

BUILDING EARLY CARE AND EDUCATION TEACHERS'
PROFESSIONAL AND EMOTIONAL CAPACITY TO SUPPORT PRESCHOOLERS'
SOCIAL-EMOTIONAL COMPETENCIES

by
Nancy Ha 夏詩韻

A dissertation submitted to Johns Hopkins University in conformity with the requirements for
the degree of Doctor of Education

Baltimore, Maryland
January 2022

© 2022 Nancy Ha
All rights reserved

Abstract

Early care and education (ECE) teachers play a significant role in creating the social and emotional learning climate in the classroom and promoting children's socioemotional and behavioral health. However, ECE teachers often report feeling unprepared to meet the socioemotional needs of preschoolers who exhibit dysregulated emotions and behaviors. This is also evident in the persistent practice of suspending or expelling preschoolers from ECE settings across the U.S. To improve short and long-term developmental outcomes for children, ECE teachers' professional and emotional capacity to provide quality care for children with emotion regulation difficulties deserve more attention and systemic supports. Bandura's (1986) triadic reciprocal determinism and Jennings and Greenberg's (2009) prosocial classroom model served as the theoretical basis for this mixed-methods study, which was conducted in collaboration with the Virtual Lab School (VLS) Momentum research team at the Ohio State University. Specifically, I investigated how the web-based Social-Emotional Learning for Teachers (SELF-T) course contributed to ECE teachers' knowledge and use of strategies to promote their emotional well-being. I also explored whether the SELF-T course offered added value to ECE teachers' learning in a comprehensive professional development program designed to promote their understanding and use of evidence-based teaching practices. Findings suggest SELF-T was regarded by participants to be a timely topic in the midst of the COVID-19 pandemic that brought many physical, mental, and financial challenges to the ECE workforce. As expected, completion of the SELF-T course was associated with an increase in ECE teachers' knowledge and use of strategies to promote their emotional well-being. Study participants' interview responses further suggested that learning about teachers' social-emotional well-being contributed to some degree to their overall increased sense of efficacy in managing the classroom

effectively, teaching social-emotional learning skills, and maintaining positive teacher-child interactions. Collective findings are in support of Jennings and Greenberg's (2009) hypothesized relationships in the prosocial classroom model and the claim that a "synergistic effect" (p. 515) occurs when professional training focuses on promoting both teachers' and children's social-emotional competence to bring about positive adult and child outcomes. Potential implications for professional practices, policies, and future research are discussed.

Keywords: early care and education teacher, emotion regulation, social-emotional competence, well-being, stress, prosocial classroom, professional development, adult learning, teaching practices, COVID-19

Dissertation Adviser: Lieny Jeon, PhD






Dissertation Approval Form

Student's Name: Nancy Ha Date: 12/9/2021

Dissertation Title:

Building Early Care and Education Teachers' Professional and Emotional Capacity to Support Preschoolers' Social-Emotional Competencies

The student has made all necessary revisions, and we have read, and approve this dissertation for submission to the Johns Hopkins Sheridan Libraries as partial fulfillment of the requirements for the Doctor of Education degree.

Lieny Jeon	 Lieny Jeon	12/15/2021
Adviser	Signature	Date
Chris Swanson	 Christopher Swanson	12/17/21
Committee Member	Signature	Date
E. Juliana Pare-Blagoev	 Juliana Pare-Blagoev	12/17/21
Committee Member	Signature	Date
Committee Member	Signature	Date

Dedication

To my daughter, who teaches me the beauty and wonders of early childhood years.

And to all the educators and caregivers in both my personal and professional lives, who demonstrate genuine relationships, empathy, and care for children who need them the most.

Acknowledgments

“And whatever you do, in word or deed, do everything in the name of the Lord Jesus, giving thanks to God the Father through him” (Colossians 3:17). First and foremost, I give thanks to my Lord and Savior, who has sustained me and given me the strength to complete this journey. You have taught me to look for and appreciate the strengths and resilience in each life created in Your image.

I am also sincerely appreciative of my doctoral committee. To my adviser, Dr. Lieny Jeon, I still remember our conversation when we met for the first time at a coffee shop in South Korea. I could not have achieved all the milestones in the program without your mentorship over the past four years. Thank you for your unwavering support, encouragement, and guidance to get me to where I am today. To Dr. Juliana Paré-Blagoev, your brilliance in seeing connections where I had not even considered have sharpened my thinking, while your kindness has taught me self-compassion as I learned to balance motherhood, work, and study. To Dr. Chris Swanson, your thoughtful questions and feedback have prompted me to look beyond what I often narrowly focus on and to reflect on why I do what I do, both in my academic and professional lives.

To my loving and supportive family – my husband and life partner who loves and encourages me without reservation. Thank you for holding down the fort so I could chase my dream. To my mother, my first teacher in life who reminds me to never cease learning, being curious, and giving my best effort in all that I do. Your grit and strength inspire me to face hurdles with courage. And to my daughter, who is always willing to forgive me for missing out on some important playtime. I pray that God will also reveal His plan for you to foster your own gifts and passions, and walk with you to pursue them with confidence.

This dissertation would not have been possible without the partnership of the VLS Momentum research team. Thank you for your collaborative spirit and for welcoming me to be a part of your important work in making meaningful changes in adult and children's lives. To all the participants in this study, thank you for giving me the chance to get to know you, inspiring me with your stories, and offering a glimpse of the incredible work you do every day. I also want to express my gratitude to the professional network of leaders and practitioners who shared their knowledge and expertise with me, Dr. Linda Adamson, Sandy Avzaradel, and Start Well staff members.

I am also grateful to my peers so that I did not have to navigate this doctoral journey by myself, in particular Annie, Denise, and Kenita. We might have lived across three time zones as well as started and finished this program at different times, but I will cherish the many memories we shared over Zoom – from studying for comps and preparing for our proposals in our half-asleep states after a long day of working and mothering, to the many laughter and drinks that were shared as we celebrated each other's achievements and passing of major milestones. I cannot wait to hear all the amazing things you will do in the near future!

Finally, thank you to my dearest friends (Liah, Stephanie, Teresa, Kamelia, Gina, and others), who have forgiven me countless times for missing calls, texts, and gatherings, cheered me on, and prayed for me throughout this journey.

Table of Contents

Abstract	ii
Dedication	v
Acknowledgments	vi
List of Tables	xiii
List of Figures	xvi
Executive Summary	1
Chapter 1 - Overview and Factors Related to the Problem of Practice	13
Problem of Practice	14
Operational Definitions of Terms	15
Emotion Regulation	16
School Adjustment	17
Early Care and Education Teachers	17
Theoretical Framework and Contributing Factors	18
Chronosystem	19
Macrosystem	20
Exosystem	22
Mesosystem	23
Family and school.	24
Family and community.	25
Microsystem	27
Individual child.	27
Family.	29
School and Teacher.	30
Summary	34
Chapter 2 - Needs Assessment on Early Care and Education Teachers' Professional and Emotional Capacity	38
Situated Context of Problem of Practice	38
Purpose of the Study	40

Method	41
Data Collection	41
Description of Participants	42
Measures	44
Early care and education teachers’ emotion responsiveness to children.	44
Early care and education teachers’ use of emotion regulation strategies.....	46
Quality of teacher-children relationships.....	47
Early care and education teachers’ job stress.....	47
Summary of Results	48
Research question 1: What is the extent of ECE teachers’ training in working with children with emotion and behavior regulation difficulties?	48
Research question 2: What response styles do ECE teachers report using when children display challenging or negative emotions?.....	50
Research question 3: What emotion regulation strategies do ECE teachers report using for their emotional lives?.....	54
Research question 4: What do ECE teachers report about the quality of teacher-children relationships in their classrooms?	55
Research question 5: What are ECE teachers’ perceived levels of job stress in response to children’s emotion and behavior regulation difficulties?	58
Findings from External Report.....	60
Summary	61
Chapter 3 - Interventions that Promote Professional and Emotional Capacity of Early Care and Education Teachers.....	63
Teacher Training on Supporting Children’s Social-Emotional Competence.....	63
Theoretical Framework	68
Personal Factors – Interplay of Cognition and Emotion Among Teachers	69
Teachers’ Emotions and the Classroom	71
Training on Teachers’ Social-Emotional Competence and Well-Being.....	72
Challenging Behaviors and Teachers’ Social-Emotional Well-Being	74
Interventions to Promote Teachers’ Social-Emotional Competence and Well-Being	75
Teachers’ emotional well-being and perceived stress.	81
Teachers’ responsiveness.	84
Teacher efficacy.	85
Teachers’ emotional well-being and teaching practices for social-emotional competence.	87

Teachers' Emotional Well-Being and Children Outcomes	88
Need for Brief and Context-Specific Intervention	90
Process of Professional Development	92
Reflective Practice	95
Delivery of Professional Development.....	97
Web-based prevention and intervention on emotional well-being.....	98
Web-based professional development in early care and education.....	99
Conclusion and Overview of Proposed Study.....	100
Chapter 4 - Study Design: Method and Procedure.....	104
Social-Emotional Learning for Teachers (SELF-T).....	105
Coaching Sessions	106
Purpose of the Study	107
Research Design	109
Process Evaluation.....	110
Indicators of intervention dosage.....	110
Indicators of participant responsiveness.	111
Indicators of context.	112
Indicators of quality of program delivery.	113
Outcome Evaluation	113
Methods.....	114
Participants and Procedure	114
SELF-T course participants.	115
Recruitment and sample of follow-up interviews.	115
Data collection.	118
Instrumentation.....	119
Learning management system (LMS).....	119
SELF-T content knowledge assessments.....	119
SELF-T guiding questions.	120
VLS Momentum research surveys.....	120
Semi-structured interview protocol.....	123
Data Analysis.....	124
Quantitative data.	124
Qualitative data.	124
Summary matrices.	127

Chapter 5 – Study Findings and Discussion	135
Findings.....	135
Process Evaluation.....	135
RQ 1: To what extent are ECE teachers participating in the SELF-T course engaged?..	135
RQ 2: What are ECE teachers’ overall experience with the professional development program?	136
RQ2a) To what extent do ECE teachers feel comfortable with professional development delivered through a web-based platform?.....	136
RQ2b) Do ECE teachers report any barriers to completing activities of the professional development program during the COVID-19 pandemic?.....	137
RQ2c) What are ECE teachers’ perceived satisfaction and usefulness of SELF-T course content?.....	138
Outcome Evaluation	141
RQ3: To what extent do ECE teachers demonstrate changes in their knowledge of emotional well-being following completion of SELF-T course?	141
RQ3a) To what extent do ECE teachers demonstrate increased knowledge of emotional well-being following completion of SELF-T course?	141
RQ3b) What do ECE teachers report about their <i>knowledge of emotional well-being</i> following completion of SELF-T course?	146
RQ4: What do ECE teachers report about their <i>use of strategies that promote emotional well-being</i> following completion of SELF-T course?	156
RQ5: How do ECE teachers describe their <i>perceived stress</i> following completion of SELF-T course?	161
RQ6: How do ECE teachers describe their <i>teaching disciplinary efficacy</i> following completion of SELF-T course?.....	163
RQ7: How do ECE teachers describe their <i>responsiveness to challenging behaviors and emotions in the classroom</i> following completion of SELF-T course?.....	166
Discussion	174
Limitations.....	181
Implications for Research, Policy, and Practice	182
Practice.....	182
Policy.....	184
Research.....	185
Conclusion.....	186
References.....	188
Appendix A Needs Assessment – Recruitment Email.....	219

Appendix B Needs Assessment - Questionnaire	220
Appendix C Needs Assessment – Interview Protocol	226
Appendix D Needs Assessment – Participant Consent Form.....	228
Appendix E – Study Logic Model	231
Appendix F VLS Momentum - Pre- and Post-test Research Surveys	232
Appendix G SELF-T End-of-Module Demonstrate Questions	236
Appendix H Study – Qualtrics Informed Consent.....	239
Appendix I Study – Recruitment Email and Phone Scripts.....	243
Appendix J Study – Qualtrics Demographic Survey	246
Appendix K Study – Semi-Structured Interview Protocol	247
Appendix L Qualitative Data Analysis - Frequencies of Categories in Pre-Test and Post-Test SELF-T Short Answers – Stress on Nurturing Care.....	250
Appendix M Qualitative Data Analysis - Frequencies of Categories in Pre-Test and Post-Test SELF-T Short Answers – Positive Strategies for Negative Emotions.....	252

List of Tables

Table 2.1 Demographics of Survey Participants.....	43
Table 2.2 Constructs of Interest in Current Needs Assessment.....	45
Table 2.3 Survey Participants' Individual Responses on Professional Development, Education, Years of Experience, and CCNES.....	52
Table 2.4 Means and Standard Deviations on CCNES by Survey Participant Characteristics....	53
Table 2.5 Survey Participants' Individual Responses on Professional Development, Education, Years of Experience, Teacher-Children Relationships, ERQ, and CCWJSI.....	56
Table 2.6 Means and Standard Deviations on Teacher-Children Relationships, ERQ, and CCWJSI by Survey Participant Characteristics.....	57
Table 3.1 Summary of Research on Teachers' Social-Emotional Competence and Well- Being.....	76
Table 4.1 Demographics of SELF-T Participants.....	117
Table 4.2 Demographics of Follow-Up Interview Participants.....	118
Table 4.3 Process Evaluation Summary Matrix: Engagement.....	128
Table 4.4 Process Evaluation Summary Matrix: ECE Teachers' Overall Experience.....	128
Table 4.5 Outcome Evaluation Summary Matrix: Knowledge of Emotional Well-Being.....	130
Table 4.6 Outcome Evaluation Summary Matrix: Use of Strategies.....	131
Table 4.7 Outcome Evaluation Summary Matrix: Perceived Stress.....	132
Table 4.8 Outcome Evaluation Summary Matrix: Teaching Disciplinary Efficacy.....	133
Table 4.9 Outcome Evaluation Summary Matrix: Teachers' Responsiveness.....	134
Table 5.1 Comfort with Web-Based Professional Development from Participants of VLS Momentum.....	137

