagement. Through this mindfulness intervention, the BCIU Office of Early Childhood and Student Services can

support teachers coping with stress by teaching and encouraging engagement in self-care practices that have the potential for improving student outcomes, reducing costs for the organization related to staff turnover, health care costs, and teacher absenteeism, and increasing an overall positive school climate. The intervention requires limited time for teachers and administrators for professional development and daily engagement. Moving forward, the introductory session could be offered through a virtual platform and offered to all early childhood educators at the start of each year or upon hire. The materials needed are of low-cost as they include printed materials, free apps, and free online resources.

### **Research Design, Methods and Data Collection**

**Research design.** This study utilized a mixed-methods action research design to answer the identified research questions. Quantitative data was collected by means of a pre- and post-intervention survey to explore the relationships between early childhood teacher's perceptions of stress, job satisfaction and commitment, and self-care behavior as well as identify the effects of brief, daily mindfulness practices over an eight-week period. Additionally, weekly ratings were collected to monitor teacher stress levels and frequency of stress experiences. Qualitative data was collected via the use of a weekly reflection of personal experiences and feelings and open-ended post-intervention survey questions. Additional information regarding the surveys and data collection tools are outlined below.

**Data collection procedures.** In this study, data were collected in three phases to address the research questions: (a) pre-intervention, (b) intervention, and (c) post-intervention. All data were collected through Google Forms. Teachers were emailed

links to complete the survey and reflection forms as they were required in the timeline. One email reminder was sent to all participants for each Google Form through the different phases of data collection. To protect each participant's privacy and encourage honesty in reflection, each teacher in this study was assigned an identification number following receipt of their expressed interest and the informed consent form. This identification number was utilized through each of the three phases of data collection as a means of connecting responses but protecting each participant's identity from the researcher. A confidential secretary at the BCIU assigned these numbers and maintained a listing in the event personal contact was needed.

In the pre-intervention phase of data collection, each volunteer was asked to complete a survey by email before attending an introductory session on mindfulness practices. This data was collected over three weeks as multiple introductory sessions were offered to increase participation by accommodating teacher work schedules. The pre-intervention survey was designed to gather data about stressors, ability to cope with stressors, stress levels, job satisfaction and commitment, and self-care practices. Additionally, teacher and classroom demographic data were also collected in the pre-intervention survey. Additional information regarding the survey tools utilized is outlined below in the data collection section of the methodology.

In the intervention phase of this study, each volunteer was asked to complete a weekly reflection form using Google Forms. A link to this form was emailed to each participant at the end of each workweek (e.g., Friday evening or Saturday morning). A reminder email was also sent at the beginning of each work week to complete the prior weeks' reflection. Data collected over this period was both quantitative and qualitative as

it requested ratings of stress as well as reflections of their personal experience. Data were collected weekly for eight weeks.

In the post-intervention stage of this study, each participant was asked to complete a post-intervention survey, which included the same measures in the pre-intervention survey. Teacher and classroom demographic data was not collected post-intervention. The post-intervention survey also included personal reflection questions to gather qualitative data specific to participants' experiences in practicing mindfulness. This data was also collected over six weeks to accommodate for the varying teacher schedules and challenges associated with school closures. Additional information specific to the data collection tools and questions are provided below.

**Data collection tools.** Several data collection tools were utilized in this study to support the validity and reliability of data collection and interpretation. The data collection tools included the following key components: (a) teacher and classroom demographics, (b) stress measures, (c) job satisfaction and commitment measures, (d) self-care practices, (e) weekly intervention reflections, and (f) post-intervention reflection. All data collection tools were approved by the Institutional Review Board as referenced in Appendix A. Complete copies of these tools are included in Appendix C.

***Teacher and classroom demographics.*** Teacher demographic data was collected from all participants during the pre-intervention phases using a Google Survey format. Demographic data included program affiliation, educational level, and years of teaching experience. The survey also requested data reporting class size, caseload size, and the number of students with disabilities within a classroom to provide context for the study. Teacher and classroom demographic data were collected to provide information about the

participants and their work settings as well as insight into differences in experiences relative to these factors.

***Stress measures.*** Two separate measures were included in the pre-intervention and post-intervention surveys to gather information about each participant's perception of stress as it relates to sources of stress, their perception of their ability to handle stress, and their feelings of stress over a one-month period. These tools include the Confidence in Handling Stressors in Teaching scale and the Perceived Stress Scale.

The first tool, the Confidence in Handling Stressors in Teaching scale, is a 26-item scale that asks teachers to report on the extent to which specific factors are a source of stress and one's perceived ability to handle the specific source of stress. The scale is comprised of a list of 13 potential sources of stress in teaching, and include items such as relationships with coworkers, paperwork and recordkeeping, time management, resources available, and student behavioral issues. In the first part, teachers are asked to rate on a four-point Likert scale the extent to which each item is a source of stress. The scale ranges from *not a source of stress* to *severe source of stress*. In the second part, teachers are asked to rate the extent to which they believe they can handle each source of stress. The second section of this tool uses a five-point Likert scale from *not at all well* to *extremely well*. This tool was developed through adaptation of a scale utilized by Walton, Logel, Peach, Spencer, and Zanna (2015) to assess sources of stress and confidence of female engineering students and consideration of items identified by Bloom (2010) in the development of the Early Childhood Job Satisfaction Survey and the Early Childhood Work Environment Survey.

The second tool is the Perceived Stress Scale. This instrument is a 10-item scale that measures one's stress-related thoughts over the prior month (Cohen, Kamarck, & Mermelstein, 1983). The tool uses a five-point Likert Scale from *never* to *very often*. An overall score is calculated using a total sum of scores for each item, with higher scores overall indicating greater levels of perceived stress. Example items from this tool include "how often have you felt nervous or stressed?" and "how often have you felt that things were going your way?" This 10-item tool has been utilized in previous research and found to have adequate to strong reliability and validity (Cohen & Williamson, 1988; Mitchell, Crane, & Kim, 2008).

***Job satisfaction and commitment.*** Two separate measures were included in the pre- and post-intervention surveys to assess teachers' perceptions of job satisfaction and commitment. To assess job satisfaction, teachers completed a four-item survey to assess their general satisfaction about teaching as a profession. These items were presented on a five-point Likert scale ranging from *strongly disagree* to *strongly agree*. Items assessed teachers' job satisfaction by asking four basic questions:

1. Knowing what I know now about the job of being a teacher, if I had to decide all over again, I would become a teacher.
2. My job is an important and fulfilling aspect of my life.
3. In general, being a teacher measures up extremely well to the sort of job I wanted before I took it.
4. If a good friend told me (s)he was interested in becoming a teacher, I would have serious reservations about recommending it.

These questions were developed to engage teachers in reflection on whether they would become a teacher again, assess their feelings of fulfillment in work, and their perceptions of the job relative to the reasons they entered the field. This tool was selected following conversations with a researcher at the University of Pennsylvania as it was also being considered for use in a larger study related to mindfulness. The tool was adapted from the Measure of Teacher Stress Job Satisfaction subscale, which is reviewed in research published by Pettegrew and Wolf (1982) specific to validating measures of teacher stress. Adaptations and versions of this tool have also been used by other researchers studying mindfulness and teacher burnout (Roeser et al., 2013).

To assess job commitment, teachers were asked to complete the commitment section of the Early Childhood Job Satisfaction Survey (Bloom, 2010). This survey required participants to select items from a list that represent their feelings toward their current position. Example items include "I often think of quitting," "I put a lot of extra effort into my work," and "I'm just putting in my time." Also, from this scale, teachers were asked to rate their overall commitment to the field of early childhood education on a 10-point Likert scale ranging from *not committed* to *very committed*.

***Self-care practices.*** Teachers were asked to self-report their engagement in self-care activities, both pre- and post-intervention, via the Google Survey format. To measure engagement in self-care practices, a 20-item assessment was developed based on the Self-Care Assessment from Saakvitne and Pearlman (1996). The self-care assessment was adapted to reduce the number of items for teacher report and reflection. The assessment included a list of self-care behaviors or activities associated with physical, psychological, emotional, and spiritual self-care. Several items were also included



specific to professional self-care (Butler et al., 2019). Teachers were asked to rate their engagement in specific self-care items using a five-point Likert scale ranging from *never occurred to me* to *frequently*. Example items include "I eat healthy foods and regular foods during the day," "I get enough sleep," and "I make time for self-reflection."

***Weekly intervention reflection.*** Teachers were asked to answer nine questions weekly on a Google Form at the end of each week of the intervention period to provide data regarding their mindfulness practice and personal reflection. The first reflection form was sent to participants at the end of the first week of the intervention (e.g. Friday evening) and each week following through the eighth week. The weekly reflection form collected data on the frequency and duration of mindfulness practice within the one-week period. Specifically, teachers were asked to report how many times they practiced during the week and the total number of minutes per week. The form was also designed to gather data regarding teacher ratings of stress level and frequency throughout the intervention. Specific questions asked teachers to rate their overall stress level on a five-point Likert Scale (*1 = Low Stress; 5 = High Stress*) and frequency of stress experiences during the week on a five-point Likert Scale (*1 = Never; 5 = Very Often*).

As the introduction to action planning steps was included in the intervention to support goal setting and consistent practice of mindfulness, the weekly reflection form was designed to gather data specifically regarding whether teachers met their personal goal for practice (Galla et al., 2016). Further, it provided open-ended questions to gather information regarding challenges or barriers in practice. It prompted teachers to think about what they could/would do differently in the next week. Two open-ended questions

were included in the weekly form for teachers to describe their feelings toward their practice and share comments with the researcher.

***Post-intervention reflection.*** In the post-intervention reflection survey, teachers were asked to answer seven questions reflecting on their experiences. These questions were qualitative and designed to collect data specific to teachers' overall experience in participating in the daily mindfulness intervention. Questions asked teachers to describe their experiences, changes in their stress level (if any), and changes in their feelings toward work (if any). Teachers were also asked to provide open-ended responses regarding challenges or barriers experienced in the intervention phase and suggestions for other supports may have been helpful in the experience. The final question asked teachers if they would continue mindfulness practice with options of yes, no, or maybe. A field was also left open for other comments in the event the participants wanted to add to the survey comments.

**Validity.** Based on the work of Hendricks (2017), four factors of validity were incorporated into the research plan and study. These include credibility, transferability, dependability, and confirmability. First, credibility refers to the accuracy of facts, findings, interpretations, and conclusions (Hendricks, 2017). To ensure credibility in the data collected, all participants were assigned an identification number so that the researcher would be blind to the identity of each participant. This method was selected to support the participants' comfort level in sharing personal feelings, goals, and attitudes about the intervention and its personal and professional impact on the individual. Participants were asked to enter their identification numbers so that trends across participants could be analyzed, yet privacy was maintained to support credibility in data

collected. A confidential secretary in the Office of Early Childhood and Student Services at the BCIU assigned and maintained a listing of numbers. When direct communication with selected participants was needed, the researcher provided the feedback to the confidential secretary so she could share it directly with the participant to respect privacy and confidentiality.

To further ensure the credibility of results, the intervention period was established to occur over eight weeks to allow for persistent and prolonged data collection. Also, while a pre- and post-intervention survey was the primary method to evaluate intervention effects, the inclusion of weekly reflection forms and ratings of stress were included to evaluate the effects of the intervention over time and provide additional data points for triangulation. Data was collected through Google Forms to ensure consistency and accuracy of reports. The researcher kept notes for each group regarding themes present as well as copies of emails sent to the group that addressed new resources or reassurances surrounding themes in the report. The researcher used a chart to document the timeline and referenced points at which guidance was provided in the intervention.

Another factor of validity is transferability or the ability to generalize results across different settings, contexts, and individuals (Hendricks, 2017). To support the transferability of the results, the study included early childhood teachers from multiple programs within the BCIU Office of Early Childhood and Student Services. The participants included teachers with different job responsibilities, supervisors, and pay scales, which all could be variables influencing feelings of stress. Teacher and classroom demographic data was collected as part of the pre-intervention survey to provide context related to teachers' program affiliation, educational level, and years of teaching

experience. Descriptions of the various programs were included within the methodology to inform of the setting and contextual differences. The pre-intervention survey also requested data reporting class size, caseload size, and the number of students with disabilities within a classroom for further analysis as needed. One potential limitation of transferability is related to the selection of participants. While this study was open to all early childhood teachers, the study was comprised of volunteers and was not a requirement of all staff. Thus, results could vary in a larger context where individuals were not intrinsically motivated to engage in mindfulness practices.

Dependability, or the replicability of findings to other groups or settings, was also considered in the research plan and design (Hendricks, 2017). As highlighted above, the methodology provides a detailed description of the participants and setting. In addition, multiple data sources were included to provide for the triangulation of data and support dependability. As the primary focus of this study is teacher stress, several scales were included to inform on factors of stress such as ability to handle stressors, perceived stress, and job satisfaction. Weekly stress ratings and reflections were also included throughout the intervention period to inform of the trends or potential fluctuations that may naturally occur. One potential limitation of the dependability of this study involves the timing of the post-intervention survey as it coincided with the COVID-19 emergency health pandemic and school closures in Pennsylvania. Attempts were made to account for this by requesting that participants consider feelings of stress related to their work before the COVID-19 pandemic and resulting uncertainties. However, as this pandemic has changed the landscape of education and teacher expectations, the results, due to the timing, may be unique to these circumstances.

The final factor of validity considered is confirmability, which considers accuracy of results concerning potential researcher bias, motivation, or interest (Hendricks, 2017). Throughout the intervention, the researcher employed peer debriefing with a colleague within the Office of Early Childhood and Student Services when reviewing data and adjusting the intervention to protect from researcher bias. The researcher retained records of communication with participants throughout the intervention period as plans were adjusted based on data received. For instance, when signs of stress or anxiety were presented, additional reassurance or resources for professional counselors and the Employee Assistance Program were provided to all participants. In terms of data collection and interpretations, Google Forms was utilized as a tool to ensure accurate data recording, and multiple sources of data were used for the triangulation of data. Finally, researcher bias is acknowledged as past work within the organization has suggested that our early childhood teachers experience high work demands and elevated levels of stress. For this reason, a quantitative approach and assignment of identification numbers were utilized to prevent researcher bias from influencing data interpretation. Additionally, at the start of the study, the researcher did not practice mindfulness, thus did not have past experiences with success. This fact was openly shared with the participants at the introductory session.

Overall, multiple safeguards and practices were embedded in this study to ensure reliability and validity of results. The strategies included the collection of data over time, accurate data recording methods, peer debriefing, acknowledgment of bias, and triangulation of data sources (Hendricks, 2017). Limitations are recognized as the

COVID-19 emergency health pandemic potentially impacted teacher stress outside of typical work-life conditions during the post-intervention phase of data collection.

### **Summary**

This mixed-methods action research study explores the relationships between early childhood teachers' perceptions of stress, job satisfaction and commitment, and their engagement in self-care practices both before and following an eight-week mindfulness intervention. Further, this project investigates the effects of brief, daily mindfulness practices on the factors mentioned above as well as provides insight into potential benefits and challenges in the implementation of identified mindfulness interventions. The methodology of this study outlines the purpose of the study, participants and setting, intervention, and research design, including methods, data collection tools, and plan for analysis. Chapter IV will further inform the reader of the data analysis procedures. Further, it will provide a review of quantitative and qualitative results associated with each of the three research questions previously outlined in this chapter.

## CHAPTER IV

### Data Analysis and Results

In the following chapter, the data analysis and results are presented as aligned to the three research questions that were identified in the previous chapters. The results include quantitative and qualitative data collected from the 19 early childhood teachers who voluntarily participated in the study. To address the first question, inquiry data obtained through teacher survey and attitude scales were analyzed to determine relationships between teacher demographic factors and perceptions of job-related stressors, one's ability to cope with stressors, overall stress levels, job satisfaction and commitment, and personal self-care practices. Additionally, a correlational analysis was conducted to determine the existing relationships between identified variables.

The second question was informed via comparison of pre-intervention and post-intervention of teacher ratings specific to teacher stress, job satisfaction and commitment, and self-care behavior and analyzed using paired sample t-tests. Further analysis into relationships across pre- and post-intervention reports were explored through examination of subscales and items. A qualitative analysis of weekly reflection forms and post-intervention data reports was conducted to further inform the effects of mindfulness practice on teacher perceptions. The fidelity of intervention is also presented.

Finally, question three was analyzed through qualitative thematic analysis of teacher-generated artifacts, specifically weekly reflections and the post-intervention survey, to identify common challenges and barriers of practice and potential effects of action planning and reflection on weekly practice.

### **Research Question 1**

To address the first research question, "What relationships exist between BCIU early childhood teachers' perceptions of stress, job satisfaction / commitment, and engagement in self-care?", an exploratory analysis between teacher characteristics and perceptions of stress, job satisfaction and commitment, and self-care was conducted through the use of descriptive statistics. Additionally, a correlational analysis was completed to inform the researcher of existing relationships between the following variables: (a) sources of stress, (b) ability to cope with stressors, (c) perceived stress, (d) job satisfaction, (e) job commitment, and (f) self-care practice. Additional detail regarding data analysis procedures is integrated throughout the topics for ease of understanding.

**Teacher characteristics and perceptions.** Pre-intervention survey data was collected to gather information about early childhood teachers' perceptions of stress, job satisfaction and commitment, and self-care practices. Data was obtained from 19 early childhood teachers and organized into the following measures: (a) sources of stress, (b) ability to cope with stressors, (c) perceived stress, (d) job satisfaction, (e) job commitment, and (f) self-care practice. Total scores for each of these measures were calculated for each of the participants. Next, data was disaggregated in accords to three subgroups based on teacher characteristics: (a) program affiliation, (b) teacher education level, and (c) years of teaching experience. Descriptive statistics were calculated and analyzed to examine the potential relationships between the above-listed teacher characteristics and perceptions of stress, job satisfaction and commitment, and engagement in self-care practices. A brief description of each scale is provided for



reference and followed by the results. The teacher survey can be found in Appendix C.

*Score interpretation.* Two measures, the Confidence in Handling Stressors in Teaching Scale and the Perceived Stress Scale, were used to collect data about teacher perceptions of stress. The first measure, the Confidence in Handling Stressors in Teaching Scale, includes two subscale scores. The first subscale, Sources of Stress, identifies potential stressors and the level at which teachers perceive the work-related task or variable a source of stress. Summed scores on this scale can range from 13 to 52, with a higher score indicating a greater level or severity of stress related to work responsibilities. The second subscale, Ability to Cope, measures the level to which teachers believe they can handle each source of stress. Summed scores on this subscale can range from 13 to 65, with higher scores indicating greater confidence in one's ability to cope with stressors.

The second tool used to measure stress is the Perceived Stress Scale. A total score was obtained by calculating sums from item ratings. Procedures for reversing item values were followed as per directions and connotation of questions. On this scale, scores can range from 0 to 40 with the following classifications: low perceived stress (0-13), moderate perceived stress (14-26), and high perceived stress (27-40).

The job satisfaction measure included four questions used to assess one's general satisfaction with teaching as a profession. Summed scores of individual ratings were calculated for a total score on this measure. The rating on Item 4 on this scale was reversed in value due to negative connotation in the question. The highest score obtainable is 20, which would yield the highest rating of satisfaction on this scale. The lowest score, which would indicate the lowest ratings of satisfaction is 4.

In terms of job commitment, two survey items were scored to report a total score for comparison. The first item provided a rating from 1 to 10 respective to one's overall level of commitment to the field of early childhood education. The second item asked each participant to select items from a list in which they agreed with the statement. Items were both positively and negatively weighted and scored as a +1 or -1, respectively, to calculate to the overall commitment score. The highest score possible on this scale is 15, which indicates high levels of commitment.

The final measure included in the pre-intervention survey was a self-care assessment. On this scale, participants were asked to rate their engagement level on 20-items associated with physical, psychological, emotional, spiritual, and professional self-care. Total scores were obtained by calculating the sum of ratings reported across all items, with the lowest possible score of 20 and highest of 100. Higher scores indicate a greater frequency and variety of self-care practices.

***Program affiliation.*** In consideration of the sample size (n=19), early childhood educators were grouped into two categories based on program affiliation. The first category is Early Childhood (EC), which includes participants from Child Care (n=3), Pre-K Counts (n=4), and Head Start (n=3) programs. For differentiation, these participants were grouped as they each teach in programs that are considered regular education settings at the preschool level. The second category is Early Childhood Special Education (ECSE), which includes 9 participants from the Early Intervention Program, whose primary role is to serve students with disabilities in need of special education services. Table 2 provides a comparison of pre-intervention scores on each measure

between EC and ECSE teachers who participated in the study. Results reported include mean (*M*), standard deviation (*SD*), and range of scores.

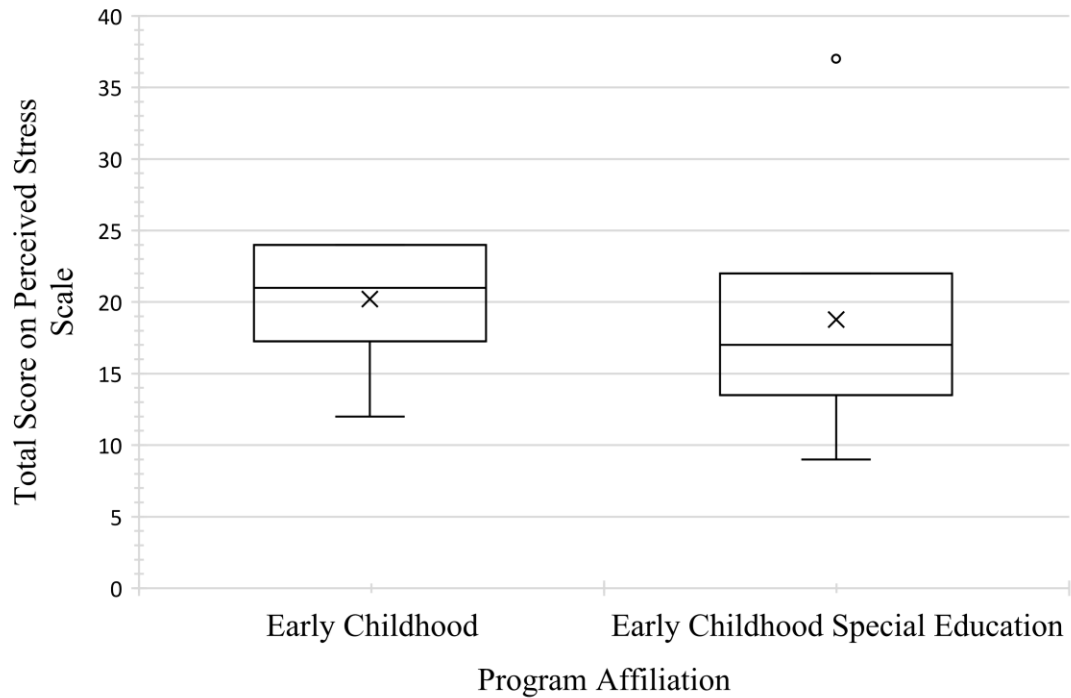
**Table 2**

*Descriptive Statistics of Pre-Intervention Survey Results by Teachers' Program Affiliation*

Measure	Early Childhood (n=10)	Early Childhood Special Education (n=9)
<b>Sources of Stress</b>		
<i>M</i>	28.9	28.5
<i>SD</i>	4.6	5.5
Range	20 - 34	21 - 39
<b>Ability to Cope</b>		
<i>M</i>	45.3	45.2
<i>SD</i>	5.7	7.5
Range	32 - 52	29 - 52
<b>Perceived Stress Scale</b>		
<i>M</i>	20.2	18.8
<i>SD</i>	4.2	8.1
Range	12 - 24	9 - 37
<b>Job Satisfaction</b>		
<i>M</i>	14.2	15.0
<i>SD</i>	2.5	3.2
Range	10 - 18	10 - 19
<b>Job Commitment</b>		
<i>M</i>	12.4	11.9
<i>SD</i>	2.3	2.1
Range	7 - 15	8 - 15
<b>Self Care</b>		
<i>M</i>	65.9	59.3
<i>SD</i>	8.3	7.1
Range	52 - 76	46 - 69

As shown in Table 2, results show minimal differences between scores of EC and ECSE teacher groups across measures of sources of stress, ability to cope, job satisfaction, and job commitment when comparing means, standard deviations, and ranges of total summed scores.

On the Perceived Stress Scale, a comparison of mean, standard deviation, and range show differences between EC and ECSE teachers' perceptions of stress. More specifically, early childhood teachers reported scores between 12 and 24 ( $M = 20.2$ ,  $SD = 4.2$ ), while early childhood special education teachers reported scores between 9 and 37 ( $M = 18.8$ ,  $SD = 8.1$ ). While on average, EC teachers reported higher levels of stress than ECSE teachers, the variance in scores within the ECSE teacher group was greater than within the EC teacher group. When calculating range, the ECSE group showed a difference of 28, while the EC group had a range of 12. Given this variability, median scores were calculated for each group resulting in EC median score of 21 and ECSE median score of 17. Raw data was also reviewed and indicated an outlier in the ECSE data with a Perceived Stress Scale score of 37, which increased the mean for the ECSE subgroup. A comparison of data is presented in the box plot in Figure 1 and suggests a significant difference in perceived stress scores between EC and ECSE groups.



*Figure 1.* Box Plot Comparison of EC and ECSE Pre-Intervention Total Scores on Perceived Stress Scale. (Legend: X = Mean ° = outlier - = median)

In addition to the differences in perceived stress, differences were found between groups in self-care. As outlined in Table 2, EC teachers' scores on the self-care scale ranged from 52 to 76 ( $M = 65.9$ ,  $SD = 8.3$ ), while the ECSE teachers' scores ranged from 46 to 60 ( $M = 59.3$ ,  $SD = 7.1$ ). Within the sample, EC teachers reported more frequent engagement in self-care practices than ECSE teachers. In summary, when comparing results between groups based on program affiliation, EC teachers reported higher levels of perceived stress and engagement in self-care than ECSE teachers within this sample.

**Teacher levels of education.** Based on self-report in the pre-intervention teacher demographic survey, the participants of the study were grouped into three categories specific to level of education. These three subgroups include teachers with associate ( $n = 2$ ), bachelor's ( $n = 7$ ), and graduate ( $n = 10$ ) degrees. Table 3 provides a comparison of

pre-intervention scores on each measure between teachers with varying levels of education. An exploratory analysis is provided below with some limitations due to the differences in group size within the sample.

**Table 3**

*Descriptive Statistics of Pre-Intervention Survey Results by Teachers' Education Level*

Measure	Highest Educational Degree		
	Associate (n=2)	Bachelor's (n=7)	Graduate (n=10)
<b>Sources of Stress</b>			
<i>M</i>	29.0	28.3	29.0
<i>SD</i>	2.8	4.2	5.8
Range	27 - 31	20 - 32	21 - 39
<b>Ability to Cope</b>			
<i>M</i>	36.5	46.7	46
<i>SD</i>	6.4	3.8	7.0
Range	32 - 41	40 - 52	29 - 52
<b>Perceived Stress Scale</b>			
<i>M</i>	22.5	20.1	18.5
<i>SD</i>	2.1	3.5	8.0
Range	21 - 24	14 - 24	9 - 37
<b>Job Satisfaction</b>			
<i>M</i>	17.0	13.0	15.2
<i>SD</i>	1.4	1.9	3.2
Range	16 - 18	10 - 16	10 - 19
<b>Job Commitment</b>			
<i>M</i>	10.0	13.3	11.8
<i>SD</i>	4.2	1.3	2.0
Range	7 - 13	12 - 15	8 - 15
<b>Self Care</b>			
<i>M</i>	67.0	66.7	59.2
<i>SD</i>	8.5	8.6	7.0
Range	61 - 73	52 - 76	46 - 69

As illustrated in Table 3, minimal to no differences were noted in mean scores on the Sources of Stress subscale for educational level. Differences in variance did increase as the subgroup sample size increased. On the Ability to Cope subscale, the associate degree subgroup ( $n = 2$ ) reported lower confidence levels ( $M = 36.5, SD = 6.4$ ) than those groups with bachelor's ( $M = 46.7, SD = 3.8$ ) and graduate degrees ( $M = 46.0, SD = 7.0$ ). Minimal to no differences were found between mean scores of bachelor's and graduate degree level teachers on this scale. On the Perceived Stress Scale, teachers with associate degrees reported the highest levels of perceived stress ( $M = 22.5, SD = 2.1$ ) followed by teachers with bachelor's degrees teachers ( $M = 20.1, SD = 3.5$ ), and then teachers with graduate degrees ( $M = 18.5, SD = 8.0$ ). This suggests that teachers with lower levels of education perceive their experiences with higher levels of stress.

On the job satisfaction measure, within the sample, teachers with bachelor's degrees reported lower levels of job satisfaction ( $M = 13.0, SD = 1.9$ ) than those with graduate degrees ( $M = 15.2, SD = 3.2$ ) or associate degrees ( $M = 17.0, SD = 1.4$ ). The two teachers with associate degrees reported the highest levels of general satisfaction toward teaching, with those with graduate degrees falling between the two other subgroups. In respect to job commitment, teachers with bachelor's degrees indicated higher levels of commitment ( $M = 13.3, SD = 1.3$ ) than those with associate degrees ( $M = 10.0, SD = 4.2$ ) and graduate degrees ( $M = 11.8, SD = 2.0$ ). The two teachers with associate degrees reported the lowest levels of commitment, and teachers with graduate degrees fell between the two groups.

Finally, on the self-care measure, teachers with graduate degrees reported less frequent engagement in self-care as a group ( $M = 59.2, SD = 7.0$ ) than did teachers with

associate ( $M = 67.0$ ,  $SD = 8.5$ ) or bachelor's degrees ( $M = 66.7$ ,  $SD = 8.6$ ). Results from associate and bachelor's degree teacher subgroups found a similar frequency of engagement in self-care.

In summary, the small subgroup of teachers with associate degrees reported lower confidence levels, higher levels of perceived stress, and lower levels of job commitment than teachers with more advanced educational degrees. In contrast, the teachers with associate degrees rated highest on the job satisfaction measure when compared to those with more advanced degrees. As a group, the teachers with bachelor's level degrees reported higher levels of stress and lower levels of job satisfaction than those with graduate-level degrees but rated their confidences in handling stressors similarly when compared to the graduate degree level subgroup. The bachelor's level teachers, as a group, rated highest in job commitment when compared to both associate and graduate-level teacher groups. Finally, the graduate-level degree subgroup rated the lowest in self-care practice when compared to teachers within the sample who hold associate and bachelor's degrees. All subgroups reported similar ratings in terms of sources of stress as they relate to work responsibilities.

***Years of teaching experience.*** To further explore relationships between teacher characteristics and perceptions, teachers were grouped into four categories based on years of experience. These subgroups were designated as less than 5 years ( $n = 4$ ), 5-12 years ( $n = 4$ ), 13-19 years ( $n = 7$ ), and 20 or more ( $n = 4$ ) years of teaching experience. Table 4 provides a comparison of pre-intervention scores on each survey scale between groups with varying years of experience.