Table 5.2 Descriptive Statistics of SELF-T Multiple-Choice Content Assessments.....	142
Table 5.3 Dependent Sample T-Test for SELF-T Content Assessment on Knowledge of Emotional Well-Being.....	143
Table 5.4 Study Participants’ Individual Responses on Demographics and Means of Knowledge of Emotional Well-Being in Pre- and Post-Test Research Surveys.....	145
Table 5.5 Descriptive Statistics of Blind-Coded Scores for SELF-T Short Answer Responses.....	146
Table 5.6 Frequencies of Categories from Pre-Test and Post-Test SELF-T Short Answers – Stress on Nurturing Care.....	149
Table 5.7 Frequencies of Categories from Pre-Test and Post-Test SELF-T Short Answers – Positive Strategies for Negative Emotions.....	151
Table 5.8 Frequencies and Examples to Categories from SELF-T Guiding Questions – Challenges or Changes to Thinking.....	153
Table 5.9 Frequencies and Examples to Categories from SELF-T Guiding Questions – Personal and Professional Practice.....	157
Table 5.10 Study Participants’ Individual Responses on Demographics and Perceived Stress Scale.....	162
Table 5.11 Study Participants’ Individual Responses on Demographics and Teaching Disciplinary Efficacy.....	163
Table 5.12 Study Participants’ Individual Responses on Demographics and CCNES Positive Reactions.....	167
Table 5.13 Study Participants’ Individual Responses on Demographics and CCNES Negative Reactions.....	168

Table 5.14 Study Participants' Individual Responses on Demographics and CCCSI Positive
Guidance.....169

Table 5.15 Study Participants' Individual Responses on Demographics and CCNES Negative
Reactions.....170

List of Figures

Figure 1 Conceptual Ecological Systems Model.....	19
Figure 2 Conceptual Model of Problem of Practice.....	37
Figure 3 Bandura’s Model of Triadic Reciprocal Determinism.....	68
Figure 4 The Prosocial Classroom Model.....	72
Figure 5 Conceptual Model of Proposed Study for Problem of Practice.....	103

Executive Summary

Early childhood behavioral and mental health and its implications on children's school adjustment remains a critical issue necessitating systemic attention and supports. Emotion regulation, which involves both cognitive and behavioral processes for the intrapersonal and interpersonal management of emotions (Cole, Martin, & Dennis, 2004), has been regarded as one of the critical skills for young children's successful transition into the educational setting (Denham, Bassett, & Zinsser, 2012; Denham, Bassett, Zinsser, & Wyatt, 2014; Graziano, Reavis, Keane, & Calkins, 2007; Herndon, Bailey, Shewart, Denham, & Bassett, 2013). Beyond academic skills and functioning, successful school adjustment highlights the importance of children's social-emotional competencies (Sasser, Bierman, & Heinrichs, 2015). According to the Collaborative for Academic, Social, and Emotional Learning (CASEL; 2020), social-emotional competencies are multidimensional and include one's self-awareness and management of personal emotions, responsible decision-making, social awareness and relationship skills. Children's attitudes associated with learning in a classroom environment, as well as capacities to engage in prosocial behaviors and form interpersonal relationships with others are critical indicators of school adjustment and set the foundation for future school experiences (Herndon et al., 2013). Conversely, children with underdeveloped emotion regulation may lack the resources and capacities for successful school adjustment, resulting in negative impacts on their academic and social functioning (Denham, Bassett, Sirotkin, & Zinsser, 2013; Morrison, Ponitz, & McClelland, 2010; Williford, Vick Whittaker, Vitiello, & Downer, 2013).

Problem of Practice

In early care and education settings, teachers play a significant role in creating the social and emotional learning climate in the classroom, from establishing warm and supportive

relationships with children, promoting young children's socioemotional and behavioral health, responding to challenging behaviors through developmentally appropriate practices, to communicating and collaboratively effectively with families, colleagues, and community service providers (Stegelin, 2018). However, early care and education (ECE) teachers often report feeling unprepared to meet the socioemotional needs of young children who exhibit dysregulated emotions and behaviors (Hemmeter, Santos, & Ostrosky, 2008; Whitebook, King, Philip, & Sakai, 2016). Indeed, the first national study on early expulsion and suspension conducted by the Yale University Child Study Center (Gilliam, 2005) revealed preschool-aged children were expelled at three times the rate of children in K-12 settings, often due to behaviors that are perceived to be challenging. Recent data from the 2016 National Survey of Children's Health further indicated an average of 250 preschoolers continue to be suspended or expelled from early childhood programs daily across the U.S. (Malik, 2017).

Developing professional competencies to address problem behaviors in the classroom continues to be a high area of need for ECE teachers (Edwards, 2017; Hemmeter et al., 2008). Beyond limited access to evidence-based and effective professional learning opportunities to promote ECE teachers' professional competencies to support children's social-emotional development (Pianta, Barnett, Burchinal, & Thornburg, 2009; Whitebook et al., 2016), research has further shown that early childhood educators experience reduced emotional capacities in their efforts of providing care to children with challenging behaviors, including a decreased sense of efficacy (Guo, Justice, Sawyer, & Tompkins, 2011), high levels of job stress (Friedman-Krauss, Cybele Raver, Neuspiel, & Kinsel, 2014), and decreased use of healthy emotion regulation and coping strategies (Jeon, Hur, & Buettner, 2016; Swartz & McElwain, 2012; Zinsser, Christensen, & Torres, 2016). Collectively, these factors may be associated with ECE

teachers' struggles to support the needs of children with emotion regulation difficulties, as well as children's struggles to adjust to and meet the socioemotional demands in preschools.

I first conducted a needs assessment study to explore whether contributing factors described in the existing literature were also relevant for ECE teachers within my situated professional context. Three key findings emerged: 1) ECE teachers have limited time and resources to access professional learning opportunities on children's socioemotional development, 2) existing professional development may not adequately prepare ECE teachers to work with children's challenging behaviors or promote positive responsiveness to children's emotional needs in the classroom, and 3) there is a need to foster ECE teachers' capacity to develop personal resources (e.g., emotion regulation and coping strategies), which can take many years of teaching experience to acquire in order to effectively cope with job-related stresses. Furthermore, a recent external study conducted by a local university research center substantiated the need to promote knowledge, skills, comfort, as well as efficacy beliefs of ECE teachers' ability to care for children exhibiting emotional and behavioral challenges. To improve short and long-term developmental outcomes for children, ECE teachers' professional and emotional capacity to provide quality care for children with emotion regulation difficulties deserve more attention and systemic supports.

Theoretical Framework

Guided by the notions that emotion regulation is a developmental skill that is malleable through experiences and interactions, and is strengthened through effective co-regulation with important caregiving adults who provide supportive, warm, and responsive interactions (Murray, Rosanbalm, Christopoulos, & Hamoudi, 2015), I focused on teacher-level factors in this study. Through the quality of their relationships and interactions, teachers play a critical role in shaping

children's development related to their emotion regulation and expression, which in turn influences children's school adjustment as well as future school experiences and outcomes (Herndon et al., 2013). Consequently, Bandura's (1986) triadic reciprocal determinism within his social cognitive theory offers a sound theoretical basis for conceptualizing the teaching and learning processes of social-emotional competence. In the context of ECE settings, studies have found that relationships exist across classroom environment (e.g., preschool classroom chaos and students' challenging behaviors), teachers' cognition (e.g., use of emotional regulation and coping strategies), as well as teachers' behaviors (e.g., quality and type of reactions teachers exhibit in response to children's emotions) (Jeon et al., 2016).

Jennings and Greenberg's (2009) prosocial classroom model further conceptualizes and brings attention to teachers' social-emotional competence and well-being along with its implications on teaching practices, classroom quality, and student outcomes. Indeed, researchers have recently begun to emphasize fostering teachers' own social-emotional well-being alongside their students', on the basis that teachers can more effectively implement evidence-based practices when they themselves have the capacity to model the social-emotional skills they are being asked to teach (Garner, Bender, & Fedor, 2018; Jennings & Greenberg, 2009; Lang, Jeon, Sproat, Brothers, & Buettner, 2020; McClelland, Tominey, Schmitt, & Duncan, 2017). A "synergistic effect" (Jennings & Greenberg, 2009, p. 515) is likely to occur when professional training focuses on promoting teaching practices that promote children's social-emotional outcomes, as well as teachers' social-emotional competence and well-being.

Synthesis of Relevant Research Literature

Intervention studies that aim to promote teachers' social-emotional competence and well-being have shown promising results in promoting teacher outcomes such as improved emotional

well-being, resilience, teaching efficacy, or decreased stress and burnout (e.g., Benn, Akiva, Arel, & Roeser, 2012; Biglan, Layton, Jones, Hankins, & Rusby, 2013; Cook et al., 2017; Jennings, Frank, Snowberg, Coccia, & Greenberg, 2013; Lang et al., 2020; Roeser et al., 2013; Taylor et al., 2016), despite varied designs, samples, and components grounded in different therapeutic theories and practices (e.g., mindfulness-based, stress management, relaxation, acceptance and commitment therapy). Improved teachers' emotional well-being has been found to have a positive relationship with teachers' willingness and intent to implement effective teaching practices (Cook et al., 2017), along with being linked to improved classroom and children outcomes (Lam & Wong, 2017; Singh, Lancioni, Winton, Karazsia, & Singh., 2013).

Existing literature further highlights the importance of ECE teachers' situated experiences, capacity for problem-solving, and opportunity for reflective practice and collaborative dialogues to construct learning and knowledge, when evidence-based professional development takes into consideration some key principles of adult learning theories (Darling-Hammond, Hyler, Gardner, 2017; Jensen, Sonnemann, Roberts-Hull, & Hunter, 2016; McFarland, Saunders, & Allen. 2009; Rohlwing & Spelman, 2014; Schachter, 2015; Spillane, Reiser, & Reimer, 2002). Furthermore, web-based delivery of prevention and intervention programs on emotional well-being as well as professional development for ECE teachers and providers have gained traction in recent years (e.g., Heber, Lehr, Ebert, Berking, & Riper, 2016; Lang et al., 2020; Pianta, Mashburn, Downer, Hamre, & Justice, 2008). Its advantages include increased scalability and efficiency, more accommodating of learners' busy schedules, lower costs, and allow for learners' self-paced engagement with content (Dede, Ketelhut, Whitehouse, Breit, & McCloskey, 2009; Kozma, 1994; Lang et al., 2020).

Research Study

For the current study, I investigated the effects of ECE teachers' participation in a comprehensive professional development program conducted as part of a pilot study, Virtual Lab School (VLS) Momentum, by a research team at the Ohio State University (OSU) between August 2019 to December 2020 (PI: Dr. Sarah Lang). Considering Jennings and Greenberg's (2009) proposition that a "synergistic effect" (p. 515) can take place when professional learning focuses on practices that promote both teachers and children's social-emotional competence, and the importance of reflective practice in the process of adult learning (Darling-Hammond et al., 2017; McFarland et al., 2009; Spillane et al., 2002), the overall purposes of this collaborative study with the VLS Momentum research team were twofold. First, my study aimed to understand how the web-based Social-Emotional Learning for Teachers (SELF-T) course contributed to ECE teachers' knowledge and use of strategies to promote their emotional well-being, self-care, and stress management (Lang, Jeon, & Buettner, 2018; Lang et al., 2020). The current study also extended the works of Lang and colleagues (2020) by exploring whether the SELF-T course offered added value to ECE teachers' experiences and learning from their overall professional development program designed to promote their understanding and use of evidence-based teaching practices for providing high quality ECE environments and promoting children's outcomes, including their social, emotional, and behavioral health.

Research Questions

The research questions for this study addressed both process and outcome evaluations, which included the following: 1) To what extent are ECE teachers participating in the SELF-T course engaged? 2) What are ECE teachers' overall experience with the professional development program? 3) To what extent do ECE teachers demonstrate changes in their *knowledge of emotional well-being* following completion of SELF-T course? 4) What do ECE

teachers report about their *use of strategies that promote emotional well-being* following completion of SELF-T course? 5) To what extent is participation in the SELF-T course associated with ECE teachers' *perceived stress*? 6) To what extent is participation in the SELF-T course associated with ECE teachers' *teaching disciplinary efficacy*? 7) To what extent is participation in the SELF-T course associated with ECE teachers' *responsiveness to challenging behaviors and emotions in the classroom*?

I hypothesized that participation in the professional development program, which included the SELF-T course for promoting ECE teachers' social-emotional competence and well-being, would result in an increase in their knowledge and use of strategies that promote emotional well-being. Furthermore, ECE teachers would report completion of the SELF-T course as part of their overall professional development program is associated with reduced levels of perceived stress, as well as positive changes to their teaching disciplinary efficacy and responsiveness to challenging behaviors and emotions in the classroom.

Research Design

A convergent parallel mixed methods design (Creswell & Plano-Clark, 2018) was used in the current study to obtain different but complementary data using both quantitative and qualitative methods. Procedurally, quantitative and qualitative data were gathered and analyzed separately, and later integrated to determine how results converge or diverge from each other for a more complete understanding of the research questions.