**Table 4**

*Descriptive Statistics of Pre-Intervention Survey Results by Teachers' Years of Experience*

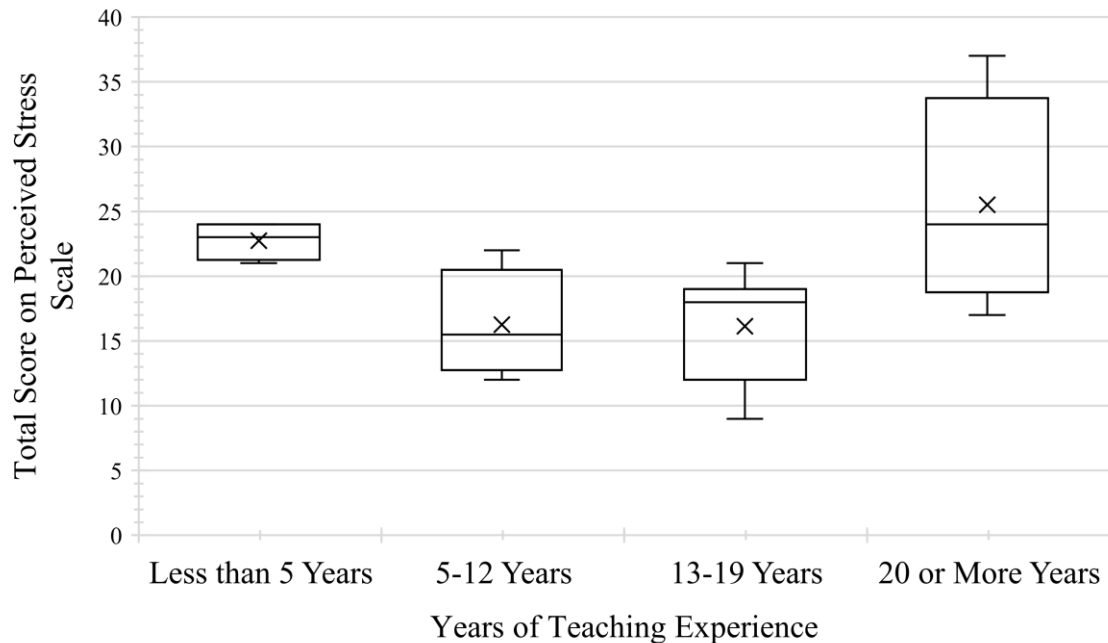
Measures	Years of Experience			
	Less than 5 Years (n = 4)	5-12 Years (n = 4)	13-19 Years (n = 7)	20 or More Years (n = 4)
<b>Sources of Stress</b>				
Mean	28.5	27.8	28.3	30.8
SD	5.6	3.8	5.3	5.9
Range	21 - 34	23 - 32	30 - 34	26 - 39
<b>Ability to Cope</b>				
Mean	44.5	47.0	46.4	42.3
SD	8.5	5.3	3.8	9.9
Range	32 - 50	40 - 52	41 - 52	29 - 52
<b>Perceived Stress Scale</b>				
Mean	22.8	16.3	16.1	25.5
SD	1.5	4.2	4.3	8.3
Range	21 - 24	12 - 22	9 - 21	17 - 37
<b>Job Satisfaction</b>				
Mean	16.0	14.5	15.3	12.0
SD	2.2	2.5	2.9	2.8
Range	13 - 18	12 - 18	12 - 19	10 - 16
<b>Job Commitment</b>				
Mean	11.5	13.0	12.1	12.0
SD	3.0	1.4	2.7	1.2
Range	7 - 13	12 - 15	8 - 15	11 - 13
<b>Self Care</b>				
Mean	59.3	64.5	62.1	65.8
SD	7.4	8.9	8.8	9.4
Range	53 - 69	57 - 76	46 - 73	52 - 73

In a review of teacher ratings on Sources of Stress subscale, teachers with 20 or more years of experience averaged the highest score with a mean of 30.8 ( $SD = 5.9$ ) followed by teachers with less than five years of experience with a mean score of 28.5

( $SD = 5.6$ ). Teachers with 13-19 years and 5-12 years followed with respective means of 28.3 ( $SD = 5.3$ ) and 27.8 ( $SD = 3.9$ ). While slight differences were found in mean and range of scores across groups, the median scores across groups indicate consistency in central tendency with scores of 28 for subgroups under 20 years of experience and 29 for the 20 or more years of experience. On the Ability to Cope subscale, teachers in the middle range categories (5-12 and 13-19 years' experience) scored highest, but with minimal differences between these two groups. Teachers with 20 or more years' experience reported the lowest confidence levels in ability to cope with a mean of 42.3 ( $SD = 9.9$ ) followed by teachers with less than five years' experience with a mean of 44.5 ( $SD = 8.5$ ). The groups with the most and least experience also showed greater range and variance in responses.

On the Perceived Stress Scale, teachers with 20 or more years' experience yielded the highest mean score ( $M = 25.5$ ), followed by teachers with less than five years' experience ( $M = 22.8$ ). Within the sample, groups of teachers within the 5-12 and 13-19 years' experience range obtained mean scores of 16.3 ( $SD = 4.2$ ) and 16.1 ( $SD = 4.3$ ), respectively. This finding indicates that within the sample, teachers with the most and least years' teaching experience felt higher levels of stress than those in the middle-level categories (5-12 and 13-19 years). A box plot was created to show the differences and distribution of data points from the Perceived Stress Scale (See Figure 2). Results indicate significant differences in perceived stress between the less than five years category and mid-range categories (e.g., 5-12 years and 13-19 years). Significant differences are also found between the 20 or more years category and mid-range categories. While there do not appear to be significant differences in mean and median

between the less than 5 Years category and 20 or more years category, the box plot shows the variance is more widely distributed for the most experienced group as compared to the least experienced.



*Figure 2.* Box Plot Comparison of Pre-Intervention Total Scores on Perceived Stress Scale by Years of Teaching Experience. (Legend: X = Mean, - = median)

An analysis of the job satisfaction scale and years of experience finds that teachers with less than five years' experience rated the highest level of job satisfaction ( $M = 16.0$ ,  $SD = 2.2$ ) and teachers with 20 or more years rated lowest ( $M = 12.0$ ,  $SD = 2.8$ ). Data specific to teachers ranging in years of experience from 5-12 and 13-19 years is outlined in Table 4. The data suggest that teachers within the sample with 20 or more years of experience are less satisfied than those in other categories with less experience. In terms of job commitment, teachers in the sample with 5-12 years scored highest, followed by 13-19 years, more than 20 years, and less than five years subgroups. Due to

variance, medians were calculated to assess differences. Minimal differences were found in medians as they ranged from 12.0 (20 or more years) to 13.0 (less than five years).

Finally, in the review of self-care as it relates to years of experience, teachers with 20 or more years of experience reported slightly higher levels of engagement in self-care ( $M = 65.8, SD = 9.4$ ), followed by teachers with 5-12 years' experience ( $M = 64.5, SD = 8.9$ ), 13-19 years' experience ( $M = 62.1, SD = 59.3$ ), and then less than five years' experience ( $M = 59.3, SD = 7.4$ ). In further review of median points and data distribution, the differences while existing do appear to be significantly different based on variance within groups.

In summary, teachers with 20 or more years' experience provided the highest ratings on sources of stress and perceived stress, and the lowest ratings in ability to handle stress and job satisfaction when compared to the other subgroups. Teachers in this group also reported greater frequencies of self-care practice than the other subgroups. On the opposite end, teachers with less than five years' experience demonstrated a similar pattern as outlined above with teachers with 20 or more years' experience concerning perceptions of stress and their ability to cope with work stressors. However, this group scored the highest of the subgroups in job satisfaction, but the lowest in job commitment. Teachers with less than five years of experience also reported the lowest level of engagement in self-care.

**Relationships between variables.** To explore the relationships between confidence in handling teaching stressors, perceived stress, job satisfaction, job commitment, and self-care practices, correlations were computed across the six measures

utilized in the teacher survey on data from 19 early childhood teachers resulting in 15 total calculations as listed in Table 5.

Correlations were computed using Microsoft Excel's data analysis correlation formula function. This function allowed for arrays of data, which included summed scores for each participant, to be analyzed to determine potential relationships between variables. The measures include subscales of sources of stress and the ability to cope and scales of perceived stress, job satisfaction, job commitment, and self-care practices.

**Table 5**

*Summary of Correlations for Early Childhood Teacher Ratings on Measures of Stress, Job Satisfaction / Commitment, and Self-Care Practices*

Measure	1	2	3	4	5
1. Source of Stress					
2. Ability to Cope	-.65**				
3. Perceived Stress	.58**	-.61**			
4. Job Satisfaction	-.30	.25	-.43		
5. Job Commitment	-.49*	-.24	.52*	.35	
6. Self-Care Practices	-.02	-.05	.11	-.15	.17

*Note:* \* $p < .05$ ; \*\* $p < .01$

The results in Table 5 indicate a statistically significant, moderate positive correlation between the severity of sources of stress and perceived stress levels,  $r(17) = .58, p < .01$ . This relationship indicates that as the severity of stress associated with specific work factors increases, overall perceived stress ratings increase.

Further results show moderate negative correlations of statistical significance for the following relationships: sources of stress and ability to cope,  $r(17) = -.65, p < .01$ , ability to cope and perceived stress,  $r(17) = -.61, p < .01$ ; sources of stress and job

commitment,  $r(17) = -.49, p < .05$ ; and perceived stress and job commitment,  $r(17) = -.52, p < .05$ . In sum, as severity of stress associated with work factors increase, one's perceived ability to cope and job commitment decreases. As perceived stress increases, ratings associated with confidence in coping with work-related stressors and job commitment also decreases.

All other correlations outlined in the matrix do not yield statistically significant relationships within this sample. Thus, data collected from this sample population does not support existing relationships between self-care practices and identified factors of stress, job satisfaction, and job commitment. Further weak to no correlations were found relative to job satisfaction and other tested variables. Finally, weak to no correlations were discovered between ability to cope with stress and job satisfaction.

**Summary of existing relationships.** Results from the exploratory analysis of descriptive statistics indicate that factors such as program affiliation, teacher education level, and years of experience were associated with differences in perceptions of stress, job satisfaction, and self-care practices within this sample. Further, correlational analyses indicate statistically significant, moderate relationships between the reported severity of work stress, overall perceived stress, ability to cope, and job commitment.

## **Research Question 2**

The following section outlines the data analysis plan and results to answer the second research question, "What effect does the inclusion of brief, mindfulness activities into the daily routine have on BCIU early childhood teachers' (a) perceptions of stress, (b) job satisfaction / commitment, and (c) self-care practices?" First, to examine the effects of mindfulness interventions, quantitative data was collected and calculated to

determine the total score for each participant on each of the scales both before and following participation in the intervention. The scales for measuring perceptions of stress included sources of stress, ability to cope with stressors, and perceived stress. Scales were also developed for both job satisfaction and commitment. Finally, a self-care measure was included. Descriptive statistics ( $M$  = mean,  $SD$  = standard deviation) were calculated, and paired sample t-test analyses were conducted on pre- and post-intervention measures of stress, job satisfaction and commitment, and self-care. Results are reported in Table 6 and further discussed in the context of each variable.

**Table 6**

*Summary of Means, Standard Deviations, and Paired Sample t-test Statistical Analysis for Scores on Pre- and Post-Intervention Measures*

Measure	Pre-Intervention	Post-Intervention	t-test P-value
	M (SD)	M (SD)	
Sources of Stress	28.7 (4.9)	28.9 (5.5)	0.9071
Ability to Cope	45.3 (6.4)	47.8 (7.8)	0.2071
Perceived Stress	19.5 (6.2)	18.5 (5.6)	0.4647
Job Satisfaction	14.6 (2.9)	15.7 (3.0)	0.0095*
Job Commitment	12.2 (2.2)	12.1 (1.7)	0.9171
Self-Care	62.8 (8.3)	69.6 (8.8)	0.0083*

*Note:* \*Statistically significant,  $p < .01$

Additionally, qualitative and quantitative data sets collected from weekly and post-intervention reflections were analyzed to determine the effects of mindfulness on early childhood teachers' perceptions of each identified variable. A thematic analysis approach was utilized to analyze open-ended survey questions that provided information

about early childhood teachers' perceptions of their experience in practicing mindfulness. Survey responses were organized in an Excel spreadsheet and coded under common categories that emerged from the review. Finally, a review of intervention fidelity was also completed and summarized to further evaluate the findings. Results are reported below with respect to the following: (a) teacher perceptions of stress, (b) job satisfaction and commitment, and (c) self-care.

**Teacher perceptions of stress.** Results specific to teacher perceptions of stress are provided below within the context of statistical analysis, weekly ratings of stress levels and frequency, and post-intervention reflection. Statistical analyses were expanded to assess potential effects of the mindfulness interventions on teachers' perceptions regarding the severity of work stressors and ability to cope.

**Statistical analysis.** Paired sample t-tests were conducted to compare early childhood teacher perceptions on the Sources of Stress, Ability to Cope and Perceived Stress Scales prior to and following participation in mindfulness practices. As shown in Table 6, while slight differences in mean scores are found across each scale, these do not rise to a level of statistical significance.

To further explore potential effects of the mindfulness intervention on teachers' perceptions of stress, additional analysis was conducted in a review of each item from the Confidence in Handling Stressors in Teaching Scale. First, mean scores across the sample of 19 early childhood teachers were calculated for each item on the Sources of Stress and Ability to Cope subscales at the pre-intervention phase.

On the Sources of Stress subscale, a four-point Likert scale (*1 = not a source of stress; 4 = severe source of stress*) was used to assess the severity of stress associated



with work-related responsibilities. On the Sources of Stress subscale, the five items that yielded the highest ratings as work stressors were (a) workload in teaching, (b) paperwork/reporting requirements, (c) time management, (d) dealing with parents, and (e) student behavior.

The Ability to Cope subscale used a five-point Likert scale to assess how well teachers felt they could manage work stressors (*1 = not at all well, 5 = extremely well*). On the Ability to Cope subscale, teachers reported the lowest levels of confidence in their ability to cope with the same five items, but in the following order lowest to highest: workload in teaching, time management, paperwork/reporting requirements, dealing with parents, and student behavior. Means (*M*) and standard deviations (*SD*) were calculated and compared for pre- and post-intervention data sets. Paired sample t-tests were conducted to compare pre-intervention and post-intervention ratings on each of the items on both the Sources of Stress and Ability to Cope scales. Results are summarized in Table 7.

**Table 7**

*Summary of Means, Standard Deviations, and Paired Sample t-test Statistical Analysis on Items from Sources of Stress and Ability to Cope Subscales*

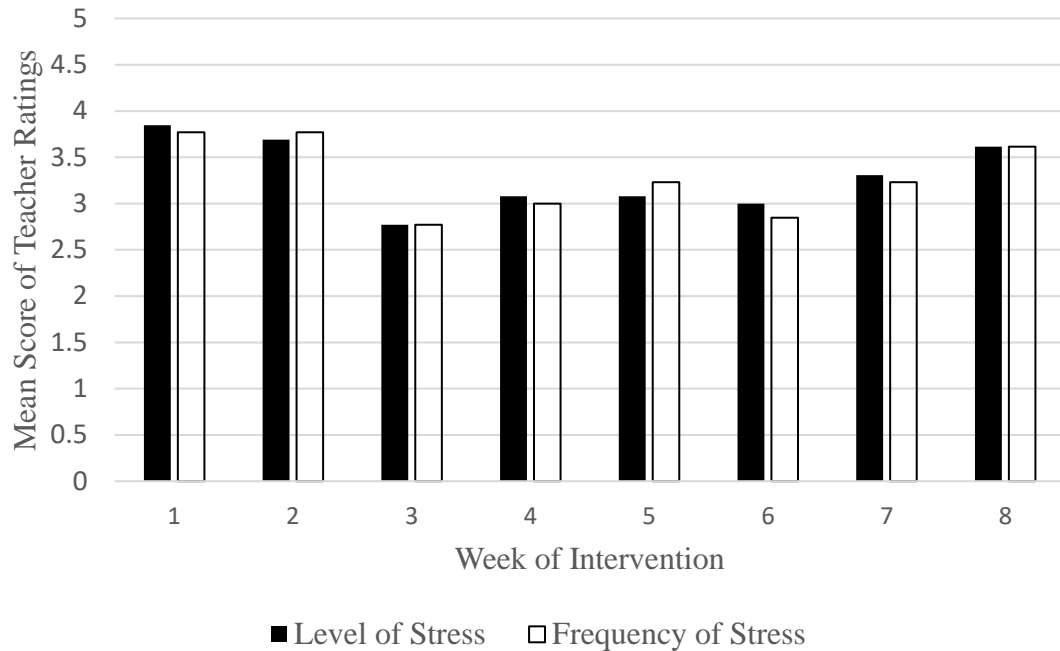
Measures	Pre-Intervention	Post-Intervention	t-test P-value
	Mean (SD)	Mean (SD)	
<b>Sources of Stress</b>			
Workload in Teaching	3.05 (0.71)	2.78 (0.63)	0.1716
Paperwork	2.95 (0.85)	2.84 (0.69)	0.4944
Time Management	2.89 (0.74)	2.47 (0.77)	0.0073**
Dealing with Parents	2.63 (0.90)	2.32 (0.94)	0.1628
Student Behavior	2.63 (0.76)	2.63 (0.76)	1.0
<b>Ability to Cope</b>			
Workload in Teaching	2.53 (0.84)	3.42 (0.84)	0.0015**
Time Management	2.95 (1.13)	3.00 (0.88)	0.8158
Paperwork	3.11 (1.10)	3.21 (0.85)	0.6499
Dealing with Parents	3.16 (1.12)	3.74 (0.87)	0.0232*
Student Behavior	3.26 (0.65)	3.37 (0.68)	0.5778

*Note:* statistical significance \*  $p < .05$ , \*\*  $p < .01$

As noted in Table 7, decreases in stress severity ratings were found on each of the five items from pre-intervention to post-intervention. A significant difference was found between time management ratings at pre-intervention ( $M = 2.89$ ,  $SD = 0.74$ ) and post-intervention ( $M = 2.47$ ,  $SD = 0.77$ ),  $t(18) = 3.02$ . No other statistically significant differences were found. Increases in confidence scores were found on each of the five items on the Ability to Cope subscale from pre-intervention to post-intervention. Paired sample t-tests indicated a significant difference in the scores between perceived ability to cope with workload in teaching at pre-intervention ( $M = 2.53$ ,  $SD = 0.84$ ) and post-intervention ( $M = 3.42$ ,  $SD = 0.84$ ),  $t(19) = 3.72$ ,  $p = 0.0015$ . In addition, a significant

difference was found between perceived ability to cope with parent interactions at pre-intervention ( $M = 3.16, SD = 1.12$ ) and post-intervention ( $M = 3.74, SD = 0.87$ ),  $t(19) = 2.48, p = 0.0232$ . There were no other statistically significant differences.

***Weekly ratings of stress.*** Over the eight-week intervention period, participants were asked to complete a weekly rating of their overall stress level ( $1 = \text{very low}, 5 = \text{very high}$ ) as well as frequency of stress ( $1 = \text{never}, 5 = \text{very often}$ ). Results over the eight-week period reveal fluctuating stress levels by participants who completed the reflection form. Figure 3 provides a bar graph that shows the mean weekly rating of overall stress level and frequency of stress experiences. Data is only reported for those participants who completed the weekly rating form for all eight weeks of the intervention. The bar graph shows a slight decrease in overall stress levels and frequency of stress experiences from Week 2 to Week 3 with reports showing increases in both factors by the end of the intervention period. Increases in stress levels and frequency are seen in Weeks 7 and 8, which coincided with the timing of the COVID-19 pandemic in Pennsylvania.



*Figure 3.* Weekly mean ratings of participants' overall stress level and frequency of stress over the eight-week intervention period.

Over the eight-week period, participants were asked to answer an open-ended question on the weekly reflection form to describe their experiences with mindfulness one time weekly. Data over the eight-week period was compiled and coded for comments about stress. Of 144 comments gathered over eight weeks, 104 had positive themes regarding the experience. Specific comments were coded and highlighted the following themes as descriptors of feelings about mindfulness practice: relaxed (14), calm/at ease/peace (13), improved feelings/change over time (11), coping support/less stressed (8), and in the moment (5).

***Post-intervention reflection.*** In the post-intervention survey, 11 out of 19 early childhood teachers reported positive changes in their stress levels over the intervention period. The following comments were captured:

*Over the eight-week period, I have experienced changes in my stress level. Since I now have techniques to use when I get stressed, it makes my stress level less. It was also beneficial using different YouTube videos on meditations that I can use for the different stresses that come up in my life.*

*Overall, I noticed a decrease in feeling stress in my life and my outlook on situations significantly changed. With the impact of the health crisis, there has been an increase in stress levels. However, I'm still using strategies to reframe my thinking and taking time for self-care and reflection.*

Of the remaining eight participants, changes in stress were reported as neutral or without detail. Three participants reported higher levels of stress due to personal circumstances or the impact of COVID-19.

**Job satisfaction and commitment.** Results specific to teacher perceptions of job satisfaction and commitment are detailed below within the reports of statistical analysis and post-intervention survey reflections.

**Statistical analysis.** Paired sample t-tests were conducted to compare early childhood teacher perceptions on the job satisfaction and commitment scales before and after participation in the mindfulness intervention. As presented in Table 6, there is a significant difference in the scores for job satisfaction pre-intervention ( $M = 14.6$ ,  $SD = 2.9$ ) and post-intervention ( $M = 15.7$ ,  $SD = 3.0$ );  $t(18) = 2.8999$ ,  $p < 0.01$ . These results suggest that participation, in brief, regular mindfulness practice affects job satisfaction positively. No significant differences were found between pre-intervention and post-intervention scores on job commitment. As presented in Table 6, the pre- and post-intervention mean scores and standard deviations of the group were similar.

**Post-intervention reflection.** The post-intervention survey asked teachers to comment on whether they experienced changes in how they felt about their role as an early childhood teacher over the intervention period. Responses on this open-ended

survey did not reveal changes specific to job satisfaction or commitment but highlighted a continued love and passion for teaching. Of the 19 teachers, nine shared that the experience with mindfulness practice did influence how they approached their work. The following quotations provide a sampling of these experiences:

*I feel much calmer in my work as an early childhood teacher and find myself using the mindfulness techniques when feelings of stress and/or anxiety arise in different situations.*

*I have noticed that I feel more open and relaxed toward my work as a teacher. This experience has allowed me to come to work with a clear head and a fresh start to the day.*

**Self-care.** The following subsection presents results regarding early childhood educators' engagement in self-care practices both before and after participation in the mindfulness intervention. Results are reported in terms of statistical analysis, weekly reflection, and post-intervention survey results. Statistical analyses were expanded to evaluate the effects of the mindfulness intervention on various types of self-care.

**Statistical analysis.** A paired sample t-test was conducted to compare engagement in self-care practices at pre- and post-intervention. Results show that a significant difference exists between the pre-intervention self-care scores ( $M = 62.8$ ,  $SD = 8.3$ ) and post-intervention self-care scores ( $M = 69.6$ ,  $SD = 8.8$ ),  $t(18) = 2.9639$ . This finding suggests that early childhood educators increased their engagement in self-care due to participation in mindfulness practices. To further investigate the effect of mindfulness practices on self-care behavior, data from the self-care assessment was broken into four subscales: physical, psychological, emotional/spiritual, and professional self-care. Means ( $M$ ) and standard deviations ( $SD$ ) from pre- and post-intervention data were calculated for each of the subscales and are presented in Table 8. Paired sample t-

tests were conducted to compare frequency of engagement in self-care practices at both pre- and post-intervention. These results are also presented in Table 8.

**Table 8**

*Summary of Means, Standard Deviations, and Paired Samples t-Test Statistical Analysis on Types of Self-Care*

	Pre-Intervention M (SD)	Post-Intervention M (SD)	t-test P-value
Physical	12.8 (2.0)	13.7 (2.3)	0.095
Psychological	16.6 (3.2)	18.8 (3.7)	0.022*
Emotional / Spiritual	19.2 (3.5)	21.8 (3.1)	0.006**
Professional	14.3 (2.3)	15.1 (2.0)	0.122

*Note:* statistical significance \*  $p < 0.05$ , \*\* $p < 0.01$

As a group, early childhood educators reported increased engagement in self-care practices post-intervention across each of the four subcategories: physical self-care, psychological self-care, emotional/spiritual self-care, and professional self-care. Results of a paired sample t-test demonstrates a significant difference between the scores in psychological self-care pre-intervention ( $M = 16.6$ ,  $SD = 3.2$ ) and post-intervention ( $M = 18.8$ ,  $SD = 3.74$ );  $t(18) = 2.5$ ,  $p = 0.022$ . In addition, a significant difference was found between the pre-intervention emotional/spiritual self-care scores ( $M = 19.2$ ,  $SD = 3.47$ ) and post-intervention emotional/spiritual self-care scores ( $M = 21.8$ ,  $SD = 3.1$ );  $t(18) = 3.1$ ,  $p = 0.006$ . These findings suggest that participants more frequently engaged in psychological, emotional, and spiritual self-care practices post-intervention than they did prior to the introduction to mindfulness. These outcomes were expected as psychological, emotional, and spiritual self-care items speak to practices often used in

mindfulness, such as journaling, self-reflection, and meditation. However, increases were noted in overall psychological self-care practices that include other activities such as trying new things and reading literature unrelated to work. In areas of physical and professional self-care, differences were found in mean scores between pre- and post-intervention reports. Yet, these did not rise to the level of statistical significance. The increase in physical self-care did approach statistical significance but did not meet the  $p < .05$  threshold set.

***Weekly and post-intervention reflection results.*** In review of responses from weekly reflections, three comments emerged from open-ended responses that highlighted awareness of self-care and integration of other self-care activities into daily routines.

*I enjoyed the experience more this week. I took time to journal this week as I did my meditation and wrote positive thoughts. Journaling helped me to work through stress and remind myself of the positives of the week. Breathing helped me as well to focus less on my to-do list.*

*I believe that this practice goes along with exercise for me. If I make time to exercise, I give myself the extra 5 minutes of mindfulness and feel really good after.*

*I plan to continue taking care of myself through diet and exercise like I started to do this past week.*

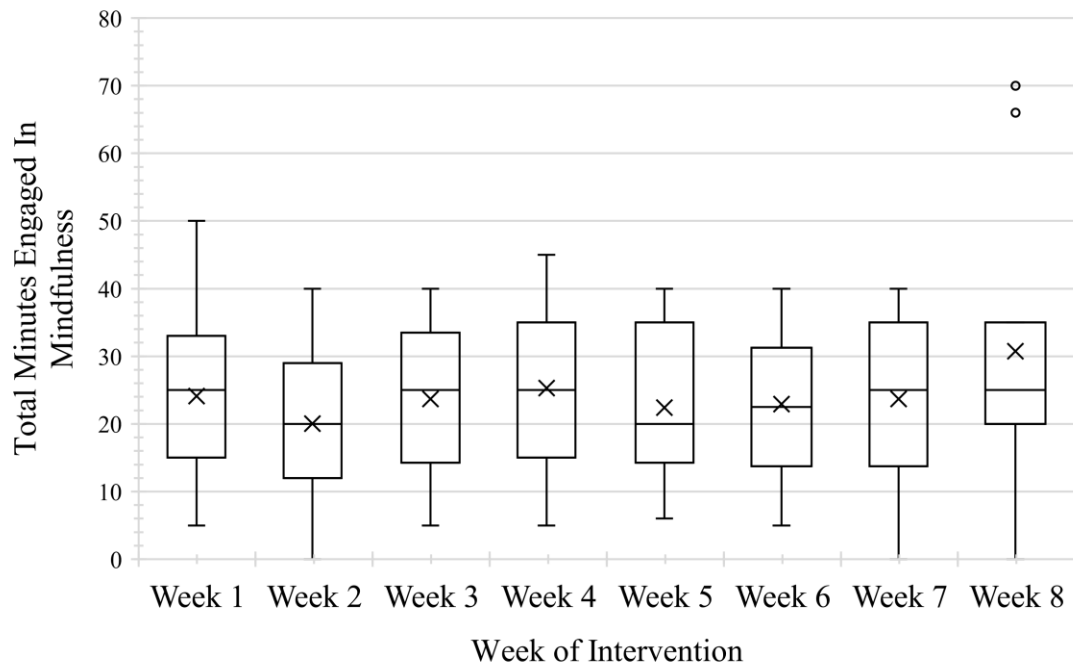
Final comments on the post-intervention survey spoke to the experience of practicing mindfulness as enhancing awareness and attention to self-care. For example, comments from two participants stated:

*I thought this experience was a good reminder of self-care. It reminded me to make time for reflection and living in the moment.*

*This experience was eye-opening and proved just how much we need to slow down to take care of our mind and body.*



**Fidelity of intervention.** To assess fidelity of implementation, participants were asked to complete a weekly reflection form to report the number of times and total minutes they engaged in mindfulness practice during the week. In the introductory session, teachers were asked to engage in a brief daily practice at least once per day for a minimum of five days. Participants were asked to spend 5-10 minutes per day in mindfulness practice. Results indicate that 47% to 63% of participants who completed the weekly reflection form engaged in five or more mindfulness sessions on a weekly basis over the eight-week intervention period. In review of collected data, engagement in mindfulness practices varied significantly in range from 0 minutes to 70 minutes per week over the intervention period. As a group, the average number of minutes spent weekly in mindfulness practices ranged from 20.1 minutes to 30.7 minutes over the eight-week period. The distribution of data is displayed in the box plot below. The whiskers on the graph show the range of minutes reported by participants. Means are represented by the X and medians by lines drawn within the box, which provides a visual description of the data distribution.



*Figure 4.* Box Plot Comparison of Time Engaged in Mindfulness Practice over the Eight-Week Intervention Period. (Legend: X = mean, ° = outlier, - = median)

Goal setting and action planning were incorporated into the intervention as a method to support consistency in practice. Data was collected through weekly surveys to determine whether participants met their weekly goals and engaged in reflection and action planning. Overall, the group fluctuated in their success in achieving their personal goals for mindfulness practice over the eight-week period. The percentage of success ranged from 21% per week to 72% per week. Of the participants who responded to the weekly reflection form, all provided a reflection and comment related to their plan for the following week.

Over the eight-week period, there were missing data points on weeks 3, 5, 7 and 8. In total, one participant missed four weeks and four participants missed one week. It

is not clear if missing data was related to lack of engagement in mindfulness or oversight in completing the form.

**Correlational analysis: Time in practice and teacher perceptions.** Because of variability and inconsistency of practice between participants, a correlational analysis was conducted to explore potential relationships between time spent in mindfulness practice across the six measures utilized in this study. To calculate the correlations, differences between pre-intervention and post-intervention data were calculated for each of the 19 participants across the six scales utilized in the study. Using Microsoft Excel, correlations were calculated for total time spent in mindfulness practice across the calculated differences in pre- and post-intervention scores on scales of sources of stress, ability to cope, perceived stressors, job satisfaction, job commitment, and self-care. The results of these correlations are reported in Table 9.

**Table 9**

*Summary of Correlations between Total Time Engaged in Mindfulness Practice and Teacher Perceptions of Stress, Job Satisfaction, and Self-Care*

Measures	Correlation Coefficient
Sources of Stress	-0.61**
Ability to Cope	0.68**
Perceived Stress	-0.47*
Job Satisfaction	0.34
Job Commitment	0.19
Self-Care	0.55*

*Note:* statistical significance (\* $p < .05$ , \*\* $p < .01$ )

The results indicate a statistically significant, moderate positive correlation between ability to cope with stressors and total time engaged in mindfulness,  $r(17) = .68$ ,  $p < .01$ . This relationship indicates that as time spent practicing mindfulness increases, one's confidence in their ability to cope also increases. In addition, a positive moderate correlation exists between time spent in mindfulness practice and overall self-care practices,  $r(17) = .55$ ,  $p < 0.05$ . This relationship is expected as the self-care measure incorporates frequency of various self-care practices utilized in mindfulness.

A statistically significant moderate negative correlation was found between sources of stress and time engaged in mindfulness,  $r(17) = -0.61$ ,  $p < 0.01$ . This relationship suggests that as time spent in mindfulness practice increases, perceptions of the severity of work stress decreases. Further results show a moderate negative correlation of statistical significance between time engaged in mindfulness and perceived stress,  $r(17) = -0.47$ ,  $p < 0.05$ . This relationship indicates that as time spent in

mindfulness increases, overall stress levels decrease. There were no significant correlations between time engaged in mindfulness and job satisfaction or commitment.