Data Collection and Analysis

An inter-university data use agreement was completed and approved to gain access to de-identified research data shared by the VLS research team at OSU. Existing data were in multiple formats including those gathered by the learning management system pertaining to participants'

activities for the SELF-T course (e.g., pre- and post-test content knowledge assessments), ECE teachers' responses to guided reflection questions facilitated and recorded by their coaches, and pre- and post-test research surveys. An associate from the VLS Momentum research team who had no prior interactions with the participants during the pilot study and I also conducted individual semi-structured interviews with three ECE teachers who successfully completed all requirements of the professional development program and consented to participate in a follow-up interview for the current study.

Quantitative data were analyzed using descriptive statistics, as well as inferential statistics to compare means from pre- and post-test scores in repeated measures using either the parametric dependent sample t-test or non-parametric Wilcoxon Signed-Rank test. I also employed content analysis (Hsieh & Shannon, 2005) for qualitative data, which included participants' written accounts of their learning in SELF-T content knowledge assessments and guided reflection questions as well as responses from follow-up interviews.

Participants and Context

The present sample was a sub-sample of the larger study conducted by the VLS Momentum research team who recruited from a population of ECE teachers who had not yet obtained a Child Development Associate (CDA) credential and were employed in ECE programs located in a midwestern state. A total of 23 ECE teachers completed the web-based SELF-T course as part of their professional development program. Based on demographic information that were gathered and available for review ($n=14$), all of the ECE teachers identified as female, 71.4% were White, 21.4% were Black, 14.3% were bi-racial, and 7.1% were multi-racial. All ECE teachers spoke English, with 43.8% of the sample reported speaking another language in

addition to English. In regards to their educational levels, 28.6% earned a high school diploma or GED, 50.0% attended some college, and 21.4% earned an associate or bachelor's degree.

Of the 19 participants who successfully completed all of the requirements of the professional development program, three ECE teachers also consented to participate in an individual semi-structured follow-up interview for the current study. All three participants identified themselves as female, lead teachers working in either infant and toddler or preschool classrooms, and have worked between 7-15 years in the field of ECE.

Findings

Firstly, findings from process evaluation suggest the extensive programmatic structure and supports designed by the VLS Momentum research team and embedded within each course (e.g., meeting the mastery criteria for assessments at the end of each module and course, engaging in reflective practice through a series of guiding questions during coaching sessions) ensured that all SELF-T participants demonstrated adequate intervention dosage and engagement in order to achieve foundational understanding of key objectives and content. ECE teachers who completed all requirements of the professional development program in the VLS Momentum study generally reported the web-based platform and format was favorable and likely to pursue future online professional development opportunities if available. However, interviewees also suggested that program activities should be offered in both in-person and virtual formats in future implementation because each ECE teacher's preferences and needs can differ, suggesting that there is indeed a need for a person-centered approach to designing professional development that meets learners' individualized needs (Jeon et al., 2016).

Considering that the COVID-19 pandemic began close to or at the start of the professional development program for these ECE teachers, a few individuals reported facing

barriers to completing program activities that included a lack of access to in-person coaching, reliable internet access, financial resources, as well as needing to take care of other responsibilities at work or home. Findings from interviews also mirror those from Nagasawa and Tarrant (2020), who found that ECE teachers experienced increased demands and stressors across economic, health, and caregiving domains during the pandemic.

Responses from the three interview participants further highlighted ECE teachers' perceived usefulness or benefits of SELF-T. Examples included improving their ability to cope with work-related stresses using stress management or reduction strategies, recognizing that they are not alone in their struggles, promoting reflective practices and sense of confidence, and offering opportunities to openly discuss the topic of social-emotional well-being with colleagues. One interviewee highlighted how teaching stress management to ECE teachers can hopefully alleviate staff turnover and shortages in the field, similar to suggestions from Buettner and colleagues' (2016) study that examined the relationship between ECE teachers' social-emotional capacity and commitment to the profession. The contents of SELF-T were also regarded by an interviewee as being a timely topic in the midst of a global pandemic that brought many physical, mental, and financial challenges to the ECE workforce (Swigonski, James, Wynns, & Casavan, 2021).

Outcome Evaluation

As expected, ECE teachers who completed the SELF-T course experienced an increase in their knowledge of emotional well-being, one of the intended short-term outcomes of this study. In particular, qualitative data offered insights on how SELF-T promoted ECE teachers' understanding of stress and in particular, its effects on one's emotional state and classroom environment. Content analysis of SELF-T participants' responses also suggested an increased

understanding of the use of reframing or reappraising to more effectively respond to situations that elicit negative emotions, which may be a promising finding since cognitive appraisal has been found to be a more effective emotion regulation strategy in response to classroom stressors (Chang, 2013; Jennings et al., 2013), and is associated with ECE teachers' reduced use of exclusionary discipline practices such as expulsion (Zinsser, Zulauf, Das, & Silver., 2019). Furthermore, several individuals reported that although the content covered in SELF-T might not have been new to them, it was still helpful to reinforce their existing knowledge on how to promote their own well-being, acknowledge that there are difficult days or moments at work, and remind them how stress can negatively affect the classroom environment and teacher-children interactions. This finding further suggests that SELF-T may have the capacity to foster ECE teachers' knowledge of the associated relationships between teachers' social-emotional well-being, teacher-child relationships, and classroom climate described in the prosocial classroom model (Jennings & Greenberg, 2009).

Current study findings also suggest that completing the SELF-T course was associated with changes in ECE teachers' use of strategies that promotes emotional well-being, which was the second intended short-term outcome. Study participants' responses indicated an intent to use stress prevention or reduction strategies that target their cognitive, emotional, physiological, and behavioral responses to stressors within themselves, as well as an intent to share or use similar strategies to promote others' (e.g., children, families, colleagues) emotional well-being.

This study further aimed to understand to what extent completion of the SELF-T course was associated with more distal outcomes, such as participants' perceived stress, teaching disciplinary efficacy, and responsiveness to challenging behaviors and emotions in the classroom. Considering the overall increased stresses experienced by the ECE workforce amidst

the COVID-19 pandemic (Nagasawa & Tarrant, 2020; Swigonski et al., 2021), it was unsurprising to find that ECE teachers reported experiencing an increased level of perceived stress from pre-test to post-test research surveys. Likewise, previous study findings (e.g., Lang et al., 2020) also suggested a potential for SELF-T participants to report an increase of perceived stress following their course completion as a result of increased awareness and understanding of stress, along with its manifestations and effects in their lives.

Findings from quantitative and qualitative data were inconsistent in determining changes in the other two distal outcomes, ECE teachers' teaching disciplinary efficacy and responsiveness to challenging behaviors and emotions in the classroom. It should also be noted that because SELF-T was one of 21 courses that ECE teachers completed as part of the overall professional development program, this brings challenges to understanding and substantiating to what extent positive changes in interviewees' sense of teaching efficacy or responsiveness to challenging behaviors and emotions can be attributed to SELF-T alone as opposed to the entirety of their VLS training. Interviewees' responses nonetheless suggested that learning about teachers' social-emotional well-being contributed to some degree to their overall increased sense of efficacy in managing the classroom effectively, implementing social-emotional learning, and maintaining positive teacher-child interactions similar to what Jennings and Greenberg (2009) hypothesized in the prosocial classroom model. Consequently, collective findings from the current study align with recommendations from prior research (Garner et al., 2018; Lang et al., 2020) and support Jennings and Greenberg's (2009) claim that a "synergistic effect" (p. 515) occurs when professional training focuses on promoting both teachers' and children's social-emotional competence to bring about positive adult and child outcomes.

Chapter 1 - Overview and Factors Related to the Problem of Practice

Early childhood behavioral and mental health and its implications on children's school adjustment remains a critical issue necessitating systemic attention and supports. In addition to persistent negative effects including poor academic, social, and life outcomes (Casillas, Robbins, Allen, Kuo, Hanson, & Schmeiser, 2012; Denham et al., 2003; Graziano et al., 2007; Ladd, Birch, & Buhs, 1999; Robst & Weinberg, 2010), childhood behavior problems have been found to be associated with developmental delays (e.g., communication, social-emotional, play, motor) that impede children's school readiness (Montes & Lotyewski, 2012). Meanwhile, school entry marks a significant transitional period for young children. This transition typically involves decreased adult supervision and supports, as well as increased demands and expectations for autonomy (Graziano et al., 2007). Adjusting to these environmental changes and expectations can be particularly taxing on children's cognitive and social capacities (Carter et al., 2010). It is no surprise that many studies suggest emotion regulation can be a critical skill that effectively facilitates young children's transition into the educational setting (Denham et al., 2012; Denham et al., 2014; Graziano et al., 2007; Herndon et al., 2013; Sasser et al., 2015).

Conversely, children with emotion dysregulation may lack the resources and capacities for successful school adjustment resulting in negative impacts on their academic and social functioning (Denham et al., 2013; Morrison et al., 2010; Williford et al., 2013). Indeed, the first national study on early expulsion and suspension conducted by the Yale University Child Study Center (Gilliam, 2005) revealed preschool-aged children are expelled at three times the rate of children in K-12 settings, often due to their challenging behaviors. Recent data from the 2016 National Survey of Children's Health further indicate an average of 250 preschoolers continue to be suspended or expelled from early childhood programs daily across the U.S. (Malik, 2017).

Besides being a stressful and negative experience, Stegelin (2018) asserted the practice of preschool suspensions and expulsions is harmful and disruptive to young children's sense of acceptance and security, opportunities to participate in enriching learning experiences, routines and stability for the family, and even predicts long-term negative outcomes such as poor attitudes toward school, retention, academic struggles, and suspensions and expulsions in later grades. Gender and racial disparities also exist in the use of exclusionary discipline practices even beginning in early childhood, where boys account for 54 percent of preschool enrollment but 79 percent of suspensions, and black students are three times more likely to be subjected to out-of-school suspensions in comparison to their white peers (Bettencourt, Gross, Ho, & Perrin, 2018; Stegelin, 2018). Indeed, there is an ongoing need to examine intervention supports that are available to promote young children's social, emotional, and behavioral health.

Problem of Practice

In early care and education settings, teachers play a significant role in creating the social and emotional learning climate in the classroom, from establishing warm and supportive relationships with children, promoting young children's socioemotional and behavioral health, responding to challenging behaviors through developmentally appropriate practices, to communicating and collaboratively effectively with families, colleagues, and community service providers (Stegelin, 2018). However, early care and education teachers often report feeling unprepared to meet the socioemotional needs of young children with dysregulated emotions and behaviors (Hemmeter et al., 2008; Whitebook et al., 2016), partly due to the limited access to evidence-based professional development opportunities (Pianta et al., 2009; Whitebook et al., 2016). Research has further shown that early childhood educators experience reduced emotional capacities in their efforts of providing care to children with challenging behaviors, including a

decreased sense of efficacy (Guo et al., 2011), high levels of job stress (Friedman-Krauss et al., 2014), and decreased use of healthy emotion regulation and coping strategies (Jeon et al., 2016; Swartz & McElwain, 2012; Zinsser et al., 2016). Collectively, these factors may be associated with early care and education teachers' reduced responsiveness to children's socioemotional needs (Morris, Denham, Bassett, & Curby, 2013), diminished quality of teacher-child relationships (Brock & Curby, 2014; Williford et al., 2013), and limited effectiveness in implementing practices to promote children's social-emotional learning (Jennings & Greenberg, 2009), and perhaps contribute to the cumulative and cyclical effects on children and teachers' negative outcomes. To improve short and long-term developmental outcomes for children, early care and education teachers' professional and emotional capacity to provide quality care for children with emotion regulation difficulties deserve more attention and systemic supports.

Mirroring national trends and concerns, this problem of practice is also prevalent within my professional context situated in a largely suburban county in the Pacific region of the U.S. Early care and education teachers struggle with addressing the needs of children with emotion regulation difficulties, while children struggle with adjusting to and meeting the socioemotional demands in preschools. The following sections of this literature review will describe the concepts and relationships of children's emotion regulation and school adjustment in greater detail, as well as examine potential contributing factors to the current problem of practice through the lens of Bronfenbrenner's (1994) ecological systems theory.

Operational Definitions of Terms

Before proceeding with the literature review, it is important to first review the operational definitions to establish a consistent understanding of key terms and constructs that will be used throughout this manuscript.

Emotion Regulation

Although there is a lack of consensus on the definition of emotion regulation in the existing literature, the construct in this manuscript refers to the “processes used to manage and change if, when, and how one experiences emotions and emotion-related motivational and physiological states and how emotions are expressed behaviorally” (Eisenberg, Hofer, & Vaughan, 2007, p. 288). In other words, emotion regulation involves both cognitive and behavioral processes for the intrapersonal and interpersonal management of emotions (Cole, et al., 2004). Breaking down into even smaller steps, Dvir, Ford, Hill, and Frazier (2014) described emotion regulation as the sequences of “selecting and modifying situations that have emotional significance, deploying attention, integrating information, making judgments and decisions, and selecting behavioral responses” (p. 149). Regardless of which definition one chooses to adopt, the construct itself is complex and multifaceted.