**Summary of results.** In summary, results indicate that there were challenges with fidelity of intervention implementation as only 47-63% engaged in mindfulness practices at least five times per week. Further, variability was found within the group in terms of personal goal attainment as weekly percentages of those reporting they had met their own goals for practice ranged from 21-72% over the eight-week intervention. Despite these challenges with fidelity, significant differences across pre-intervention and post-intervention ratings were found in areas of job satisfaction in self-care. In self-care, participants engaged more often in psychological and emotional/spiritual self-care as a result of their experience, which is notable, despite the challenges with fidelity of daily practice. While significant differences in overall stress ratings (e.g., severity of work stressors, perceived stress) were not found on full-scale items, significant differences were found in their ability to cope with the workload of teaching and overall perception of time management as a high source of stress. More specifically, teachers felt more equipped to handle their teaching workload and reported time management as a less severe source of stress than during the pre-intervention phase. Teachers also felt more confident in their ability to work with parents. Qualitative data reports from weekly reflection forms and post-intervention surveys also highlighted mindfulness practice as a means of being aware of stress and coping with or lowering stress. Finally, a correlational analysis found statistically significant, moderate relationships between time engaged in mindfulness and differences in reported levels of stress at pre- and post-

intervention. As time engaged increases, levels of reported stress decrease in severity and frequency, while ones' perceived ability to cope increases.

### **Research Question 3**

To answer Question 3, "What do BCIU early childhood teachers who participate in the eight-week intervention perceive as benefits and challenges to regularly engaging in mindfulness?", a thematic analysis of qualitative data was conducted to identify benefits and challenges to regularly engaging in mindfulness. This process involved a five-phase cycle, which included compiling, disassembling, reassembling, interpreting and making conclusions.

Results were obtained from the review and coding of weekly reflection forms and post-intervention survey data. Surveys were completed by all participants to gather qualitative data specific to their personal experiences with mindfulness and its potential effects on their perceptions of stress and work. Open-ended questions were asked to investigate the potential benefits or challenges associated with the intervention. Weekly reflection forms were completed through Google Forms. Survey data in response to each question was compiled into one workbook to begin the data analysis process. In the first phase of analysis, the researcher read through all survey responses and recorded notes from each weekly report to determine overarching themes. For each question, data was disassembled and coded respective of the identified themes related to perceptions of stress, job satisfaction and commitment, self-care, challenges in practice, and benefits. The same process was used in analysis of data from the post-intervention survey.

**Benefits of mindfulness.** Participants in the post-intervention survey were asked to answer an open-ended question to describe their experiences with mindfulness over the

eight-week period. A sampling of benefits reported included the following themes: calm and relaxation, self-awareness, and feelings of gratitude and peace. The same question was asked on the weekly reflection form and found similar outcomes regarding the benefits identified. On the weekly reflection forms, of 144 comments gathered over eight weeks, 104 had positive undertones regarding the experience. Most comments were general (e.g., I felt good about the experience; It was good to sit and watch the world go by). More specific comments were categorized and highlighted the following themes: relaxed (14), calm/at ease/peace (13), improved feelings/change over time (11), coping support/less stressed (8), and in the moment (5). A sampling of comments highlighting benefits of mindfulness include:

*This week, I actually practiced mindfulness right before bed. I have trouble falling asleep at night at times and deep breathing has been helping to put my mind at ease and fall asleep.*

*I made it part of my morning routine and I feel it helped me calm before a potentially tough day.*

*I feel that this experience is helping me grow and has helped me to find different ways to practice mindfulness that works for me. I had a really rough week with a family member being in the hospital. I have been upset and really needed time for myself to practice mindfulness. This past week, I used a lot of mindfulness practice for stress. I still feel that the YouTube videos on mindfulness work best and help me with my meditation. I like hearing sounds and voices when I practice mindfulness.*

*I learned how to bring myself back to my breath when feeling stressed.*

*Mindfulness practice has reminded me to be in the moment, thinking of gratitude and calm when needed.*

*I felt really good and more at peace. I had two very stressful days and did meditation longer, which helped with getting back on track and not letting things bother me.*

On the post-intervention survey, 11 out of 19 teachers reported positive changes in their stress levels over the period of the intervention. Of the remaining eight participants, changes in stress were reported as neutral or without detail. Three participants reported higher levels of stress due to personal circumstances or the impact of COVID-19.

In addition to comments about stress, teachers describe mindfulness as an enjoyable experience, which yielded positive feelings and provided them coping strategies. For example, participants stated:

*When I was able to do them, I always enjoyed them. It gave me a sense of gratitude and peace. It allowed me to think of my day in many different ways and gave me strategies to keep myself calm in different situations. Even when I was stressed and lost control of my emotions, knowing what my triggers are and how to sense when they are happening gave me time to think about ways that I can handle them.*

*My experience participating in the mindfulness intervention was very rewarding. This experience has helped me to be more calm and relaxed throughout the day. It has allowed me to take time for myself and be able to stop and take deep breaths when needed.*

In summary, the benefits of mindfulness practice, as reported by participants, include increased feelings of calm, peace, and relaxation, decreased stress, and improved feelings or awareness about one's self over time. Of the participants, 14 early childhood educators reported they would continue mindfulness practice following the study. The other 5 participants were not sure if they would continue and responded, "maybe."

**Challenges and barriers.** On the weekly reflection form and post-intervention survey, participants were asked to answer open-ended questions to describe any challenges experienced throughout the intervention. A sampling of challenges reported



included the following themes: (a) time and scheduling, (b) forgetfulness, and (c) challenges with beginning practice. In addition, other notable challenges were reported.

***Time and schedules.*** In Week 1 of the intervention, time and schedules emerged as the most common barrier to mindfulness practice as it was reported to be challenging by 11 of 19 participants. This challenge continued to be reported over the eight-week period, especially as participants engaged in social events with friends, spent time with family, and/or had changes in schedules. Several participants commented on challenges on weekends when routines were less structured. While an initial challenge for many participants, data over time found decreasing trends in this report's frequency on weekly reflection forms. In total, 56 comments over the intervention period were associated with time and schedules. Eleven respondents also cited time as a challenge or barrier on the post-intervention survey.

***Forgetfulness.*** Forgetfulness presented initially as a barrier to practice by five participants during the first week. This was less frequently reported over time but was still cited as a barrier by at least one participant each week. A total of 15 comments mentioned forgetfulness as a challenge. Three respondents also reported "just forgetting" as a challenge on the post-intervention survey.

***Challenges with beginning practice.*** Throughout the intervention phase, challenges with beginning practice also emerged as a theme across the eight-week period. Comments from participants included concerns about focus, distractibility, and one's mind wandering in practice. Additionally, some participants were initially challenged in finding mindfulness practices that best served them and their intention. This theme was present in 23 comments over the course of the intervention. This feeling was echoed by

three respondents in the post-intervention survey. Also, four participants reflected on the importance of letting go of personal expectations and emotions in beginning practice.

***Other challenges.*** In addition to the top three themes reported above, additional comments highlighted job demands, responsibilities for others, feelings of stress and anxiety, and uncontrollable life events as barriers to practice. Examples cited in these areas include illness or medical needs, work responsibilities/staying late, interruptions by others, and feelings of stress related to news/social media. In Week 8, the COVID-19 pandemic and stress associated were cited by 12 participants.

In summary, challenges presented most frequently included time and schedules, remembering to practice or instilling new habits, and learning the practice of mindfulness as a beginner. While goal setting and action-planning techniques were utilized to enhance fidelity in practice, these methods did not fully address all challenges.

### **Summary of Results**

In summary, several relationships exist between teacher characteristics and perceptions of stress, job satisfaction and commitment, and self-care practices. Significant moderate correlations were found between stress factors, ability to cope, and job commitment. Mindfulness practices were found to have significant effects on ratings of job satisfaction and self-care. Further analysis of stress scales and qualitative reports highlighted benefits of mindfulness in personal experiences, supporting coping strategies, and bringing calm. Correlational analyses also suggest that more time in practice is associated with changes in perceptions of stress. Fidelity of the intervention was a concern in this study as it varied amongst participants and week to week. Thus, this factor should be considered within interpretation of results. Challenges associated with

the practice include time and schedules, forgetfulness, and learning a new practice. Life events and circumstances were also presented as challenges to practice. Further discussion of conclusions will be presented in Chapter V.

## CHAPTER V

### Conclusions and Recommendations

Chapter V discusses the conclusions of the study as related to each of the three identified research questions. First, the chapter reviews the existing relationships between teacher characteristics and their perceptions of stress, job satisfaction and commitment, and engagement in self-care practices. Second, this section examines the effectiveness of brief, consistent mindfulness practice on early childhood teachers' perceptions of stress, general job satisfaction and self-care behavior. Benefits of mindfulness are discussed. Finally, challenges or barriers related to fidelity and ongoing mindfulness practice are explored. Following discussion of the conclusions, limitations are outlined and recommendations for future research and practice are made. Recommendations include those for future implementation of mindfulness in self-care, wellness, and professional development initiatives in context of the findings and fiscal implications.

#### Research Question 1

The first research question asked, "What relationships exist between BCIU early childhood teachers' perceptions of stress, job satisfaction / commitment, and engagement in self-care?" The methodology and data analysis were designed to identify existing relationships between early childhood teachers' perceptions of stress, job satisfaction and commitment, and self-care practices as they related to teacher characteristics as well each other. The results reported analyzed pre-intervention survey data to determine differences in confidence in handling teaching stressors, perceived stress, job satisfaction and commitment, and self-care across characteristics such as program affiliation, teacher

level of education, and years of teaching experience. In addition, relationships between the variables were explored through correlational analyses.

**Teacher characteristics.** The following subsection discusses findings from the study that explore existing relationships between teacher characteristics as they related to each of the variables studied. Teacher perceptions of stress, job satisfaction and commitment, and engagement in self-care are discussed below in respect to early childhood educators' program affiliation, teacher levels of education, and years of teaching experience.

**Program affiliation.** As a group, Pre-K Counts, Head Start, and Child Care teachers, categorized as early childhood (EC) teachers, reported higher levels of stress on the Perceived Stress Scale than did teachers in the Early Intervention program, who were categorized as early childhood special education (ECSE) teachers. While on average, both groups reported moderate stress levels on this scale, within the sample, teachers working in regular education programs were more likely to experience feelings of stress and appraise their life situations as unpredictable, uncontrollable, or overwhelming than those working primarily in special education settings (Cohen et al., 1983). While the perceived stress measure indicated differences in stress levels between EC and ECSE teachers, few to no differences were reported between program groups in the perceived severity of work stressors or educators' ability to cope with those sources of stress. In addition, on average, teachers from both early childhood and special education programs reported similar levels of job satisfaction and job commitment, which were relatively high on both scales indicating overall positive feelings toward their work as an early childhood educator and within the BCIU Early Childhood programs.

In reflection of these findings, it was presumed that teachers working in special education settings would experience higher levels of stress than teachers working in regular early childhood programs due to the complexity of student needs, prevalence of challenging student behavior, and legal requirements within the field of special education. However, in contrast, early childhood educators experienced slightly higher levels of stress than their special education colleagues. This difference may be attributed to variations across groups in years of experience, teacher confidence, or education in meeting the needs of students in at-risk settings. Further, differences in program structures, student admission processes, and class sizes may be factors that influence feelings of perceived stress. For instance, while the identified early childhood programs are considered "regular education programs" for preschoolers, it is important to recognize the Pre-K Counts and Head Start programs are specifically designed to serve students considered at-risk due to factors such as, but not limited to poverty, homelessness, and/or foster care placement (Pennsylvania Key, 2018; Pennsylvania Department of Human Services, 2019). Thus, as children begin in these "regular education programs," early childhood teachers may be the first to recognize individual student challenges and work through plans independently to address complex student needs. To enter special education programs, students are evaluated by a team of professionals and individualized education programs are developed prior to the start of services (Pennsylvania Office of Child Development and Early Learning, 2019). Due to this requirement, special education teachers are provided a comprehensive evaluation and plan for meeting student needs within more specialized programs and settings. In review of these differences, it is recommended that programs systematically review the supports in place for teachers in

regular education programs to proactively address complex student needs upon enrollment as well as support for working with families with complex social needs.

As job responsibilities are different across program, one would expect varying severity ratings on sources of work stress. However, ratings across the two program groups, regular and special education, were similar on the Sources of Stress subscale on the Confidence in Handling Teaching Stressors Scale. Thus, the slight differences in perceived stress across programs may not be directly related to the work or job responsibilities within the classroom context. For example, differences in perceived stress between the EC and ECSE programs may be related to differences in program or organizational structures. The literature has suggested that variables such as work schedules, compensation, and benefits may lead to an imbalance in effort and reward, which alter teachers' feelings toward work and negatively impact psychological well-being (Vagg & Spielberger, 1998; Jeon et al., 2016; Boyd, 2013). Within the BCIU organization, teachers in the regular early childhood education programs (i.e. Child Care, Head Start, and Pre-K Counts) are compensated at a lower salary and with less comprehensive benefits than those teachers in the Early Intervention program. As a result of these differences, EC teachers may experience their own challenges with financial security and personal needs, which is one factor that may influence feelings of stress or attitudes toward work (Jeon et al., 2016).

Interestingly, teachers working in EC programs rate the severity of stress on specific work elements similarly to teachers within the ECSE program, thus the difference of compensation may be a factor in the differences in perceived stress between groups (Boyd, 2013). In interpretation of this finding, it is possible that differences in

perceived stress between EC and ECSE teachers may exist due to factors such as compensation or benefits as the demands may not be adequately balanced for the effort or reward (Vagg & Spielberger, 1998; Boyd, 2013). Additionally, these differences may result in additional stressors outside of work that contribute to overall feelings of perceived stress.

Finally, educators working within the EC programs reported higher levels of engagement in self-care practices than did ECSE teachers. This outcome was of interest as it was opposite of what was anticipated as the groups with higher reported stress levels also reported increased participation in self-care practices. This finding is further explored in later discussion of correlational analyses between variables.

*Teacher levels of education.* In terms of teacher education level, exploratory findings suggest the presence of relationships between variables, but have limitations in interpretation due to the sample size of associate degree level teachers ( $n = 2$ ) as compared to bachelor's ( $n = 7$ ), and graduate ( $n = 10$ ) level degreed teachers. Within the sample, teachers with associate degrees reported higher levels of perceived stress than teachers with more advanced levels of education. Of the group, teachers with graduate degrees reported the lowest levels of perceived stress. As was noted in findings across programs, these three subgroups similarly rated severity of stress specific to work responsibilities. The two teachers with associate degrees were least confident in their ability to handle work stressors when compared to teachers with bachelor's or graduate degrees, who reported similar levels of confidence. These findings suggest that teachers with lower levels of education may experience higher levels of stress due to factors such as skill and/or confidence. In review of data from the sample, stress differences between



groups with varying levels of education may be related more to one's feelings of control, ability to cope, and confidence in handling stressors than the actual sources of stress in their work lives. This relationship is consistent with the findings indicating moderate, negative correlations between perceived stress and ability to cope with stress.

Interestingly, the teachers with associate degrees reported the lowest levels of job commitment, but the highest in job satisfaction. In comparison, teachers with bachelor's degrees reported the highest levels of job commitment but scored the lowest in job satisfaction. The job commitment scale included items to assess teachers' overall devotion to the field as well as their commitment to their current position and organization. In contrast, the job satisfaction scale included items to assess feelings towards teaching as a profession as they relate to initial perceptions of teaching and feelings of fulfillment or importance. These scales were separated into two variables for review as they could yield varying results for teacher attrition and turnover. Those satisfied with teaching, but not committed to the organizational structure may stay in the field of early childhood education but leave an organization for new teaching opportunities. Teachers with low commitment and low satisfaction may leave the field entirely as they experience an imbalance in effort and reward (Grant et al., 2019). Although these relationships were noted, scores across groups found relatively high levels of job satisfaction and commitment to the BCIU as well as the field of early childhood education. While within the sample these inverse relationships existed between the subgroups, the correlational analysis did not find a strong or statistically significant relationship between job satisfaction and job commitment. This finding suggests that variation may occur between how one perceives their role as a teacher and

their feelings toward their specific assignment or place of work, which is consistent in research conducted specific to teacher turnover and attrition (Grant et al., 2019).