Research suggests an inverse relationship exists between emotion regulation and development of internalizing and externalizing problems (Eisenberg, Spinrad, & Eggum, 2010). Indeed, emotion dysregulation has been linked to many psychiatric conditions or disorders and is often manifested as externalizing behavior challenges in children (Dvir et al., 2014). Irritability, noncompliance, aggression, temper outbursts, and destruction of property are among the most commonly observed challenging behaviors exhibited by young children with emotion dysregulation (Perry, Holland, Darling-Kuria, & Nadiv, 2011), and the presence of these disruptive behaviors generally indicate “(a) the absence of sufficient ability to regulate emotion or (b) attempts to regulate a situation, emotion, or behavior in a maladaptive manner” (Breitenstein, Hill, & Gross, 2009, p. 5).

As part of typical development, there is a general decline of externalizing behaviors as young children experience growth in their abilities to regulate themselves during early childhood years (Choe, Olson, & Sameroff., 2013). However, approximately 3% to 15% of children who engage in challenging behaviors at a young age continue to have behavioral challenges through adolescence (Fettig & Ostrosky, 2011). The prevalence and persistence of such maladaptive functioning suggest early intervention supports may be warranted for children with emotion regulation difficulties.

School Adjustment

Beyond academic skills and functioning, school adjustment also emphasizes social-emotional competencies (Sasser et al., 2015). In particular, school adjustment encompasses “(a) young children’s behaviors and attitudes associated with learning in the classroom environment (e.g., positive attitudes about school, and the ability to participate both cooperatively and self-directedly in classroom activities); and (b) their skills associated with successful interactions with peers and teachers (e.g., social competence and lack of disruptive behavior)” (Herndon, et al., 2013, p. 642). Previous research shows that the abilities to engage in prosocial behaviors and form interpersonal relationships with others are critical indicators of school adjustment for young children, and set the foundation for future school experiences (Herndon et al., 2013). This manuscript will focus on the social and emotional competencies that promote children’s readiness for learning and success in a group environment, acknowledging the importance of the social and emotional competencies in children’s school adjustment.

Early Care and Education Teachers

Wide variability and diversity exist in the characteristics of programs, settings, practitioners (e.g., training, qualification requirements, compensation), pedagogical approaches,

funding sources, policies, and organizational management and regulations in early care and education (Institute of Medicine and National Research Council, 2015). This lack of uniformity among early childhood educators and the systems they work in makes it difficult to use the term broadly. In this manuscript, however, early care and education (or ECE) teachers refer to early childhood professionals who care for, work with, and educate children from birth to eight years of age, as defined by the National Association for the Education of Young Children (NAEYC). Considering this age range, ECE teachers can be inclusive of practitioners working in homes, center-based preschools, as well as childcare centers (Institute of Medicine and National Research Council, 2015).

Theoretical Framework and Contributing Factors

Human development occurs within social environments and many factors contribute to young children's development of emotion regulation and consequently, their school adjustment. For the remaining sections of this literature review, Bronfenbrenner's (1994) ecological paradigm for human development will be used to organize an investigation of such factors. The ecological systems model describes environmental contexts (i.e., macrosystem, exosystem, mesosystem, microsystem) which all operate over time (chronosystem) and along a continuum of direct relatedness to an individual. According to Bronfenbrenner (1994), factors from these contexts may directly or indirectly interact with the inherent biopsychological characteristics of an individual, and contribute to his or her developmental outcomes to a varying degree. Of particular importance is the dynamics and impact of proximal processes, what Bronfenbrenner (1994) described as the reciprocal interactions between an individual and his or her immediate environment that occur on a regular basis and over an extended period of time, on human development. Although it is beyond the scope of this literature review to discuss all potential

contributing factors to the challenges of emotion dysregulation and school maladjustment among young children, the following sections will briefly highlight salient factors within the distant environmental contexts and primarily focus on factors within a child’s most immediate contexts (e.g., self, family, school). Figure 1 provides readers a succinct summary of factors across the ecological systems that will be discussed in this chapter.

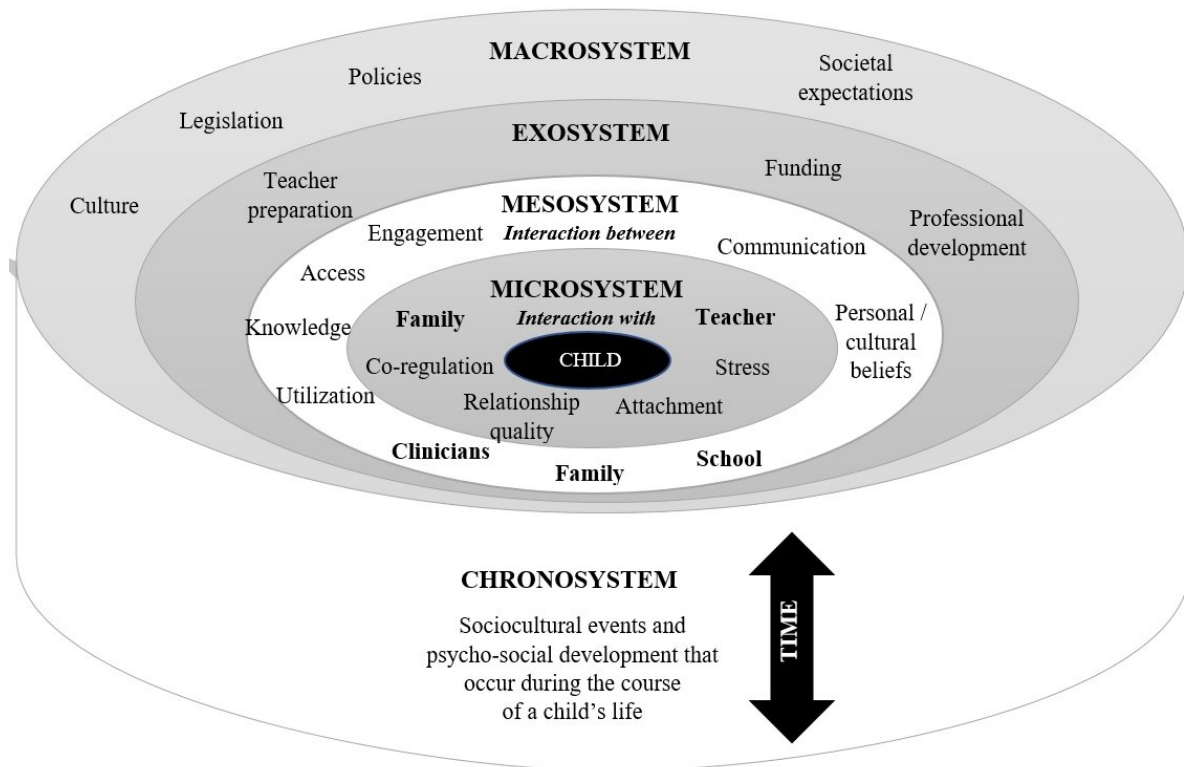


Figure 1. Conceptual ecological systems model. This figure details contributing factors associated with children’s development of emotion dysregulation and school maladjustment.

Chronosystem

An integrated level of analysis which plays a role in all other levels of systems, chronosystem considers both changes and consistencies in relation to an individual’s development throughout the course of life (Bronfenbrenner, 1994). Examples include changes in educational policies and legislation over the course of an individual’s schooling years, the development of emotion regulation with age and maturation, and family-level characteristics

(e.g., socioeconomic status, employment status, family structure) that evolve with time and life circumstances. Thus, chronosystem can be viewed as the intersection between time and people, events, or environments within all other levels in the ecological systems model (Bronfenbrenner, 1994).

Macrosystem

Considered to be the most distal level of analysis, factors in the macrosystem include social, cultural, political, or economic features of the society in which an individual resides (Bronfenbrenner, 1994). Explicit and implicit belief systems, influential knowledge bases, and cultural values of the broader society are thought to influence the development of an individual to a certain degree. Therefore, it is imperative to examine how the societal landscape has altered the trajectory of children's school experiences.

In terms of historical and economic contexts within the U.S., the increasing number of women entering the workforce in recent decades, combined with the lack of policies and supports for paid maternal or family leave (Vahratian & Johnson, 2009), has resulted in an increasing number of children enrolling into childcare centers and early education programs at an earlier age (Rimm-Kaufman & Pianta, 2000). Approximately two-thirds of children are now enrolled in an early education program by age four (U.S. Census Bureau, 2018). Meanwhile, policy reforms have redefined school readiness for children, families, and educators, particularly with the passage of No Child Left Behind (NCLB) resulting in an increased accountability of students' academic progress, and ramifications even for those in the early grades (Lara-Cinisomo, Fuligni, Ritchie, Howes, & Karoly, 2008; Westley & Buysse, 2003). The increasing societal focus on children's cognitive and academic development is evident by the shift in ECE teachers' beliefs about school readiness and pedagogical approaches, as academic content and

adult-directed instruction have taken the center stage in early childhood classrooms and dramatically altered children's learning experiences (Bassok, Latham, & Rorem, 2016). Consequently, less emphasis has been placed on children's social-emotional development and family engagement to equip them with resources to support children's developmental needs and school readiness skills (Brown, 2010; Scott-Little, Kagan, & Frelow, 2006). With expectations to increase classroom time on content instruction and decreased opportunities to foster children's social-emotional development in their natural environments (e.g., through unstructured or dramatic play) during early school years (Barblett, Knaus, & Barratt-Pugh, 2016; Hirsh-Pasek, Golinkoff, Berk, & Singer, 2009), there is an overwhelming demand for children to develop emotion and behavior regulation beyond their chronological and developmental abilities in order to access and participate in structured learning activities (Morrison et al., 2010).

Besides attention on children's academic readiness skills, governmental policies and legislations have recently taken notice of their mental health and social-emotional outcomes. As an example, the U.S. Department of Health and Human Services and U.S. Department of Education (2016) issued a policy statement highlighting the negative outcomes associated with exclusionary discipline practices (e.g., suspensions, expulsions) in early childhood. The policy further provided recommendations to the workforce and state agencies for eliminating the use of such practices in early childhood and learning settings, as well as for promoting social, emotional, and behavioral health with young children by building the capacity of ECE teachers and providers. Similar efforts at the state level have taken place in this author's professional context, as demonstrated by the governor's recent signing of an assembly bill that would establish safeguards preventing children from unnecessary exclusionary discipline practices in state-funded early learning, care, and developmental programs and services, unless the child's

participation poses a serious safety threat. However, approximately 90% of ECE settings are considered private and not state-subsidized in the local context where the current problem of practice is situated (Social Science Research Center, 2017), and thus, not required to implement these mandated guidelines and safeguards to provide supports for children's social, emotional, and behavioral health. The ongoing adjustments to federal and state policies regarding the focus of early care and education support the notion that societal and political forces have the capacity to influence the climate of early care and education, teacher practices and beliefs, and ultimately, the developing child.

Exosystem

The exosystem is characterized by the linkages of two systems, in which at least one of them does not involve the developing individual (Bronfenbrenner, 1994). The workplace, social networks, and communities are examples of such systems that can be studied to consider their indirect effects on the developing child, through the individuals (e.g., parents, siblings, peers, teachers) with whom they share direct interactions. Considering the current problem of practice takes place in the context of ECE settings, one linkage that is of particular importance is between ECE teachers and their pre-service and in-service training.

Studies have shown that ECE teachers lack training, knowledge, and skills in the domain of social-emotional development from their preparation programs (Brock & Curby, 2014; Buettner, Hur, Jeon, & Andrews., 2016). In particular, developing competencies in assessing and managing problem behaviors in the classroom continues to be a high area of need (Edwards, 2017; Hemmeter et al., 2008). Hemmeter and colleagues (2008) administered a survey across 125 early childhood teacher preparation programs in the U.S. to examine the content delivery model on children's social, emotional, and behavior development, as well as faculty members'

perceptions on how well-prepared their graduates were in addressing children's challenging behaviors. Findings revealed that although faculty members perceived graduates from four-year programs were somewhat more prepared than those from two-year programs, graduates overall only had emerging knowledge on children's social-emotional development and skills to address challenging behaviors (Hemmeter et al., 2008). Limited funding, administrative support, and faculty development have been cited to contribute to the reduced quality of early childhood teacher preparation programs (Hyson, Tomlinson, & Morris, 2009), which in turn influences the professional competencies of ECE teachers working directly with young children.

Beyond the systemic challenges in pre-service training programs, Pianta and colleagues (2009) also pointed out that professional development opportunities for ECE teachers rarely align with what is considered best practice or evidence-based, given the lack of targeted and field-based feedback on teachers' instruction and interactions with children. As a result, Pianta et al. (2009) argued the current state of professional development is counterintuitive to the investments made in supporting ECE teachers' professional learning, considering that such efforts usually translate to negligible gains in student outcomes. In combination with the lack of preparation prior to entering the field, it is not surprising that ECE teachers report concerns over their limited competence in addressing children's emotional and behavioral needs (Hemmeter et al., 2008). Much like factors in the macrosystem, the aforementioned challenges within the exosystem have an indirect but evident influence on the outcomes of a developing child.

Mesosystem

The mesosystem is comprised of interactions between two or more elements within the microsystem, with each of these elements having direct influences and interactions with the developing individual (Bronfenbrenner, 1994). In other words, mesosystem is the linkage

between two or more microsystems. Two particular sets of interactions among a child's environment (i.e., family and school, family and community) are closely examined below. As the Institute of Medicine and National Research Council (2015) pointed out, the collaboration and partnership across systems or contexts are critical for ensuring continuity in the education and care of young children; however, the reality is "just when children would benefit most from high-quality experiences that build on each other consistently over time, the systems with which they interact are fragmented" (p. 1).