Further, correlational results suggest perceptions of stress may be attributed to the employer or organizational structure rather than the field of early childhood education or teaching experience. In terms of self-care, teachers with lower levels of education more frequently engaged in a variety of self-care activities than did teachers with higher levels of education. In further interpretation, this finding also suggests that teachers who experience higher levels of stress, may more regularly engage in self-care than those with lower stress levels. As mentioned in the prior section, self-care will be further discussed below.

*Years of experience.* Relationships were also explored across variables specific to years of teaching experience. In this study, teachers with 20 or more years' experience rated higher levels of perceived stress and severity of stress related to specific to work responsibilities than did teachers with fewer years of teaching experience. Despite being the most practiced as teachers, this subgroup was the least confident in their ability to handle sources of work stress. This finding was of concern as one would expect teachers with the most years of experience to feel more confident in their ability to succeed in their work. However, this relationship may be an early warning indicator of teacher burnout or emotional exhaustion (Maslach et al., 1996). For instance, as these teachers have worked over the years, ongoing challenges and feelings of stress may be further exacerbated by feelings of ineffectiveness or fatigue (Gugliemi & Tatrow, 1998; Kyriacou, 2001; Vandenberghe & Huberman, 1999). Teachers with less than 5 years' experience displayed a similar pattern related to stress and confidence ratings (e.g. higher

perceived stress and lower confidence). While stress perceptions were similar for these groups, the opposite results were found in job satisfaction. Teachers with the most experience rated the lowest levels of job satisfaction, while teachers with the least experience rated the highest job satisfaction. In this context, perceived stress ratings do not appear to be directly linked with job satisfaction as the teachers with the highest levels of stress rated as most and least satisfied among the four subgroups. Yet, it is important to recognize that overall, the groups ratings were relatively high for job satisfaction and differences were minimal. Differences in job satisfaction between groups specific to years of experience may be attributed to the changes in the field over the years in terms of expectations, resources, and quality controls (Gagnon et al., 2019; Hall-Kenyon et al., 2014). In job commitment, teachers with less than 5 years of experience rated the lowest of the four subgroups (5-12 years, 13-19 years, and 20 or more years). This finding was not surprising as these teachers were relatively new to the field and may or may not have found the right fit in position. In self-care, the teachers with the most experience reported higher levels of engagement and teachers with the least experience the lowest levels of engagement.

**Relationships between variables.** The following subsection discusses findings from the study that explore existing relationships between perceptions of stress and the following factors: (a) self-care, (b) ability to cope, and (c) job satisfaction /commitment.

*Self-care practices and perceived stress.* Of special note, across exploration of relationships between program affiliation, teacher education level, and years of teaching experience, potential relationships emerged between participants' engagement in self-care and their perceptions of stress. Interestingly, initial findings suggested that groups with

higher levels of stress engaged more frequently in a variety of self-care practices. For instance, in the comparison between EC and ECSE teachers, EC teachers reported both higher levels of perceived stress and engagement in self-care than ECSE teachers. In analysis of education levels, teachers with associate degrees reported the highest levels of stress and engagement in self-care when compared to other subgroups. In contrast, graduate level teachers reported the lowest levels of stress and lowest levels of engagement in self-care. Finally, in review of years of experience, the most experienced teachers reported the highest levels of stress and engagement in self-care. However, within this analysis, the group with the least stress (e.g, 5-12 years), reported similar levels of self-care practices as the most experienced teachers. Further, teachers with less than 5 years' experience reported the lowest levels of self-care but were second highest in their reported levels of perceived stress. While this exploratory analysis suggested potential relationships between self-care and stress experiences, the patterns were not consistent when analyzed across different groupings. Further, correlational analysis does not indicate a significant relationship, positive or negative, between the perceived stress and self-care factors. Thus, self-care practices may be utilized in dual contexts, as a means of prevention, but also intervention to cope with feelings of stress when they emerge (Butler et al., 2019).

***Stress and ability to cope.*** In further exploration of themes emerging from the exploratory analysis related to stress and ability to cope, a correlational analysis was conducted to determine if significant relationships existed between sources of stress, perceived stress, and confidence in one's ability to handle stress. Results indicated statistically significant, negative correlations between one's ability to cope with stress and

both perceived stress and severity of stress related to work sources. This relationship was observed in the review of subgroup comparisons specific to level of education and years of experiences. For example, in terms of years of experience, teachers with associate degrees reported the highest levels on the perceived stress scale, thus suggesting they were more likely to view their situations as uncontrollable, unpredictable, and overwhelming than those with higher levels of education. These teachers also rated themselves as least confident in their ability to cope with work-related stressors. A similar pattern was found in the analysis of data from subgroups related to years of experience. More specifically, teachers with the most experience (e.g. 20 or more years), reported the highest levels of perceived stress and lowest levels of confidence in their ability to cope with work stress. In short, these findings suggest that as stress levels increase, one's confidence or ability to cope with sources of stress decreases or vice versa. This is an important finding because interventions that support one's ability to cope or overall confidence could likely serve to mediate feelings of stress. The effects of mindfulness on this relationship will be further discussed under research question 2.

*Stress and job satisfaction / commitment.* Exploratory findings from analysis of teacher education levels and years of experience suggested potential relationships between stress, job satisfaction, and job commitment. Correlational analyses found a significant negative relationship between job commitment and both perceived stress and severity of work stressors. Specifically, as stress levels increased, job commitment decreased. This relationship was present in data from the two teachers with associate degrees as this group reported the highest levels of perceived stress groups and lowest level of job commitment. Interestingly, they also had the highest rating in job satisfaction

of the three subgroups. In the analysis of years of experience, teachers with the most experience reported the highest levels of stress and lowest levels of job satisfaction, while teachers with the least experience reported higher stress and higher job satisfaction than the 5-12 and 13-19 years' experience subgroups. However, correlational analyses did not demonstrate significant relationships between job satisfaction and stress. Further, there was no existing relationship between job satisfaction and commitment. As a result, while one may find teaching a satisfying occupation, one's perceptions of stress and/or feelings toward their organization or school could impact their longevity in a specific position (Grant et al., 2019). While a statistically significant correlation was not found between ability to cope with stress and job commitment, supporting one's confidence in coping could be a potential mediator. Similarly, as highlighted in previous work, various personal, interpersonal, and organizational variables influence teachers' perceptions of stress, job satisfaction, and commitment (Prilleltensky et al., 2016). Future research into the interaction of these multiple factors could be beneficial for decreasing attrition in the field of early childhood education.

**Summary.** In summary, the pre-intervention survey data highlighted several potential relationships or influencing factors in teacher's perception of stress, job satisfaction and commitment, and self-care practices. In this exploration, differences were noted between groups with shared teacher characteristics such as program affiliation, levels of education, and years of experience. Limitations were noted in this research as the scales developed provided a baseline, but not all tools allowed for reference to a general population or early childhood educators. Thus, it is only representative of the participants in this study and not generalizable to others. The

relationships highlighted are reflective of findings in educational literature surrounding teacher stress and associated factors. Overall, these findings are helpful in understanding dynamics for individuals and across programs within the BCIU that may support identification of needs for targeting interventions or supports.

### **Research Question 2**

The second research question asked, "What effect does the inclusion of brief, mindfulness activities into the daily routine have on BCIU early childhood teachers' (a) perceptions of stress, (b) job satisfaction / commitment, and (c) self-care practices?" Thus, the study was designed to investigate potential effects of brief, daily mindfulness practices on variables such as perceptions of stress, job satisfaction and commitment, and self-care practices through both quantitative and qualitative sources. Overall, early childhood teachers expressed benefits of mindfulness practice in each of these areas in both open-ended reflections and survey questions. The following section discusses the findings and conclusions in terms of the following areas: (a) perceptions of stress, (b) job satisfaction and commitment, and (c) self-care practices.

**Teacher perceptions of stress.** Overall, participant engagement in mindfulness practice appears to have had some positive impacts on teacher perceptions of stress as well as one's ability to cope with stress. These benefits are further discussed below in context of the intervention, multiple data sources, and potential impacts of COVID-19 as a confounding variable in this study.

First, in review of pre- and post-intervention ratings and statistical analyses, there were no significant differences on full scale ratings in perceived stress, sources of stress, and ability to cope with stressors. However, qualitative analyses indicated positive

benefits of mindfulness for this group of educators throughout the course of the intervention as reported in weekly reflections and a post-intervention survey. The thematic analysis of open-ended responses highlighted several benefits of mindfulness practice on teacher stress levels throughout the eight-week period and at post-intervention. Specifically, teacher comments identified feelings such as relaxation, calm, peace, and "at ease" associated with brief practices of mindfulness. In addition, remarks emphasized improved feelings and experiences over time as well as use of mindfulness practices as a coping mechanism to reduce stress in the moment. These benefits were noted in review of average weekly ratings of stress level and frequency through the first few weeks of intervention. Data indicated decreases in both stress frequency and levels following two weeks of practice that remained fairly level through in the middle of the intervention period. Increases were then noted in the final weeks as the Commonwealth of Pennsylvania became impacted by the emergency health pandemic, COVID-19. Further discussion of these implications is provided below in review of the Perceived Stress Scale scores, weekly reflections, and post-intervention surveys.

Scores on the Perceived Stress Scale remained relatively stable over the course of the intervention period, which was not the anticipated outcome of the researcher at the onset of this study. The Perceived Stress Scale is a generalized measure which provides insight into the degree in which one appraises life situations as stressful. Items on this scale ask about feelings and thoughts and are designed to assess how unpredictable, uncontrollable, or overwhelming respondents' find their experiences (Cohen et al., 1983). Results from this study did not reveal differences in ratings on this scale at pre- and post-intervention assessments. Thus, this finding would not initially support the conclusion



that mindfulness practices could assist in decreasing teacher stress. However, a review of weekly reflection data indicated that participants experienced a slight decrease in levels and frequency of stress from Week 2 to 3 which continued to Week 6 prior to the onset of the emergency health pandemic in the Berks County community. Qualitative comments from reflections in Week 7 and 8 highlight the beginning of the COVID-19 emergency health pandemic, which could potentially be reflective of the increase in weekly stress measures in Weeks 7 and 8 as well as the teacher ratings of perceived stress during the post-intervention survey period.

In reflection of the timeline, the post-intervention data was collected over the four-week period in which COVID-19 cases began to dramatically increase and all Pennsylvania schools were closed by order of Governor Wolf. This confounding variable makes it challenging to determine the effects of mindfulness intervention as the emergency health pandemic is thought to have had profound impacts on stress, anxiety, and overall well-being for all individuals in impacted areas (Panchal et al., 2020). Interestingly, in review of the findings, teacher perceptions of stress did not dramatically increase despite the various pandemic related factors that could have potentially increased stress levels, specifically perceptions of life being unpredictable, uncontrollable, or overwhelming. During the time of post-intervention data collection, there was uncertainty about teacher compensation and benefits, return to work, and the future of programming in all BCIU early childhood programs. Following the initial two-week closure, teachers were then tasked with creating online platforms, remote instruction plans, and navigating a new world for teaching and learning at the preschool level. Thus, while post-intervention results did not demonstrate a decrease, one could

speculate about the benefits of mindfulness in teacher coping during this time period as stress levels did not dramatically increase. Unfortunately, this investigation was outside of the scope of this study.

Despite this significant limitation, further analysis was conducted to assess any potential differences in work-related stressors and/or one's ability to cope to determine potential effects of mindfulness on such factors. More specifically, an item analysis on the Confidence in Handling Stressors Scale was conducted to determine if any changes were observed in the severity of work stress in areas which were rated as most stressful on the pre-intervention survey. In review of the top five sources of stress and their severity ratings at pre- and post-intervention, results indicate an overall decrease in severity ratings for four out of the five identified stressors. Decreases were noted in severity of stress associated with workload in teaching, paperwork and reporting requirements, time management, and dealing with parents. No changes were noted in perceptions of stress related to student behavior. Statistical analysis of these items indicated significant difference between pre- and post-intervention ratings in stress associated with time management. Engagement in mindfulness practice may have positively influenced teachers' perceptions of stress related to their ability to manage their time and work expectations.

On the Ability to Cope subscale, comparison of pre- and post-intervention ratings found that teachers' ability to cope with work-related stressors increased over the period of the intervention for the following items: (a) workload in teaching, (b) time management, (c) paperwork and reporting requirements, (d) dealing with parents, and (e) student behavior. Statistical analysis found significant differences between pre- and post-

intervention ratings specific to teachers' ability to cope with workload in teaching and dealing with parents. These findings indicate that engagement in mindfulness practice positively influenced teachers' confidence in addressing work challenges that caused severe stress. While these results were not found on a larger scale basis, effects were noted despite challenges that arose with the intervention. Intervention fidelity is further explored below, which provides additional insight into the interpretation of results.

As part of this study, fidelity was assessed to determine whether participants actively engaged in mindfulness practice as was expected in the design. Findings indicate varying degrees of participation on a weekly basis over the course of the intervention. Self-report data indicated that over the eight-week period, daily participation as measured by at least 5 sessions per week varied amongst the group from 47% to 63%. Greater variability may exist as there were inconsistencies in weekly reporting by some participants. The inconsistency of daily practice is another variable that could have impacted results specific to stress as previous research has suggested consistent practice over time is necessary for maximum benefits (Soler et al., 2014). In addition, while consistency of daily practice varied, total time engaged over each session and week to week varied per participant, thus potentially impacting the outcomes or benefits reported for the group as a whole.

Due to the inconsistencies and differences in practice across participants, a correlational analysis of difference in stress ratings at pre- and post-intervention periods and time spent engaging in mindfulness over the eight-weeks was conducted to further assess potential relationships between time spent engaged in mindfulness and impact on stress perceptions. Results indicate significant, negative moderate correlations between

time engaged in mindfulness and differences in both sources of stress and perceived stress levels at pre- and post-conditions. This suggests that as time engaged in mindfulness increases, stress levels decrease in both general perceptions and reports of severity of work-related stressors. A statistically significant, moderate positive correlation was also found between time engaged in mindfulness and differences in one's ability to cope. Specifically, as time engaged in mindfulness practice increased, one's perceived ability to cope with work stressors also increased. Further research is recommended to further investigate these relationships in respect to the dosage and duration of practice needed to yield positive outcomes and benefits as it has implications for success in future implementation efforts. As previous research highlighted more time intensive interventions (von der Embse et al., 2019), engagement in brief, consistent daily practice remains promising as an intervention.

In summary, engagement in mindfulness practices appeared to have positive effects on teachers' perceptions of stress as reported in qualitative data sources and noted on some items within the quantitative analysis. However, two notable limitations to the interpretation of these findings include the overlap of timing in which the emergency health pandemic started in Berks County, Pennsylvania and the fidelity of practice in the intervention. Despite these limitations, engagement in mindfulness practice appears to have yielded positive benefits for participants as noted in differences pre- and post-intervention surveys as well as weekly reports. Further, while fluctuations in stress occurred amongst participants, the group scores remained relatively stable in overarching measures suggesting that despite working through a period of emergency and uncertainty, participants were able to cope with the challenges at least at the onset of the pandemic.

As noted in both teacher comments on the weekly and post-intervention reflections, mindfulness tools did provide methods for coping with stress. Further research is recommended to further explore these effects and necessary dosage and duration of practices to yield positive outcomes in stress reduction or increased ability to cope.