Family and school. Studies examining parental partnership and engagement with schools in relations to children's learning outcomes often reference Bronfenbrenner's ecological systems perspective, as an acknowledgement that both family and school are influential systems in a developing child's life (Fantuzzo, McWayne, Perry, & Childs, 2004; Powell, Son, File, & San Juan, 2010). However, research results are inconsistent regarding the relationship between parent-school relationships and children's outcomes. One study conducted by Powell and colleagues (2010) examined the association between parent-school relationship (i.e., parental involvement, perceived teachers' responsiveness) and children's academic and social outcomes by the end of preschool year. Results indicated both parental involvement and perceived teacher responsiveness positively correlated with children's social skills outcomes, and negatively correlated with children's problem behaviors.

A previous study also investigated the relationships between various dimensions of family involvement (i.e., home-based involvement, school-based involvement, home-school conferencing) and behavioral and learning outcomes (i.e., approaches to learning, conduct problems, receptive vocabulary) in children from low-income and urban families (Fantuzzo et al., 2004). Results from the study suggest home-based involvement (e.g., parental behaviors that

promote child's learning at home such as reading to a child or providing learning activities and physical space) was the strongest predictor of children's outcomes. In contrast, weak relationships were found between school-based involvement and home-school conferencing with children's outcomes. Such findings stand in contrast to those from Powell et al. (2010); however, Fantuzzo and colleagues (2004) explained that parent-school involvement may be associated with parental education, as well as cultural and socioeconomic differences between parents and educators. The authors further highlighted common barriers to parental involvement faced by ECE teachers, such as lack of training on effective communication with families, limited understanding of family's role in children's education and outcomes, and failure to reflect on school-based practices that are incongruent with families' needs, priorities, or beliefs (Fantuzzo et al., 2004).

Family and community. Challenges also exist at the intersection of family and community that negatively impact the provision and quality of early intervention services for young children needing specialized supports that promote the development of emotion regulation. Researchers found that medical professionals and clinicians engage in variable levels of screening, diagnosing, and treating of early childhood emotional and behavioral problems, generally show limited awareness of available treatments and resources, and struggle to collaborate with and coordinate services across families, schools, and service providers (Dempster, Wildman, & DUBY, 2015). Studies have also investigated potential barriers to family engagement in mental health treatment for their children's behavior difficulties (Brown, Girio-Herrera, Sherman, & Kahn, 2014; Harwood, O'Brien, Carter, & Eyberg, 2009). Concerned with the low rates of treatment engagement among young children with social-emotional problems, a qualitative study conducted by Brown and colleagues (2014) found that parents generally go

through a lengthy process before acknowledging delays in their child's development. Parents also feel frustrated over the limited treatment services available at their primary care physicians' offices and inconvenienced with the need for scheduling additional specialist appointments at other locations (Brown et al., 2014). In addition, parents' general lack of knowledge and unrealistic hopes or fears were found to contribute to delays or avoidance of following through with referrals and prematurely discontinuing treatment for their child (Brown et al., 2014). Findings from another study by Harwood and colleagues (2009) corroborate those from Brown et al. (2014), while noting low-income families face additional barriers to accessing early childhood behavioral and mental health treatments due to issues related to costs, transportation, and childcare options.

Along with parents and clinicians' perspectives, Koivunen, Van Alst, Ocasio, and Allegra (2017) investigated potential barriers around accessing early childhood mental health services by also seeking the feedback of ECE teachers. Findings revealed the need for considering cultural factors around issues of mental health and family dynamics, underutilization of mental health services from the community due to stigma, limited availability and provision of mental health services in children's natural environments, long waiting times and delays in securing services through outside agencies (e.g., school district), and parents' hesitation in seeking supports offered by the school district due to their own negative educational experiences in the past (Koivunen et al., 2017). Overall, barriers to effective collaboration and communication across the family, school, and community contexts contribute to the reduced quality of care of young children, particularly those who are at risk of requiring mental health and behavioral supports to promote social-emotional development.

Microsystem

The last and innermost environmental context is the microsystem, which is comprised of settings and interpersonal relationships directly involving the developing individual often occurring through regular and repeated interactions (Bronfenbrenner, 1994). It is within this system where proximal processes take place (Bronfenbrenner, 1994), and consequently, it is the interplay of child-level characteristics, family, and school that contribute significantly to developmental outcomes (Pianta & Walsh, 1996, as cited in Ștefan, Rebege, & Cosma, 2015).

Individual child. Researchers have investigated the etiology of emotion dysregulation by examining several child-level characteristics: temperament (Gartstein, Putnam, & Rothbart, 2012), age (Rothbart, Sheese, Rueda, & Posner, 2011), and verbal abilities (Cole, Dennis, Smith-Simon, & Cohen, 2009). For example, temperament (i.e., individual differences in physiological, emotional, and behavioral reactivity and self-regulation that are influenced by genetics, biomaturation, and experiences over time) has been found to contribute as both risk and protective factors for internalizing and externalizing behavior problems during early childhood (Gartstein et al., 2012). Specifically, high levels of negative emotionality and low levels of effortful control (i.e., conscious efforts for orienting or shifting attention and activating or inhibiting a response) are each predictive of internalizing and externalizing behaviors (Gartstein et al., 2012). A later study found a similar predictive relationship between limited effortful control and risks of developing externalizing behaviors (Choe et al., 2013). Conversely, children with high levels of effortful control are better able to modulate their emotions in later years (Kochanska, Murray, & Harlan, 2000).

Cole and colleagues (2009) also investigated the relationships between child-level factors (e.g., age, verbal ability, temperament) and preschoolers' ability to recognize and generate

strategies for regulating negative emotions (e.g., anger and sadness). Results suggested age was a significant predictor for recognizing strategies to regulate anger, whereas children's expressive verbal ability, as opposed to their age, was a better predictor of their ability to generate strategies for anger. Consequently, children's ability to recognize regulation strategies predicted their self-regulatory behavior when frustrated. In addition to temperament, effortful control, and age effects, the study by Cole and colleagues (2009) highlighted the role of verbal abilities in mediating one's behaviors and actions.

Indeed, age effects on the development of emotion regulation may be explained by the neurobiological changes that take place around three to four years of age, which contribute to children's increasing abilities for controlling emotions and behaviors (Rothbart et al., 2011). A longitudinal study by Olson, Lopez-Duran, Lunkenheimer, Chang, and Sameroff (2011) likewise found that delays in the development of self-regulation, social-cognitive understanding, and adverse parenting practices each contributed to higher levels of peer aggression in preschool. However, only corporal punishment predicted aggressive behaviors at school-age, suggesting that child-level characteristics contributing to emotion and behavior dysregulation may resolve with developmental changes and maturation (Olson et al., 2011).

Besides biopsychological factors, there has been an increasing focus and attention on the long-term impacts of toxic stress and adversity during childhood in recent years. Murray and colleagues (2015) argued that "in managing stress emotionally, one must manage strong feelings, tolerate distress, and regulate emotionally-driven behavior" (p. 16). However, frequent or prolonged exposure to high levels of stress (e.g., poverty, exposure to violence, abuse, neglect, caregivers' substance abuse and mental health problems) likely inhibits children's abilities to develop effective regulation skills that promote their social, emotional, and behavioral well-

being (Murray et al., 2015). Similarly, exposure to traumatic events or stresses in early childhood is associated with various psychiatric disorders resulting in emotion dysregulation (Dvir et al., 2014). Results from these studies affirm that human development is influenced by individual differences and further shaped by one's experiences and interactions with his or her environments, which collectively have the potential to affect developmental, educational, and life outcomes (Nelson III & Sheridan, 2011; Rimm-Kaufman & Pianta, 2000).

Family. In addition to individual characteristics previously mentioned, emotion competencies are promoted and developed in the contexts of adult-child relationships and interactions through co-regulation (Murray et al., 2015), and the scientific community has extensively focused on parental characteristics and family dynamics. The seminal study of Baumrind (1967) conceptualized the idea that parenting styles and parent-child interactions are associated with children's psychosocial and behavioral development. More recently, early attachment between infants and mothers (Moutsiana et al., 2014), quality of parenting practices (Bernier, Carlson, & Whipple, 2010), maternal education (Hughes & Ensor, 2009), maternal stress and discipline practices (Bayer, Hiscock, Ukoumunne, Price, & Wake, 2008) are associated with children's mental and behavioral health. Likewise, Choe and colleagues (2013) further pointed out that children's risks of developing problem behaviors increase when maternal stress negatively impacts both parental self-regulation and reduces children's opportunities for learning effective strategies to regulate emotions and behaviors. Beyond parenting styles and maternal well-being, research has also established a strong association between family's socioeconomic status and children's social-emotional and behavioral health, due to its impact on parents' mental health, stability of childcare arrangements, and families' access to mental health

care and resources (Bratsch-Hines, Mokrova, & Vernon-Feagans, 2015; Davis, Sawyer, Lo, Priest, & Wake, 2010; Reiss, 2013).

School and Teacher. Besides individual and family-level contributing factors, it is also critical to explore the effects school-based interactions and relationships have on children's emotion regulation and school adjustment difficulties because children spend a significant amount of time in school settings. As cited in Chang (2013), teachers' "emotions are intimately involved in virtually every aspect of the teaching and learning process and, therefore, an understanding of the nature of emotions within the school context is essential" (Pintrich, 1991, p. 199). Building on the extensive literature of parent-child relationships, researchers began to investigate potential associations between children's social-emotional outcomes and teachers' emotion responsiveness to children (Morris et al., 2013), teachers' emotion regulation in response to stresses related to children behavior problems (Friedman-Krauss et al., 2014; Jeon et al., 2016; Swartz & McElwain, 2012; Zinsser et al., 2016), and quality of teacher-child relationships (Brock & Curby, 2014; Williford et al., 2013).

Teachers' emotion responsiveness to children. Considered to be one of the key indicators of high-quality ECE environment, emotion responsiveness is characterized by teachers' genuine care and interests in a child's emotional experiences (e.g., happiness, excitement, sadness, disappointment, frustration, anger) and engagement in positive teacher-child interactions, which foster a child's sense of value and social acceptance (Hyson, Copple, & Jones, 2006). Based on the principle that children learn emotional behaviors through observations, feedback, and instruction from others (e.g., parents, siblings, teachers, peers), the extent and manner in which ECE teachers respond to children's emotional experiences can influence children's development of emotional knowledge and behaviors (Morris et al., 2013).

Indeed, emotionally responsive teachers (i.e., warm, sensitive, and responsive to child's emotional needs) are better able to promote children's emotion regulation skills (Bailey, Denham, Curby, & Bassett, 2016). Furthermore, teachers' emotional support appears to moderate the relationship between children's emotion regulation and school adjustment, wherein children who struggle with social-emotional competencies experience more difficulties with school adjustment when they are in less emotionally supportive classrooms (Bailey et al., 2016).

Teachers' emotion regulation, stress, and quality of teacher-child relationships.

Literature has investigated the bidirectional relationships between teachers and students' social-emotional competence and outcomes following the introduction of prosocial classroom model by Jennings and Greenberg (2009). The study by Curby, Downer, and Booren (2014) suggest that teachers' emotions and behaviors potentially influence those of children, and vice versa. Singh and colleagues (2013) also highlighted that negative interactions between teachers and children have cumulative effects on children's development and may manifest into challenging or problem behaviors over time. Considering the importance of bidirectional relationships between teachers' emotions and children's emotion and behavior regulation, one cyclical pathway within the prosocial classroom model (Jennings & Greenberg, 2009) that is of interest to the current problem of practice is teachers' patterns of emotion regulation in response to stresses associated with children behavior problems, which in turn influences the quality of teacher-child relationships and consequently, children's social-emotional outcomes (i.e., emotion regulation, school adjustment).

Recalling the definition of emotion regulation as the cognitive and behavioral processes in which one engages for the purposes of intrapersonal and interpersonal management of emotions (Cole et al., 2004), researchers have studied whether the two patterns or strategies of

emotion regulation (i.e., cognitive reappraisal and expressive suppression) proposed by Gross and John (2003) apply to teachers in response to stresses they experience in the classroom. Stress, a concept introduced by Lazarus (1966), is the response for when the demands of an experience or event exceeds one's capacity for coping, or when it threatens one's well-being. Aside from external influences (e.g., demanding workload, lack of resources, lack of administrative support), internal influences such as teachers' cognitive appraisals of student misbehaviors (Chang, 2013; Friedman-Krauss et al., 2014), perceptions of classroom chaos (Jeon et al., 2016), and decreased tolerance and sense of efficacy in meeting the needs of children with challenging behaviors (Collie, Shapka, & Perry, 2012; Kokkinos, Panayiotou, & Davazoglou, 2005) have been found to be associated with teacher stress. Indeed, teaching is regarded as a profession involving intensive emotional labor (Chang, 2009; Hargreaves, 1996).

Teachers' use of emotion regulation and coping strategies have been found to mediate the relationship between student misbehaviors and feelings of job burnout (Chang, 2013), indicating that a higher degree of student misbehaviors are associated with less effective use of teachers' emotional regulation and coping strategies, which in turn is associated with greater feelings of job burnout. Similarly, Tsouloupas, Carson, Matthews, Grawitch, and Barber (2010) found that teachers' emotion regulation was associated with burnout, a separate but related construct to stress defined as "an erosion of engagement that what started out as important, meaningful, and challenging work becomes unpleasant, unfulfilling, and meaningless" (Maslach, Schaufeli, & Leiter, 2001, p. 416). However, contradicting to the results from Chang (2013), teachers' use of emotion regulation strategies was not found to have a mediating role between teachers' perceived student problem behaviors and burnout in the study by Tsouloupas and colleagues (2010).

There are two potential reasons for the discrepancy in findings. First, Tsouloupas et al. (2010) explained their sample primarily had experienced educators (more than 11 years of teaching experience) who might have already developed effective coping strategies in response to job stresses; thus, suggesting that novice or inexperienced teachers may use less adaptive emotion regulation strategies to reduce perceived stress resulting from students' challenging behaviors in the classroom. Second, the measure used in both studies, Emotion Regulation Questionnaire (ERQ) developed by Gross and John (2003) that has also been widely used outside of the field of education, may only be measuring teachers' general response to emotional experiences rather than specific emotional response to student misbehaviors in the classroom (Chang, 2013; Tsouloupas et al., 2010). Because emotion regulation is context-specific, it is unclear whether the ERQ can accurately capture the potential differences in how teachers regulate their emotions with students as opposed to adults or others in different contexts (Chang, 2013; Tsouloupas et al., 2010). Nonetheless, results from both studies provide evidence that educators' patterns of emotion regulation are associated with stresses experienced in the classroom. Early care and education teachers, however, do not receive adequate training to enhance their internal resources for managing the stresses associated with supporting children with emotional and behavioral challenges (Friedman-Krauss et al., 2014).

Quality of teacher-child relationships. Teacher-child relationship involves the two concepts of closeness and conflict, specifically, "closeness refers to teachers' feelings of affection for and open communication with children, while conflict refers to the extent to which teachers experience discordant interactions and a lack of positive rapport with children" (Pianta & Nimetz, 1991, as cited in Roskam, Stievenart, & de Mol, 2016, p. 32). Existing literature has established that teachers' perceptions of student behaviors and quality of teacher-child

relationship in the early school years predict children's academic, social-emotional, and behavioral outcomes (Denham et al., 2012; Hamre & Pianta, 2001). Cumulative effects are also indicated, considering that preschool classroom adjustment significantly predicts kindergarten classroom adjustment (Denham et al., 2014), and children's positive engagement with adults is associated with gains in emotion regulation over time (Williford et al., 2013). Conversely, conflicts in teacher-child relationships during preschool predicts referral to special education in elementary school years (Buckrop, Roberts, & LoCasale-Crouch, 2016). Longitudinal research has also shown that negativity and conflicts in teacher-child relationships increase the likelihood of children developing chronic behavior problems (Silver, Measelle, Armstrong, & Essex, 2010). Findings from these studies collectively suggest children are at-risk of emotion dysregulation and poor academic and social-emotional outcomes, when their relationships with teachers are characterized by high conflicts.

Summary

Potential contributing factors to young children's emotion dysregulation and school maladjustment, as well as ECE teachers' struggles to meet these children's needs, have been reviewed and organized using Bronfenbrenner's ecological systems framework. Increasing number of children entering an early education program at an earlier age (Rimm-Kaufman & Pianta, 2000), influences of policy reforms and legislations on the meaning of school readiness and educators' pedagogical approaches (Bassok et al., 2016; Lara-Cinisomo et al., 2008; Westley & Buysse, 2003), and increased emphasis on early academic learning over social-emotional development (Brown, 2010; Morrison et al., 2010; Scott-Little et al., 2006) are some of the factors at the macrosystem level as a result of political, social, and cultural influences from the society.

At the exosystem level, limitations and challenges in pre-service teacher training programs and in-service professional development opportunities (Brock & Curby, 2014; Buettner et al., 2016; Pianta et al., 2009) lead to ECE teachers feeling ill-equipped to meet the social, emotional, and behavioral needs of young children (Hemmeter et al., 2008). Within the mesosystem level, multifaceted barriers exist that negatively impact parent-school involvement (Fantuzzo et al., 2004), availability and access to early intervention services (Brown et al., 2014; Harwood et al., 2009) and community engagement to address children's mental and behavioral health (Koivunen et al., 2017).

Within the microsystem where proximal processes with the developing individual take place, multiple factors at the individual, family, and school levels contribute to the current problem of practice. Individual differences in temperament (Choe et al., 2013; Gartstein et al., 2012; Kochanska et al., 2000), verbal ability, and age (Cole et al., 2009; Rothbart et al., 2011), as well as exposure to adverse childhood experiences and stresses (Dvir et al., 2014; Murray et al., 2015) each play a role in the development of emotion regulation. The family context brings about differences in early attachment styles (Moutsiana et al., 2014), quality of parenting practices (Bernier et al., 2010), maternal characteristics (Bayer et al., 2008; Choe et al., 2013), and socioeconomic status and access to care and resources (Bratsch-Hines et al., 2015; Davis et al., 2010; Reiss, 2013) that may alter the trajectory of children's development in emotion regulation. Finally, teachers' emotion responsiveness to children (Bailey et al., 2016), use of emotion regulation strategies in response to stresses related to children behavior problems (Friedman-Krauss et al., 2014; Jeon et al., 2016; Swartz & McElwain, 2012; Zinsser et al., 2016), and quality of relationships with children (Brock & Curby, 2014; Williford et al., 2013) have bidirectional influences and relationships with children's social, emotional, and behavioral

outcomes. All factors reviewed in this chapter help understand the current problem of practice related to the negative experiences and outcomes of children with emotion dysregulation and their ECE teachers in early childhood settings. Figure 2 offers a visual representation to the current problem of practice and a framework for factors of interest and measures that will be investigated in Chapter 2.

Considering the current problem of practice is situated within the context of ECE settings, and guided by the notions that emotion regulation is a developmental skill that is malleable through experiences and interactions, and is strengthened through effective co-regulation with important caregiving adults who provide supportive, warm, and responsive interactions (Murray et al., 2015), teacher-level factors and particularly teacher emotions and coping skills, will be more closely examined in the following chapter. Through the quality of their relationships and interactions, teachers play a critical role in shaping children's development related to their emotion regulation and expression, which in turn influences children's school adjustment as well as future school experiences and outcomes (Herndon et al., 2013).

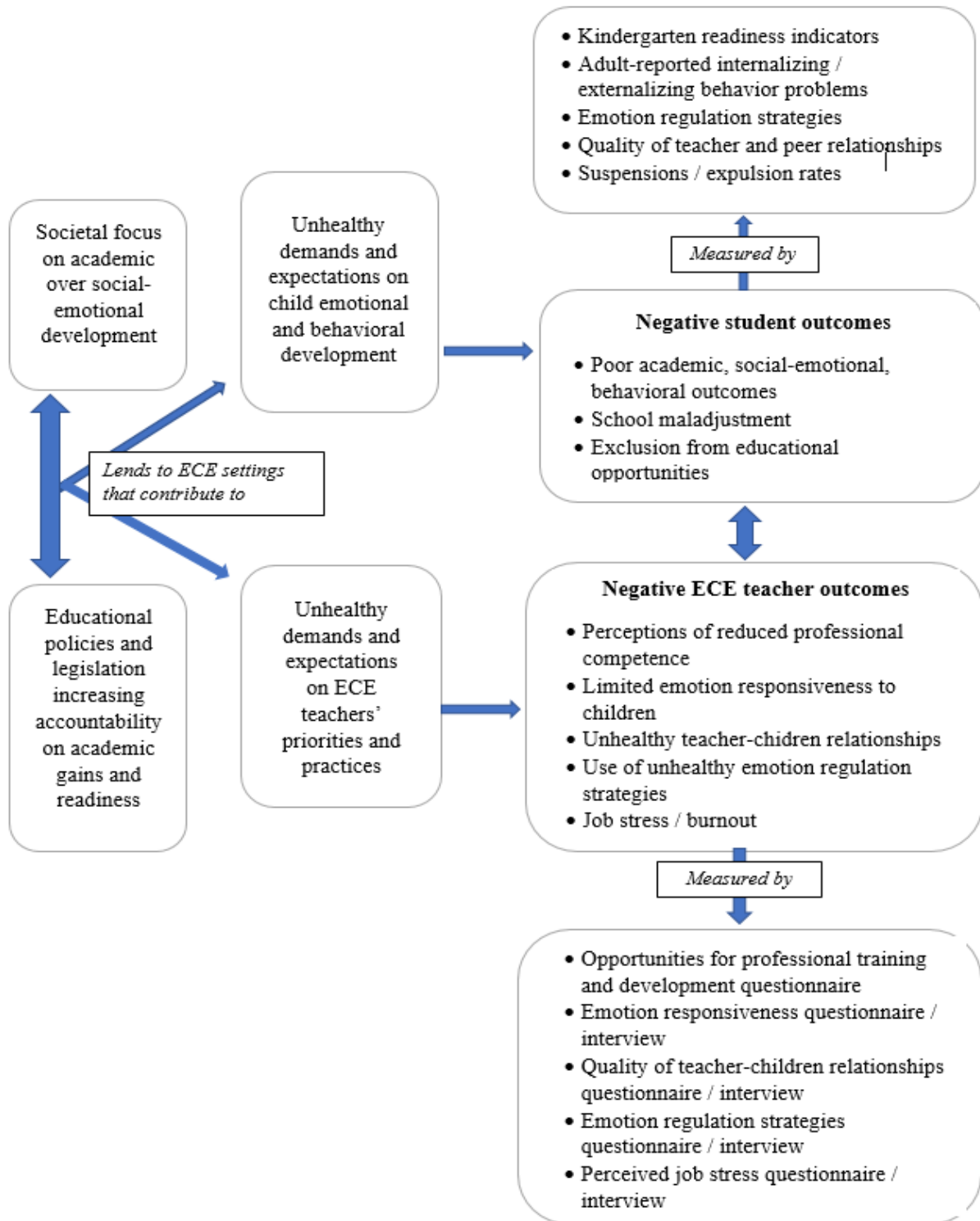


Figure 2. Conceptual model of problem of practice. This figure illustrates the proposed interactional relationships between the systemic influences from societal and political forces on the landscape of early care and education and the negative impacts on ECE and student outcomes at the classroom and individual levels. ECE = early care and education.

Chapter 2 - Needs Assessment on Early Care and Education Teachers' Professional and Emotional Capacity

The previous chapter describes contributing factors associated with children's development of emotion dysregulation and school maladjustment through the lens of Bronfenbrenner's (1994) ecological systems model, which supports the notion that human development occurs based on the interactions of inherent characteristics within the individual and his or her environments. As previously discussed, contributing factors may exist across the multi-level systems (i.e., chronosystem, macrosystem, exosystem, mesosystem, microsystem). However, considering my situated professional context and guided by the principles that emotion regulation is a developmental skill influenced by experiences and strengthened through processes of co-regulation with caring, warm, and responsive adults (Murray et al., 2015), I have chosen to investigate teacher-level factors more closely in this chapter. Specifically, ECE teachers' professional background and training in emotional and behavioral challenges, responsiveness to children's socioemotional needs, use of emotion regulation strategies, perceived job stress, and quality of teacher-children relationships will be emphasized in the current study.

Situated Context of Problem of Practice

To explore potential contributing factors related to the problem of practice within my local context, I conducted an investigation within a large public school district in the Pacific region of the U.S., which has two fee-based and four state-funded preschool programs located across six different elementary school sites. Similar to what was mentioned in the previous chapter, there is variability in program characteristics (e.g., student-to-staff ratio, full-day or half-day class options), funding sources, as well as policies and regulations (e.g., expenditure, progress monitoring and accountability measures, professional development opportunities and mandates) between fee-based and state-funded programs. Collectively, there can be up to 336

students attending the preschool programs within a school year when enrollment across all centers are at full capacity. According to Mrs. Allison, a pseudonym for an administrator who oversees all early childhood learning programs in the school district, there are no objective and concrete data available for review within the local context regarding the extent of current problem of practice. This is because there are no existing policies and requirements to implement universal and formative assessments that measure and monitor children's developmental progress for those enrolled in fee-based centers. However, based on my professional experiences as a school psychologist, there appears to be a growing concern over the number of young children with early onset emotion and behavior regulation challenges reported by ECE teachers within the local context. These observable challenges are similar to the characteristics such as impulsivity, noncompliance, aggression, temper outbursts, and destruction of property, as described in the literature (Perry et al., 2011).

Looking at data from the broader context, kindergarten teachers across the local community have also reported on a county-wide survey that over 20% of children in their classrooms exhibit delays in social competence (e.g., peer and adult relationships, approaches to learning) and emotional maturity (e.g., prosocial behaviors, aggression, hyperactivity and inattention, anxious and fearful behaviors) (citation masked for privacy). As a result, ECE teachers are expressing concerns over the adverse impacts these challenges have on children's school readiness skills and interpersonal relationships, such as sitting still, attending to instruction, following directions, completing learning tasks, and getting along with others, which are aligned with national trends (e.g., Denham et al., 2013).

Recalling that early suspensions and expulsions occur at a high rate of frequency in preschool settings (Gilliam, 2005; Malik, 2017), reports from multiple parents who have been

informed the preschool center is not the right fit for their children due to challenging and disruptive behaviors confirm the persistent use of exclusionary discipline practices within the local context. My personal communication with Mrs. Allison also indicates suspensions (e.g., sending child home for the day) likely occur on a weekly basis, particularly at centers where there is constant turnover of leadership staff. Unfortunately, the frequency in which such exclusionary discipline measures are used in the local context is unknown as there are no specific guidelines, parameters, or expectations for tracking preschool suspension and expulsion rates (Stegelin, 2018).