**Job satisfaction and commitment.** Data was also analyzed to determine potential effects of mindfulness practice on teachers' feelings of job satisfaction and commitment. Statistical analysis revealed an increase in the overall groups' ratings of job satisfaction from pre-intervention to post-intervention, suggesting that mindfulness practices may have yielded positive perceptions in respect to feelings toward work as a teacher. Qualitative data indicates that increases in some ratings may be attributed to the influence of mindfulness practices. For instance, a few comments indicate that mindfulness assisted teachers in being present in the moment. Thus, satisfaction could have been influenced by practicing skills such as accepting the moment without judgement or stepping back to be present in the moment. While differences might be attributed to mindfulness practice, several comments made by teachers at post-intervention also highlighted the impact of the emergency health pandemic and school closures on participants' feelings about teaching. Several teachers commented on how the closures enhanced their awareness of their feelings and appreciation of hands-on, in-person interactions with students as the pandemic restricted them from regularly seeing and interacting with their students in the traditional classroom.

Although differences were noted in job satisfaction at the end of the intervention period, there were no significant differences found between pre- and post-intervention ratings of job commitment. However, amongst the group, job commitment was relatively

high at both pre- and post-intervention indicating an overall commitment to the field and BCIU early childhood programs. The mindfulness intervention did not appear to have influenced the variable of job commitment.

In reflection of the methodology, the measures of job satisfaction and commitment were designed to be relatively brief and incorporated as a means of exploring the potential relationship between teacher stress and these two variables, as well as the potential effects of mindfulness on these two constructs. In post-analysis reflection, the measures, while not inappropriate for the exploratory analysis, could have been better designed to provide a more sensitive scale for determining differences. For example, on the job commitment scale, teachers were asked to select agreed upon statements from a list which were scored in a +1 or -1 system based on its positive or negative attribution. These items could have been better measured using a Likert-Scale as was done for the other variable measures. This change might have established a scale with better sensitivity to assess changes over the course of the intervention. Further, this scale mixed items related to the field of early childhood education and organization. Separating out items related to the organization and field may have been more informative in understanding teachers' perceptions of the organization. In addition, the job satisfaction scale only included four items. Thus, as high scores were found at pre-intervention, the low number of items made it challenging to truly assess for positive differences or increases at post-intervention. Revisions to the measures or use of more robust, sensitive measures would be recommended for future research.

**Self-care practices.** In the area of self-care, the results of this study found increased teacher engagement in self-care practices following participation in the

mindfulness intervention. An increase in self-care practices was an expected outcome as several items on the self-care assessment included activities associated with mindfulness practice, thus participation in the intervention would yield changes on this scale. So while fidelity with brief, daily practice fluctuated amongst the group, the groups' engagement in overall psychological, emotional, and spiritual self-care following the intervention increased significantly from the pre-intervention period. In short, the introduction to five basic mindfulness practices led to increases in frequency of actions such as journaling, self-reflection, using self-affirmations, trying new things, meditating, and expressing one's emotions. While not as substantial, increases in frequency of practice were also found in teachers' physical self-care behaviors (e.g. sleep, taking breaks, exercise, and healthy eating). These did not quite approach statistical significance but were noteworthy as qualitative data points suggested that mindfulness practice was paired with exercise, used prior to bedtime, helped with falling asleep, and linked with healthy eating.

**Summary.** In summary, mindfulness practices appear to have had a positive impact on teacher perceptions of stress and engagement in self-care practices. While the quantitative data analysis did not reveal as significant findings as were expected, qualitative reports find that mindfulness brought positive feelings of calm, peace, and relaxation to participants. Further, the intervention provided coping strategies and self-awareness that appeared to contribute to teachers' ability to cope and manage stressful moments. Of significance, teachers reported increased confidence in working with parents and managing their workload, and stress feelings over time management lessened in severity post-intervention. Results also suggested that more time spent in mindfulness practice may yield more positive outcomes as correlational analyses found significant

relationships between time spent in practice with differences pre- and post-intervention in teacher stress perceptions and confidence. Further, the analysis of findings indicated that engagement in mindfulness may have influenced feelings of job satisfaction but did not have the same, or any, effect on job commitment. However, due to limitations of this study as they relate to the researcher-developed tools and the overlapping timing of post-intervention data collection with the emergency health pandemic of COVID-19, further research is recommended to further explore these effects.

### **Research Question 3**

The third research question was designed to understand teachers' perceptions of the benefits and challenges associated with mindfulness practice and to provide recommendations for future implementation of such interventions within the organization. Specifically, the question asked, "What do BCIU early childhood teachers who participate in the eight-week intervention perceive as benefits and challenges to regularly engaging in mindfulness?" The following section discusses these lessons learned and provides recommendations for the future.

**Benefits of mindfulness.** Research on mindfulness-based interventions have suggested benefits of practice in increasing overall well-being and decreasing feelings of stress or burnout (Flook et al, 2013; Jennings et al., 2013). Studies have also highlighted positive impacts on teacher self-efficacy and overall awareness of one's feelings and ability to be in the moment (Jennings et al., 2013; Gold, 2010). As discussed in review of the second research question, participation in mindfulness practice appears to have had a positive effect on perceptions of stress and coping ability. Specifically, findings indicated that at post-intervention, teachers felt less stressed in time management than



reported at pre-intervention. This finding is consistent with that reported by Jennings et al. (2013) in their review of the program, *Cultivating Awareness and Resilience in Education (CARE)*. Findings from this study are promising in supporting the use of the proposed intervention model as differences were noted with a less-intensive professional development and practice model than CARE. The intervention in this study included a one-hour professional development program and commitment to practicing mindfulness daily for 5-10 minutes. Fidelity in this study varied week to week, yet significant differences were found in the groups' overall engagement in self-care practices at pre- and post-intervention. The participants did find benefits of mindfulness, even with varied consistency and time in practice.

Results also found that participants in this study, as a group, felt more confident in their ability to work with parents and manage their workload following participation in the mindfulness intervention. These findings are similar to results in prior studies indicating that mindfulness practice has had positive impacts on self-efficacy and awareness (Jennings et al., 2013; Flook et al., 2013; Gold, 2010). Further findings from this study indicate overall positive feelings from participants toward the intervention and its benefits. For example, on weekly reflections, participants reported positive feelings about their experience, which centered around themes of calm, relaxation, peace, and feeling at ease. In addition, over the course of the eight-week period as well as at post-intervention, comments specifically noted changes in feelings over time, decreases in stress, and an overall feeling of awareness of stress and emotions. Results also found many participants felt the practice of mindfulness was an enjoyable experience, which were like findings by Reiser and McCarthy (2018) in their investigation of SPAM.

Finally, this study found that participants reported increased general satisfaction toward their work as a teacher and increased engagement in self-care practices following participation in the mindfulness intervention. In terms of job satisfaction, ratings may have been influenced by practice in being in the moment and accepting without judgment, thus bringing a renewed appreciation for work as a teacher. However, given comments relative to the impact of the COVID-19 school closures, this finding should be further investigated as the same impact might not have been noted without the time for reflection outside of the school environment. In terms of self-care, while increased self-care behavior was expected, the impact is important as participation in mindfulness did not increase just one type of self-care, but opened experiences in physical, psychological, and emotional/spiritual self-care. While specific health or well-being measures were not utilized, teacher reports highlighted themes such as calm, peace, and relaxation in reflection of their experiences in mindfulness. The incorporation of mindfulness practice in employee wellness programs may promote increased engagement in a variety of activities that support teacher health and well-being.

**Challenges in implementation.** As expected, challenges did arise in terms of fidelity of implementation and beginning practice of mindfulness. Results indicate that the biggest challenges were remembering or finding time to schedule mindfulness practices. Supports in the form of action-planning tools and calendars were provided at the onset of the intervention to support potential challenges; however, this still emerged as a common barrier within the first few weeks. In reflection, additional time or meetings as were incorporated in several models of mindfulness programs may have supported this initial challenge (Jennings et al., 2013; Reiser & McCarthy, 2018); however, the time

challenges may also have dissuaded the participants from volunteering given their high ratings of stress associated with workload and time management. Overall, within a few weeks, many participants were able to resolve scheduling and time issues and use apps or reminders to engage in practice. Those who did not appeared to have had multiple challenges in practice and potentially needed more support and coaching.

As weeks went on, the elements of practice such as finding meditations or practices that were personalized and met one's personal intention were noted as challenges. In the initial session, participants were provided tools that would allow for exploration, but were structured around the five key practices common in the research (e.g. breathing exercises, body scan, focused attention, open monitoring, and loving kindness meditation). The qualitative comments in the weekly reflections highlighted the personal journey of mindfulness for the volunteers. As participants explored practices, they appeared to be able to better identify their intentions and what they wanted or needed from the practice. In turn, this appeared to enhance their experience and positive feelings. A few participants reported neutral or negative feelings toward practice, which suggested challenges finding meaningful practices that supported their intention. Additional time or support in learning beginning practices may be warranted in future implementation to strengthen success of beginners in practice. Also, the intervention may be improved by establishing a method for networking and support. For example, as offered in comments by a few participants on the post-intervention survey, the inclusion of check-ins with peers or use of a social media support group may have enhanced the experience. In addition, a structured schedule might have been helpful for those struggling to find practices on their own from the toolkit provided.

Interestingly, some of the other challenges mentioned were also items in which benefits were found. For instance, a few participants mentioned stress and anxiety, job demands, or life events impacting time as barriers. So, while mindfulness potentially could support these sources of stress, the practice was not one instilled as a habit or found as a priority when personal or professional obligations shifted. While these were not overarching themes across participants, they are key considerations for expansion as the participants in this study were volunteers who were already motivated to participate in mindfulness practice for one reason or another. Yet, they experienced challenges despite this motivation and the supports provided.

### **Limitations of the Study**

Limitations of this study were discussed throughout the narrative above in terms of each research question. In summary, there were several challenges or limitations of the study which should be considered in the generalization and interpretation of findings. First, participants in this study were volunteers from the BCIU early childhood programs, who had personal or professional motivations for participating in the session and study. As a result, the relationships highlighted across variables are not generalizable to the organization as a whole or other early childhood educators without further investigation. In addition, as all participants were volunteers, fidelity in practice and challenges were noted in reflections and post-intervention surveys. If this intervention were to be utilized on a larger scale, one should anticipate similar, if not additional challenges in implementation. Thus, changes to the structure may be warranted to better support beginning practice and/or schedules.

Tools utilized in this study were designed to be exploratory in nature to assess relationships and general effects of the mindfulness practices by comparing pre- and post-intervention. In reflection, the tools utilized for job satisfaction and commitment contained only a few items, which may have limited full assessment of attitudes in these areas. In addition, the variation in scoring for the job commitment scale as it was adapted from other work might have yielded additional sensitivity in measurement had a Likert-Scale been utilized. Items on the job commitment scale could have been further developed to separate out devotion to the field versus commitment to the organization. Given the results of this study and interesting relationships found between these measures, it is recommended that these concepts be more thoroughly addressed in future research with more robust tools. In addition, while tools used in this study were adapted or based on other studies, only the Perceived Stress Scale provided a frame of reference for obtained scores with the general population. Thus, while relationships could be explored and pre- and post-comparisons could be made, the findings did not provide significant insight into how the sample group would compare to the general population or even other early childhood teachers in the field.

Finally, the COVID-19 emergency health pandemic likely impacted results in this study. Yet, it is challenging to know the extent of that impact on the variables and the effects that experience in mindfulness may or may not have had on the post-intervention reports. In reflection, one would have expected the pandemic and its resulting consequences to lead to increased stress. Yet, results for the group were relatively stable. Thus, one might speculate that mindfulness practice had an effect in managing stress levels during a challenging time of stress, anxiety, and uncertainty. In

addition, job satisfaction increased, which several participants commented was related to the closures and missing students and being at school. However, it is unknown as to whether these insights and reflections were related to the experiences with mindfulness practice over the 6-8 weeks prior as mindfulness is a practice of reflection, gratitude, and appreciation.

### **Recommendations for Research and Practice**

**Recommendations for research.** In review of findings, multiple recommendations for future research emerge. First, due to voluntary nature and small sample size of this intervention, results are specific to this population and conclusions are not necessarily generalizable to all early childhood educators, or even those working within the BCIU Early Intervention program. As only 19 participants out of 95 potential educators volunteered, there is still much to be learned relative to the questions asked. In addition, questions emerge specific to why more teachers were not interested in learning about mindfulness and experiencing its potential benefits. For instance, are teachers who did not volunteer less stressed or more satisfied in their work? Or are they more stressed and less engaged, thus not wanting to commit additional time and resources? In terms of the findings in this study, relationships do emerge in terms of stress and self-care practices of teachers from different programs, with differing levels of education, and varying years' experience. These variables likely interact in ways more complex than described in this study, thus further investigation may inform educational leaders of potential patterns related to teacher stress, job satisfaction and commitment, and self-care that could lend itself to improving wellness programs and supports for teachers with varying needs and profiles.

Findings also suggested a significant, positive correlation in differences in perceptions of stress pre and post-intervention with the time spent engaged in mindfulness practice. However, while this finding suggests a meaningful relationship, it does not provide confirmation that as time engaged increases, stress decreases. Similarly, while a significant negative correlation in differences in perceptions of ability exists, this does not verify that confidence increases as time engaged in practice increases. Additional research into this relationship and the necessary duration and dosage of intervention for meaningful benefit would support further development of research and implementation in practice. The intervention studied was designed intentionally to cut back dosage and duration of practice compared to the widely studied programs and some benefits were noted within the small sample. Given the potential positive benefits of a smaller scale intervention for educators, further research is recommended.

As outlined in the limitations, more robust research surrounding job satisfaction and commitment as it relates to stress and mindfulness practice may be helpful for the field. As ratings were weighted on the higher end of score range, it is possible that tools were not sensitive enough or designed appropriately to fully assess changes in teacher attitudes and perceptions in these areas. In addition, challenges with fidelity and consistency of practice were observed. Further research into the inclusion of more structured activities or social support may be of interest to determine if these factors increase fidelity as well as benefits.

In summary, this exploratory study highlighted the potential of brief, daily mindfulness practices in changing teachers' perceptions of stress, their confidence, and work satisfaction. These elements are important for maintaining a healthy, positive-

mindful workforce, thus warrant additional investigation to support educators and children in the field.

**Recommendations for practice.** Based on the findings of this study, it is recommended that the BCIU Early Childhood Programs continue to promote self-care and wellness initiatives such as mindfulness practice as part of teacher professional development programs. The first step in this process is to share the results of this study with the supervisors and program administrators across the Office of Early Childhood and Student Services. As a supervisory team, it is important that administrators across programs recognize how differences in program structure, years of experience, and teacher education level may impact feelings of stress, ability to cope, and job satisfaction and commitment. Further, in terms of self-care, findings suggest that strategies such as mindfulness may be used for prevention as well as intervention for when early childhood educators experience stress. However, in interpretation of stress models with these findings, it is important to recognize that self-care and mindfulness practices will likely be more supportive in situations where basic needs are met, supervisory support is present, and job demands are within reason (Prilleltensky et al., 2016). So, while mindfulness may serve as a tool to support teachers, it should be integrated into a comprehensive program with other components of wellness as well as quality professional development.

Next, these findings can be used to support early childhood educators who appear to be within groups of higher need for support managing stress and increasing coping strategies. Thus, mindfulness education could be incorporated within new employee orientation and induction programs as a component for wellness and self-care for teachers



entering the field. In addition, the introductory session can be provided as an offering for teacher development at the start of the new school year as the programs return to new conditions related to the emergency health pandemic, COVID-19. As the program offering is brief and provides free tools for exploration, it can easily be provided to all employees through in-person or virtual means as a support in the reentry process. Further, incorporating strategies for employees within continuing education programs, within program newsletters, and on a regular basis in staff meetings may yield beneficial effects for all in exploring or increasing practice, especially for those later in their career who may demonstrate symptoms of higher stress and burnout over time.