Purpose of the Study

The purpose of the current needs assessment is to determine whether several of the teacher-level factors identified within the literature may be relevant to ECE teachers' challenges with addressing the needs of children exhibiting emotion and behavior dysregulation. These include ECE teachers' professional training and background (Brock & Curby, 2014; Buettner et al., 2016), availability of job-embedded professional learning and development (Pianta et al., 2009), and emotion responsiveness to children (Bailey et al., 2016). Additionally, ECE teachers' patterns and use of emotion regulation strategies in response to stresses related to children problem behaviors (Chang, 2013; Friedman-Krauss et al., 2014; Jeon et al., 2016; Swartz & McElwain, 2012; Tsouloupas et al., 2010; Zinsser et al., 2016), as well as their perceived quality of teacher-child relationships (Brock & Curby, 2014; Williford et al., 2013) are investigated, given their associations with children's social-emotional outcomes (e.g., emotion regulation, school adjustment). Specifically, the current needs assessment conducted within the studied school district was guided by the following research questions:

1. What is the extent of ECE teachers' training in working with children with emotion and behavior regulation difficulties?
2. What response styles do ECE teachers report using when children display challenging or negative emotions?
3. What emotion regulation strategies do ECE teachers report using for their emotional lives?
4. What do ECE teachers report about the quality of teacher-children relationships in their classrooms?
5. What are ECE teachers' perceived levels of job stress in response to children's emotion and behavior regulation difficulties?

Method

This needs assessment was conducted using a mixed methods approach that incorporated both quantitative and qualitative data. A nonprobability sampling approach was used to recruit participants for the web-based survey, which relied on respondents to voluntarily accept the invitation. The survey consisted of a battery of self-report measures and results were analyzed using descriptive statistical methods. Based on a convenience sampling, an in-person interview was also conducted with one survey respondent who volunteered to participate by entering her email address in the last question of the web-based survey. Results from the interview may offer more in-depth and richer information to confirm or disconfirm the saliency of factors contributing to the current problem of practice based on survey results.

Data Collection

The researcher obtained permission from the school district to administer the web-based survey. At the request of Mrs. Allison to distribute the survey on the researcher's behalf, an

email message was created by the researcher detailing the confidential, anonymous, and voluntary nature of the study (see Appendix D). The email also included a brief introduction of the researcher, details regarding the purpose of the study, specified duration of the data collection period, and link to access the web-based survey. A follow-up reminder email was sent two days prior to the survey closing date. The start of the survey provided details on respondents' informed consent to participate voluntarily, and that by completing and submitting the survey, they were consenting to be a part of the research study.

A semi-structured interview protocol was used for the in-person interview (Appendix C). In addition to obtaining the participant's verbal agreement for audio recording the interview, a paper-based informed consent form was presented and signed at the start of the interview (Appendix D). The participant was also given a copy of the protocol for reference throughout the interview. The researcher engaged in notetaking during the interview to highlight key points discussed, followed by a condensed transcription of the interview at a later time. Findings from the interview are described below using a pseudonym to ensure anonymity of the participant.

Description of Participants

There were 16 district-employed ECE teachers teaching preschool in the 2018-2019 school year at the time the survey was distributed. Six participants completed the web-based survey, resulting in a 37.5% response rate. Demographic information for the ECE teachers are presented in Table 2.1.

Table 2.1

Demographics of Survey Participants

Variables	<i>n</i>	%
Gender	6	
Male		-
Female		100.00%
Race/Ethnicity	6	
American Indian or Alaskan Native		-
Asian, Native Hawaiian or Pacific Islander		16.67%
Black, African-American		16.67%
Hispanic, Hispanic-American, Latino		33.33%
White, European-American		16.67%
Multi-racial		16.67%
Educational attainment	6	
High school diploma or GED		-
Associate degree		33.33%
Bachelor's degree		50.00%
Graduate degree		16.67%
Graduate or professional degree beyond a master's		-
ECE experience in years	6	
Less than one year		-
1-5 years		33.33%
6-10 years		-
11-15 years		16.67%
16-20 years		-
More than 20 years		50.00%

Note. ECE = Early care and education.

As expected, all survey participants were females as there were no male ECE teachers employed at the time. In regards to educational attainment, all participants have earned a minimum of a two-year degree (associate's degree). The percentage of ECE teachers with a bachelor's degree from the study sample (50%) was similar to the national sample of ECE teachers serving children age three to five years (45% in National Survey of Early Care and Education Project Team, 2013). The sample's work experiences in early care and education

ranged from one year to more than 20 years. One ECE teacher who completed the survey (participant 6, or Mrs. Ellen) volunteered to participate in an in-person interview.

Measures

In addition to questions on respondents' demographic characteristics and professional background and training created by the researcher, the web-based survey included several existing self-report measures. Before the survey was distributed, a pilot study was conducted with three ECE teachers employed outside of this school district, which led to minor revisions to improve the organization, structure, and overall quality of the survey (Lochmiller & Lester, 2017). A semi-structured interview protocol was also used for the in-person interview. Please refer to Appendices B and C for a copy of the full instruments. Table 2.2 and the following sections will provide details on the description, operational definition, and specific measures used to assess each construct of interest for the current needs assessment.

Early care and education teachers' emotion responsiveness to children. Replicating from the study by Lang, Mouzourou, Jeon, Buettner, and Hur (2017), the shortened and adapted version of Coping with Children's Negative Emotions Scale (CCNES) was used for measuring ECE teachers' emotion responsiveness. The original CCNES was created by Fabes, Eisenberg, and Bernzweig (1990) for measuring parents' response styles to 12 scenarios of children displaying negative emotions. For each scenario, three possible positive reactions (expressive encouragement, emotion-focused reactions, and problem-focused reactions) and three possible negative reactions (distress reactions, punitive reactions, and minimization reactions) are presented as response options. Respondents are asked to rate their likelihood of responding to each option using a seven-point Likert-type scale (1 = *very unlikely*, 7 = *very likely*). Fabes et al. (1990) later developed a revised version to expand its use with teachers.

Table 2.2

Constructs of Interest in Current Needs Assessment

Construct	Instrument(s)	Subscale(s) / Variable(s)	Measure(s)
Emotion responsiveness	Shortened and adapted version of Coping with Children's Negative Emotions Scale (CCNES) by Lang et al. (2017)	Problem-Focused Reactions	Survey #13-17
		Emotion-Focused Reactions	Interview #1, 2, 5, 6
		Expressive Encouragement	
		Minimization Reactions	
		Punitive Reactions	
Emotion regulation	Emotion Regulation Questionnaire (ERQ, Gross & John, 2003)	Cognitive Reappraisal	Survey #19a, c, e, g, h, j
		Expressive Suppression	Survey #19b, d, f, i Interview #3, 6
Teacher-children relationship quality	Student Teacher Relationship Scale – Short Form (STRS) modified by Whitaker et al. (2015)	Closeness	Survey #18a, c, d, e, f, g, i
		Conflict	Survey #18b, h, j, k, l, m, n Interview #7
Job stress	Child Care Worker Job Stress Inventory modified by Friedman-Krauss et al. (2014)	Job stress	Survey #20a-e Interview #2, 4

In their study, Lang and colleagues (2017) used only five of the 12 scenarios from the revised version because of the scenarios' applicability to early childhood teachers and classrooms (e.g., "If a child in my class is participating in a group activity and makes a mistake and then gets upset and is on the verge of tears, I would..."). The researchers also removed the response option for distress reactions from each scenario because they were found to be highly correlated with social desirability (Fabes et al., 2002). Therefore, participants for the current study were asked to respond to a total of 25 items (five response options across five emotional scenarios).

Early care and education teachers' use of emotion regulation strategies. Emotion regulation encompasses both cognitive and behavioral processes in which one engages for intrapersonal and interpersonal management of emotions (Cole et al., 2004). Researchers have studied two distinct patterns or strategies of emotion regulation (i.e., cognitive reappraisal and expressive suppression) proposed by Gross and John (2003), to investigate teachers' responses to stresses experienced in the classroom. Cognitive reappraisal is defined as cognitive restructuring of an event or experience for the purpose of changing its emotional impact, whereas expressive suppression involves inhibiting an emotion-expressive behavior in response to a situation (Gross & John, 2003).

The Emotion Regulation Questionnaire (ERQ) created by Gross and John (2003) is a 10-item scale for measuring respondents' tendencies toward regulating their personal emotions and is consisted of two subscales: cognitive reappraisal (e.g., "When I want to feel more positive emotion, I change the way I'm thinking about the situation") and expressive suppression (e.g., "When I am feeling negative emotions, I make sure not to express them"). Respondents indicate

their agreeability using a seven-point Likert-type scale (1 = *strongly disagree*; 7 = *strongly agree*).

Quality of teacher-children relationships. This construct is measured based on ECE teachers' perceptions of their overall relationships with children in their classrooms across two domains (i.e., closeness and conflict). Specifically, "closeness refers to teachers' feelings of affection for and open communication with children, while conflict refers to the extent to which teachers experience discordant interactions and a lack of positive rapport with children" (Pianta & Nimetz, 1991, as cited in Roskam et al., 2016, p. 32). The modified version of Student Teacher Relationship Scale - Short Form (STRS, Pianta, 2001), created by Whitaker, Dearth-Wesley, and Gooze (2015) in conjunction with the original developer, is used in the current needs assessment. The modified version of STRS measures ECE teachers' perceptions of their emotional relationships with all the children in their classrooms. Respondents are asked to indicate the applicability of each statement (e.g., "I share an affectionate, warm relationship with the children," "Dealing with the children drains my energy") using a five-point Likert-type scale (1 = *definitely does not apply*; 5 = *definitely applies*) across the 15 items. Eight items make up the conflict subscale and seven items make up the closeness subscale (see Appendix B question 19).

Early care and education teachers' job stress. Friedman-Krauss and colleagues (2014) defined job stress for early childhood educators as "conditions in the workplace (i.e., in the classroom) that negatively influence physiological, psychological, and social well-being" (p. 682). The literature has investigated several conditions that contribute to ECE teachers' levels of job stress, including their cognitive appraisals of student misbehaviors (Chang, 2013; Friedman-Krauss et al., 2014), perceptions of classroom chaos (Jeon et al., 2016), and decreased tolerance

and sense of efficacy in meeting the needs of children with challenging behaviors (Collie et al., 2012; Kokkinos et al., 2005).

The modified version of the Child Care Worker Job Stress Inventory (Curbow, Spratt, Ungaretti, McDonnell, & Breckler, 2000) developed by Friedman-Krauss and colleagues (2014) is used in the present study as a measure of ECE teachers' job stress. The measure is based on five items that are likely to reflect the emotionally upsetting challenges or stresses ECEs face from managing students' problem behaviors in the classroom. Respondents provide ratings of frequency on a five-point Likert-type scale (1 = *rarely*, 5 = *most of the time*). Examples of items include "children with behavior problems are hard to deal with" and "my classroom becomes so noisy that I feel very irritated" (see Appendix B question 20).

Summary of Results

Research question 1: What is the extent of ECE teachers' training in working with children with emotion and behavior regulation difficulties?

Four of the six survey participants reported that they have received training on working with children with emotional or behavioral difficulties. In regards to the locations in which the training took place, two participants indicated they received training from both professional development opportunities (e.g., workshop, conference, webinars) and their coursework. One participant reported having received training from professional development opportunities only. One participant indicated her training took place during on-the-job supervision or consultation. Interestingly, only two of the four participants felt the training they received has helped prepare them to work with students' emotional or behavioral challenges. Tables 2.3 and 2.5 describe each participant's responses related to training experience and perceptions of helpfulness.

Of the two participants who indicated they have not received training, one reportedly has 11-15 years of experience in the field of early care and education, while the other has more than 20 years of experience. Both participants indicated they “have not come across any professional training or development opportunities (e.g., workshop, webinars)” as the reason for the lack of training.

Mrs. Ellen was one of the participants who indicated she has not had previous professional training or development on children’s emotional and behavioral challenges. During the interview, she shared that “unfortunately, there’s not a lot of time for training. It’s really hard to find training. So you just talk with your teachers, or you talk with your friends.” Mrs. Ellen further reported, “I feel like preschool teachers are often learning from their environment and each other.” Sentiments over the limited time, resources, and access to helpful or useful professional learning opportunities on children’s social-emotional development or build the capacity of ECE teachers in working challenging behaviors in the classroom mirror concerns identified in the literature, in which access to evidence-based professional development opportunities (Pianta et al., 2009; Whitebook et al., 2016) and teacher training on social and emotional development in childhood (Jennings & Greenberg, 2009) remain limited and rare.

During a personal communication with Mrs. Allison, she however shared frustration over challenges with finding opportunities to provide professional development and training to ECE teachers from fee-based centers, as opposed to teacher from state-funded centers who need to attend five days of mandatory professional development and trainings each school year per requirements set forth by the Department of Education in the studied state. In contrast, attempts to offer trainings on weeknights or weekends along with providing monetary compensation to ECE teachers from fee-based centers (for whom there are no legislative mandates for ongoing

professional development, training, or continuing education units) have been ineffective. Mrs. Allison believed that ECE teachers may not be available or wish to attend because offering trainings on weeknights or weekends can pose as barriers due to personal and family commitments. Although ECE teachers from state-funded programs are required to attend trainings each year on the topics of classroom and teaching quality (e.g., utilization of measures such as Classroom Assessment Scoring System, or CLASS and Desired Results Developmental Profile, or DRDP) and social-emotional learning, Mrs. Allison further reported there is a need to increase the capacity of ECEs from both fee-based and state-funded centers, in their skill set and knowledge of positive behavior supports and classroom management, social-emotional learning, and teachers' emotion responsiveness to children's needs.

Research question 2: What response styles do ECE teachers report using when children display challenging or negative emotions?

Based on results detailed in Table 2.3, all participants reported a higher likelihood of using positive reactions (problem-focused, emotion-focused, expressive encouragement) than negative reactions (minimization, punitive responsiveness) in response to children's negative emotions. Due to the small sample size, I did not conduct a statistical test comparing participants' scores by their background information. Descriptively, no clear pattern exists in the likelihood of using positive or negative reactions between participants who received or did not receive professional development in children's emotional and behavioral challenges, as well as between novice and experienced teachers (Table 2.4). However, ECE teachers who had professional development and felt it was helpful in preparing them to work with students' challenging behaviors in the classroom reported lower means of negative reactions (minimization and punitive reactions), in comparison to ECE teachers who received professional

development but felt it was not or only somewhat helpful. In relations to educational attainment, participants who earned at least a bachelor's degree reported higher means for emotion-focused reactions and expressive encouragement, but at the same time, also higher means for minimization and punitive response styles.

When asked how she responded to a recent event in which a child had difficulties regulating his or her emotions, Mrs. Ellen stated the need “to be patient” and “to help the child express feelings or wants through words, as opposed to just screaming and crying.” Her statement suggests a response style that may be closely related to expressive encouragement, which coincides with Mrs. Ellen's survey response indicating highest likelihood of using expressive encouragement over types of reactions. In regards to ECE teachers' role in fostering children's emotion development, Mrs. Ellen reported feeling the need to “teach our children how to express themselves verbally better, how to deal with their emotions. You know, umm, those are, like how to resolve our conflicts without constant ‘teacher teacher,’ but ‘what did you do first?’ It's like if someone wants to tattle to me, well ok, ‘what did you do? What did you do first to try to take care of it on your own?’ to foster that independence.” In considering what ECEs' role in partnering with families to children's emotion development, Mrs. Ellen pondered and replied “I don't know if there's a difference in our role. But I think we have to, like, it's all a team.”

Table 2.3

Survey Participants' Individual Responses on Professional Development, Education, Years of Experience, and CCNES

	PD	PD helpfulness	Education	Years of Experience	ECE Specialization	CCNES				
						Problem-Focused	Emotion-Focused	Exp. En.	Min.	Punitive
Participant 1	Yes	Somewhat	Graduate	1-5	Yes	7.00	7.00	7.00	2.20	2.20
Participant 2	Yes	No	Bachelor's	20+	Yes	4.40	6.40	6.60	2.20	2.20
Participant 3	Yes	Yes	Bachelor's	1-5	Yes	5.20	5.60	4.60	1.20	1.20
Participant 4	Yes	Yes	Associates	20+	Yes	6.40	5.20	5.20	1.40	1.60
Participant 5	No	-	Bachelor's	11-15	Yes	6.40	5.40	5.60	2.20	1.60
Participant 6	No	-	Associates	20+	Yes	6.40	4.60	6.60	1.40	1.00

Note. PD = professional development. ECE = early care and education. CCNES = Coping with Children's Negative Emotions Scale. Exp En. = Expressive Encouragement. Min. = Minimization.

Table 2.4

Means and Standard Deviations on CCNES by Survey Participant Characteristics

	<i>n</i>	CCNES				
		Problem-Focused Mean (SD)	Emotion-Focused Mean (SD)	Expressive Encouragement Mean (SD)	Minimization Mean (SD)	Punitive Mean (SD)
Professional development						
Yes to previous PD	4	5.50 (1.09)	6.05 (.81)	5.85 (1.14)	1.75 (.53)	1.80 (.49)
Helpfulness - Yes	2	5.30 (.14)	5.40 (.28)	4.90 (.42)	1.30 (.14)	1.40 (.28)
Helpfulness - No or Somewhat	2	5.70 (1.84)	6.70 (.42)	6.80 (.28)	2.20 (.00)	2.20 (.00)
No to previous PD	2	6.40 (.00)	5.00 (.57)	6.10 (.71)	1.80 (.57)	1.30 (.42)
Educational attainment						
Less than bachelor's	2	5.90 (.71)	4.90 (.42)	5.90 (.99)	1.40 (.00)	1.30 (.42)
At least bachelor's	4	5.75 (1.17)	6.10 (.74)	5.95 (1.08)	1.95 (.50)	1.80 (.49)
Years of experience						
Novice teachers (less than 5 years)	2	6.10 (1.27)	6.30 (.99)	5.80 (1.70)	1.70 (.71)	1.70 (.71)
Experienced teachers (more than 5 years)	4	5.65 (.96)	5.40 (.75)	6.00 (.71)	1.80 (.46)	1.60 (.49)

Note. PD = professional development. CCNES = Coping with Children's Negative Emotions Scale.

Research question 3: What emotion regulation strategies do ECE teachers report using for their emotional lives?

All participants generally reported higher means (greater use) of cognitive reappraisal over expressive suppression strategies for regulating their own emotions. Participants who have experiences with professional development and training for children's emotional and behavioral challenges ($M = 35.25$, $SD = 4.03$ for Yes to Previous PD; $M = 34.50$, $SD = 4.95$ for No to Previous PD), who have at least a bachelor's degree ($M = 35.25$, $SD = 4.03$ for at least bachelor's; $M = 34.50$, $SD = 4.95$ for less than bachelor's), or are novice teachers ($M = 38.50$, $SD = 2.12$ for novice teachers, $M = 33.25$, $SD = 3.30$ for experienced teachers) reported greater use of cognitive reappraisal. At the same time, participants with the same characteristics who have experiences with professional development and training for children's emotional and behavioral challenges ($M = 15.50$, $SD = 4.65$ for Yes to Previous PD; $M = 14.00$, $SD = 1.41$ for No to Previous PD), who have at least a bachelor's degree ($M = 16.25$, $SD = 12.50$ for at least bachelor's; $M = 12.50$, $SD = .71$ for less than bachelor's), or are novice teachers ($M = 15.50$, $SD = 6.36$ for novice teachers, $M = 14.75$, $SD = 3.10$ for experienced teachers) also reported greater use of expressive suppression. The means in cognitive reappraisal and expressive suppression are slightly higher for participants who found their professional development and training helpful in preparing for their work in the classroom than those who found them somewhat or not helpful.

During the interview, Mrs. Ellen shared that she tries "to take a step back, you know, pull myself out of the situation, whether it's an immediate response to the situation, or just trying to get quiet within myself. I'd say center myself more, when I feel stressed. And to not let whatever the situation is, and figure out how to deal with the situation calmly," in response to stressors in the classroom. She further stated to "mostly just take a deep breath. And you just

have to, you know, mentally take a step back and remember that 80 to 90% of what happens in the classroom has nothing to do with you.” Indeed, her narrative is similar to her survey responses that suggested frequent use of cognitive reappraisal strategies (second highest raw score among all six participants). When asked if she had always utilized these strategies in response to stressors experienced in the classroom, Mrs. Ellen said “No, no. I mean, I don’t think always. I’ve been doing this a really long time (chuckle).” When the interviewer asked at what point in her career she felt confident or comfortable in addressing escalated or intense emotions from children or herself in the classroom, Mrs. Ellen replied with “probably after about 10 years. I mean, I think it takes a while.”

Research question 4: What do ECE teachers report about the quality of teacher-children relationships in their classrooms?

All participants generally perceived themselves to have more closeness than conflict with the children in their classrooms (see Table 2.5). Unexpectedly, participants who have experiences with professional development and training for children’s emotional and behavioral challenges ($M = 13.75$, $SD = 3.30$ for Yes to Previous PD; $M = 12.50$, $SD = 3.54$ for No to Previous PD), or are experienced teachers ($M = 13.50$, $SD = 3.11$ for experienced teachers; $M = 13.00$, $SD = 4.24$ for novice teachers) reported higher means of conflict in their teacher-children relationships. Participants who have less than a bachelor’s degree ($M = 13.50$, $SD = 4.95$ for less than a bachelor’s; $M = 13.25$, $SD = 2.75$ for at least a bachelor’s) also reported slightly higher means of Conflict, although the statistical significance of the difference was not tested due to the small sample size. In comparison, participants who have not had previous professional development and training on children’s emotional and behavioral difficulties, have at least a

Table 2.5

Survey Participants' Individual Responses on Professional Development, Education, Years of Experience, Teacher-Children Relationships, ERQ, and CCWJSI

	PD	PD helpfulness	Education	Years of Experience	ECE Specializ.	Teacher-children relationships		ERQ		CCWJSI
						Conflict	Closeness	Cog Reapp.	Exp Suppress.	
Participant 1	Yes	Somewhat	Graduate	1-5	Yes	10.00	35.00	37.00	11.00	9.00
Participant 2	Yes	No	Bachelor's	20+	Yes	12.00	35.00	33.00	19.00	15.00
Participant 3	Yes	Yes	Bachelor's	1-5	Yes	16.00	34.00	40.00	20.00	9.00
Participant 4	Yes	Yes	Associates	20+	Yes	17.00	27.00	31.00	12.00	14.00
Participant 5	No	-	Bachelor's	11-15	Yes	15.00	32.00	31.00	15.00	11.00
Participant 6	No	-	Associates	20+	Yes	10.00	34.00	38.00	13.00	9.00

Note. PD = professional development. ECE Specializ. = early care and education specialization. ERQ = Emotion Regulation Questionnaire. Cog Reapp. = Cognitive Reappraisal. Exp Suppress. = Expressive Suppression. CCWJSI = Child Care Worker Job Stress Inventory.

Table 2.6

Means and Standard Deviations on Teacher-Children Relationships, ERQ, and CCWJSI by Survey Participant Characteristics

	<i>n</i>	Teacher-children relationships		ERQ		CCWJSI
		Conflict	Closeness	Cognitive Reappraisal	Expressive Suppression	
		Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	
Professional development						
Yes to previous PD	4	13.75 (3.30)	32.75 (3.86)	35.25 (4.03)	15.50 (4.65)	11.75 (3.20)
Helpfulness - Yes	2	16.50 (.71)	30.50 (4.95)	35.50 (6.36)	16.00 (5.66)	11.50 (3.54)
Helpfulness - No or Somewhat	2	11.00 (1.41)	35.00 (.00)	35.00 (2.83)	15.00 (5.66)	12.00 (4.24)
No to previous PD	2	12.50 (3.54)	33.00 (1.41)	34.50 (4.95)	14.00 (1.41)	10.00 (1.41)
Educational attainment						
Less than bachelor's	2	13.50 (4.95)	30.50 (4.95)	34.50 (4.95)	12.50 (.71)	11.50 (.54)
At least bachelor's	4	13.25 (2.75)	34.00 (1.41)	35.25 (4.03)	16.25 (4.11)	11.00 (2.83)
Years of experience						
Novice teachers (less than 5 years)	2	13.00 (4.24)	34.50 (.71)	38.50 (2.12)	15.50 (6.36)	9.00 (.00)
Experienced teachers (more than 5 years)	4	13.50 (3.11)	32.00 (3.56)	33.25 (3.30)	14.75 (3.10)	12.25 (2.75)

Note. PD = professional development. ERQ = Emotion Regulation Questionnaire. CCWJSI = Child Care Worker Job Stress Inventory

bachelor's degree, or are novice teachers reported higher means of closeness in their relationships with children, descriptively (see Table 2.6).

When asked how emotions contribute to the relationship between a teacher and a child, Mrs. Ellen shared “I don't know. I feel like emotions, it's more your personality I think, in how you connect with your students. I've seen really good teachers that just don't connect, you know what I mean? And then others, like there's just a personal connection with the kids. And we're all different, I think. We all approach it differently I think.”

Research question 5: What are ECE teachers' perceived levels of job stress in response to children's emotion and behavior regulation difficulties?

Table 2.5 provides results to survey respondents' individual responses on their perceived levels of job stress in response to children's emotion and behavior regulation challenges. Interestingly, participants who received professional development ($M = 11.75$, $SD = 3.20$ for Yes to Previous PD; $M = 10.00$, $SD = 1.41$ for No to Previous PD), or are experienced teachers ($M = 12.25$, $SD = 2.75$ for experienced teachers; $M = 9.00$, $SD = 0.00$ for novice teachers) reported higher levels of job stress. Participants with less than a bachelor's ($M = 11.50$, $SD = .54$ for less than a bachelor's; $M = 11.00$, $SD = 2.83$ for at least a bachelor's), or who found their previous experience with professional development somewhat or not helpful ($M = 12.00$, $SD = 4.24$ for helpfulness – no or somewhat; $M = 11.50$, $SD = 3.54$ for helpfulness – yes) reported slightly higher levels of job stress (see Table 2.6).

When asked to recall a recent experience in which a child had difficulties controlling his or her emotions, Mrs. Ellen reported the intensity of the child's emotional response was “an 8” on a scale of 1-10 (1 = *very mild*, 10 = *very intense*). In retrospect, she found the stress level of responding to the situation to be “about a 5” on a scale of 1-10 (1 = *not at all stressful*, 10 =

extremely stressful). In regards to available supports or resources at work for when ECE teachers feel stressed, Mrs. Ellen stated “I mean it’s a really small school, everybody supports each other, I feel like...the staff is always helping each other.” Mrs. Ellen further explained because early childhood centers are governed under Title 22 regulations, which require adult supervision for the children at all times, the only support that is available and appropriate to use is asking the center director to step into the classroom (so the ECE teacher can be relieved temporarily) or address the child’s challenging behaviors in a separate area. Mrs. Ellen reported feeling “the strategies always have to be covered by a staff member, so I think you’re sort