As time management and challenges of beginning practice have been identified as barriers within the study to daily, consistent practice, the early childhood programs may consider ways in which educational teams can integrate mindfulness into the day, with colleague support, or even with students who may benefit from similar practices. In one BCIU program, a school counselor begins each week with "Mindful Monday" in which the school staff and students practice some basic techniques to start the week off by setting positive intentions and a calm state of mind. This strategy can be infused into other programs to reinforce practice as well as introduce new employees to mindfulness. Further, the potential benefit of colleague support would provide for consistency in practice and accountability. In addition, to develop and grow mindfulness practice, ideas and challenges for exercises can be shared to support those needing ideas for beginning or renewed practice. Additional resources or training of supervisors or mentors may be considered in the future following review of outcome data from the next introductory phase across programs and personnel.

Overall, the introduction of mindfulness practice has had positive effects for those who participated over a short eight-week period and during the time of an emergency health pandemic. While results were not as significant as were anticipated at the outset of the study, the differences noted and stability over time in perceived stress during the pandemic do support continued promotion of such practices within professional development and wellness campaigns. The effects on stress, ability to cope, and job satisfaction as well as overall positive comments on the experience justify further implementation of such strategies promoting 5-10 minutes of mindfulness practice each day. Further monitoring of teacher perceptions through feedback forms, reflections, and employee engagement or wellness surveys is recommended as these practices are promoted on a larger scale.

**Fiscal implications.** While findings in the exploratory analysis were modest, positive impacts were noted in teacher perceptions of stress, ability to cope, job satisfaction, and engagement in self-care practices. These benefits came at a relatively low cost of printed materials and one-hour professional development session for participants. Over an eight-week period, differences were noted in stress level and ability to cope in terms of time management and ability to handle workload. Further, at the end of the eight-week session, job satisfaction increased as reported by participants. Based on these findings and the discussed limitations, it is recommended that this program be offered to others as a strategy for employee engagement and wellness with plans for additional data collection and analysis.

While beyond the scope of this study, engagement in mindfulness practices over time may yield greater effects on employees' perceptions of stress and overall wellness.

Within plans for mindfulness practice, the BCIU administration should consider monitoring metrics of teacher absenteeism, staff attrition in early childhood programs, and medical costs for conditions related to stress as increased ability to cope could result in cost-savings for the organization related to improved attendance, retention of staff, and improved health and well-being. Following review of such data and feedback regarding the promotion of mindfulness within the wellness plan, additional training and supports for mindfulness initiatives may be considered to justify costs of trainings and certifications available in the field.

### **Summary**

In conclusion, the findings of this action research study suggest that daily, brief mindfulness practices have the potential to bring positive change in mindset of early childhood educators across programs, education level, and years of experience. As this study served as an exploration of teacher characteristics and perceptions of stress, job satisfaction and commitment, and engagement in self-care practices, it highlighted potential target groups within the organization to engage in mindfulness or other wellness initiatives to support coping and management of stress. Further, it supported findings in research regarding the complexities of stress experiences related to various models proposed in the field. The study indicated that participation in daily, brief practices over time has the potential to decrease feelings of stress related to time management and increase one's ability to cope with their workload and interactions with families. Teachers also reported positive experiences and feelings throughout and post-intervention indicating increased coping and ability to relax. Self-care practice overall increased through participation in this study. And while initially self-care was intended to be used

as an intervention to decrease stress, findings may suggest that it is also a strategy used to cope with stress or prevent further negative emotions or increases in stress levels.

Findings suggest that mindfulness practice may enhance benefits or frequencies of other self-care behaviors. In conclusion, the findings, as they were specific to this population, and limited by factors such as instruments developed, small sample size, and the overlapping period of the COVID-19 health pandemic, prompt additional questions and need for more investigation to further inform the field. Yet, the benefits identified in the context of the organization and pandemic continue to support the promise of mindfulness as a cost-effective wellness and professional development initiative in the field of early childhood education.

### **Final Conclusions**

As educators prepare to reopen schools in a post-pandemic climate, they are faced with questions that highlight the uncertainty and complex dynamics of the future of education. The current climate has sparked feelings of stress, compromised feelings of confidence, and led to educators questioning whether to return to classrooms or the field of education within the current context. As educational leaders prepare for reentry, it is critical to consider the impact of stress on the mental health of educators as well as the student well-being and success. As educators embark on this journey, this study highlights that simple mindfulness practice can provide a framework for educators to cope with stress and the uncertainty of the ever-changing landscape. Remember, mindfulness is innate and is enhanced through practice (Albrecht et al., 2012). In planning for the future, the words of Borysenko (2004) provide guidance in mindfulness as she states, "Every day brings a clear choice: to practice stress or to practice peace."

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**APPENDICES**

**Appendix A****Institutional Review Board Approval**

**Institutional Review Board  
California University of Pennsylvania  
Morgan Hall, 310  
250 University Avenue  
California, PA 15419  
[instreviewboard@calu.edu](mailto:instreviewboard@calu.edu)  
Melissa Sovak, Ph.D.**

Dear Michelle,

Please consider this email as official notification that your proposal titled “An investigation into the influence of self-care/mindfulness practices on early childhood teacher stress levels and job satisfaction” (Proposal #18-103) has been approved by the California University of Pennsylvania Institutional Review Board as submitted.

The effective date of approval is 9/26/19 and the expiration date is 9/25/20. These dates must appear on the consent form.

Please note that Federal Policy requires that you notify the IRB promptly regarding any of the following:

- (1) Any additions or changes in procedures you might wish for your study (additions or changes must be approved by the IRB before they are implemented)
- (2) Any events that affect the safety or well-being of subjects
- (3) Any modifications of your study or other responses that are necessitated by any events reported in (2).
- (4) To continue your research beyond the approval expiration date of 9/25/20 you must file additional information to be considered for continuing review. Please contact [instreviewboard@calu.edu](mailto:instreviewboard@calu.edu)

Please notify the Board when data collection is complete.

Regards,

Melissa Sovak, PhD.  
Chair, Institutional Review Board

## **Appendix B**

### **Informed Consent**

Dear Teacher,

As an early childhood teacher at the BCIU, you are being asked to participate in a research study about early childhood teachers, their self-care practices, and their perceptions of stress and job satisfaction. Your participation in this study will help the researcher learn more about how you perceive your work as an early childhood teacher at the BCIU and the potential influence that mindfulness practices may have on your work experiences. By providing your insights, the researcher will be better equipped to develop supports for teachers and support staff working in BCIU Early Childhood Programs that promote wellness.

#### **What will I be asked to do if I take part in this study?**

If you agree to participate in this study, you will be asked to (1) complete two survey questionnaires pre- and post-intervention, (2) attend a one-hour professional development session about mindfulness, (3) participate in mindfulness activities over an eight-week period, and (4) share your experiences in participating in mindfulness through a weekly journal and rating form.

The pre- and post-intervention surveys will ask you questions about your background in teaching, how you perceive job stress, your overall job satisfaction, and your self-care practices. The one-hour professional development session will provide an overview of mindfulness practices and support you in setting goals and intentions for practice over the eight-week period. The weekly journal and rating form will ask you to rate your stress levels and comment on your experiences participating in recommended mindfulness practices.

#### **Where will this study take place?**

The professional development session will be held at the BCIU Main Office. The surveys and weekly journal forms will be available in hard copy and/or via an online survey tool using a secure website. Participants may practice mindfulness over the eight-week session in any location of their choosing (e.g home, work).

#### **How long will the study last?**

The study is projected to last approximately 12 weeks, which includes a pre- and post-intervention survey and eight-week period in which participants engage in brief, daily mindfulness practices. Prior to the eight-week session, you will attend a one-hour professional development session to explain mindfulness and guide you through the next steps. Total participation time will vary on your goals and intentions for participation. It is anticipated that participants will spend five to 10 minutes per day on mindfulness activities. The pre- and post-intervention surveys may take up to 30 minutes each or 60 minutes total to complete.

**What happens if I don't want to participate?**

Your participation is voluntary; you can choose whether you want to participate in the study or not. There will be no penalty if you choose not to participate.

**Can I quit the study before it ends?**

You can withdraw from the study at any point by notifying the researcher. There will be no penalty if you choose to withdraw. The researcher will not ask you why you opted to withdraw.

**What are the risks?**

There are minimal risks to this study. First, you may feel bored/fatigued by answering survey questions, but you do not have to answer anything you do not want to. You will not be asked questions of a sensitive nature. Second, there is a slight risk of breach of confidentiality, but this is highly unlikely if coding procedures and data storage procedures are followed by both researchers and participants. Finally, as mindfulness is a practice designed to bring awareness to your experiences, there is a likelihood that you may reflect on unpleasant experiences that occur within your day that could result in slight discomfort. These are part of the normal human experience when engaging in such practices.

To minimize risks, the study will serve as an introduction to low-intensity mindfulness practices and a counselor will be involved in the one-hour professional development session and reviewing materials provided. There may be unforeseeable risks for participants or those who are more vulnerable to psychological distress than others. However, given the low-intensity of the intervention, these risks are considered low. In the event there are unforeseeable challenges, participants may contact the researcher for support or referrals to address them.

**How will I benefit from participating?**

If you decide to be in this study, you may see changes in your work experiences as a result of participating in daily, brief mindfulness activities. Mindfulness may increase your awareness of pleasant experiences in your daily work. You will also help the researcher better understand the current perceptions of teachers at the BCIU and potential benefits from incorporating mindfulness into professional development programs.

While mindfulness is the focus of this study, one may find similar benefits in decreased stress and perceptions toward work if engaging in regular self-care activities (e.g. physical exercise, reading, spending time with friends).

**Will my responses be kept confidential and private?**

Yes, the survey data and journal responses we collect from you will be kept confidential, which means only the researchers and confidential support staff at BCIU will see it. Your responses will be associated with a confidential ID and your personal information will be removed prior to the researchers reviewing the results. No names will be reported in the report of the findings. Data will be stored on a secure server and password-protected and/or stored in a locked office.

**Who do I contact if I have questions about this study?**

If you have questions about this study, you can reach out to the main researcher, Michelle Reichard-Huff, at [rei2009@calu.edu](mailto:rei2009@calu.edu) or 908-619-1589. If you would like to speak with someone other than the researcher, please contact Dr. Mary Wolf, Assistant Professor at California University of Pennsylvania, at [wolf@calu.edu](mailto:wolf@calu.edu)

*I have read this form. Any questions I have about participating in this study have been answered. I agree to take part in this study, and I understand that taking part is voluntary. I do not have to take part if I do not wish to do so. I can stop at any time for any reason. If I choose to stop, no one will ask me why.*

*By signing below, I agree to participate in this study. By doing so, I am indicating that I have read this form and had my questions answered. I understand that it is my choice to participate and I can stop at any time.*

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Approved by the California University of Pennsylvania Institutional Review Board. This approval is effective 09/26/19 and expires 09/25/20.

## Appendix C

### Data Collection Tools

#### Pre- and Post-intervention Measures

##### Confidence in Handling Teaching Stressors

*(Adapted from Walton et al., 2015 and Bloom, 2010)*

**Rate the extent to which the following are sources of stress.**

*(1=Not a source of stress, 2=Mild, 3=Moderate, 4=Severe)*

1. Relationships with co-workers
2. Relationships with supervisors
3. Paperwork and recordkeeping
4. Time Management
5. Daily work schedule
6. Student behavioral issues
7. Lesson planning
8. Classroom environment
9. Resources available
10. Curriculum expectations
11. Workload in teaching
12. Dealing with parents
13. Role in decision-making

**Please rate the extent to which you think you can handle this source of stress.**

*(1=Not at all well, 5=Very well)*

1. Relationships with co-workers
2. Relationships with supervisors
3. Paperwork and recordkeeping
4. Time Management
5. Daily work schedule
6. Student behavioral issues
7. Lesson planning
8. Classroom environment
9. Resources available
10. Curriculum expectations
11. Workload in teaching
12. Dealing with parents
13. Role in decision-making



**Perceived Stress Scale**

*(Cohen, Kamarck, & Mermelstein, 1983)*

*(0=Never, 1=Almost never, 2=Sometimes, 3=Fairly often, 4=Very often)*

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and “stressed”?
4. In the last month, how often have you felt confident about your ability to handle your personal problems?
5. In the last month, how often have you felt that things were going your way?
6. In the last month, how often have you found that you could not cope with all the things that you had to do?
7. In the last month, how often have you been able to control irritations in your life?
8. In the last month, how often have you felt that you were on top of things?
9. In the last month, how often have you been angered because of things that were outside of your control?
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

**General Satisfaction about Teaching as a Profession**

*(Adapted from Pettegrew & Wolf, 1982; Roeser et al., 2013)*

*(1= strongly disagree, 2=mostly disagree, 3 = disagree, 4 = agree, 5=mostly agree, 6 = strongly agree)*

1. Knowing what I know now about the job of being a teacher, if I had to decide all over again, I would become a teacher.
2. My job is an important and fulfilling aspect of my life.
3. In general, being a teacher measures up extremely well to the sort of job I wanted before I took it.
4. If a good friend told me (s)he was interested in becoming a teacher, I would have serious reservations about recommending it.

**Early Childhood Job Satisfaction Survey – Part V - Commitment**

*(Bloom, 2010)*

This section asks questions that relate to your center and to the early childhood field. Check all that describe how you feel about your organization.

1. I intend to work here at least two more years.
2. I often think of quitting.

3. I'm just putting in my time.
4. I take pride in my center.
5. I put a lot of extra effort into my work.
6. I feel very committed to this center.
7. I don't care what happens to this place after I leave.
8. It would be difficult for me to find another job as good as this one.
9. It's hard to feel committed to this place.
10. I sometimes feel trapped in this job.

On a scale of 1 (not committed) to 10 (very committed), please rate your level of commitment to your position in early childhood education. (include visual scale)

### **Self-Care Assessment**

*(Adapted from Saakvitne & Pearlman, 1996)*

Using the rating scale below, rate the following areas in terms of frequency:

*(5=frequently, 4 = occasionally, 3 = rarely, 2 = never, 1 = never occurred to me)*

1. I eat healthy foods and regular meals during the day.
2. I exercise or engage in physical activities that are fun (e.g. dance, swim, sports, walk).
3. I get enough sleep
4. I take time off when needed.
5. I make time for self-reflection
6. I write in a journal
7. I read literature unrelated to work
8. I make attempts to decrease stress in my life.
9. I mediate.
10. I try new things (e.g. go to different events, new hobbies)
11. I say no to extra responsibilities sometimes
12. I spend time with other whose company I enjoy.
13. I give myself praise or affirmations
14. I express my emotions.
15. I play and have fun.
16. I make time for reflection.
17. I take breaks when needed
18. I take time to chat with co-workers
19. I identify projects that are exciting and rewarding
20. I seek help when needed

**Teacher Demographic and Background Survey**

Please complete the following questions about yourself, current position, and background.

In which program do you serve as a teacher?

- Head Start
- Pre-K Counts
- Early Intervention

What is your current educational level or highest degree completed?

- Associates degree
- Bachelor's degree
- Graduate degree

How many years have you served as a teacher?

How many students are in your class?

How many students with disabilities are in your class?

**Weekly Reflection - Teacher Journaling / Rating Prompts**

1. How many times did you practice mindfulness this week?
2. How did you feel about the experience?
3. Did you meet your goal for this week?
4. On a scale of 1 to 5 (*1 = low stress, 5 = high stress*), rate your overall stress level this past week.
5. Using the following scale, rate how often you experienced / felt stress this past week. (*1 = Never; 2 = Almost never, 3 = Sometimes, 4 = Fairly often, 5 = Very often*)
6. What challenges / barriers did you experience?
7. What, if anything, will you try differently next week?
8. Other comments:

**Post-Intervention Reflection - Mindfulness Post-Intervention Survey Questions**

1. Please describe your experiences participating in the daily mindfulness interventions.
2. Over the eight-week period, have you experienced changes in your stress level?  
Please describe your experience.
3. Over the eight-week period, have you experienced changes in your feelings toward work? Please describe your experience.
4. What challenges or barriers did you experience participating in the mindfulness activities?
5. What supports could have been provided to enhance the experience?
6. Will you continue to engage in these mindfulness practices?
7. Other comments: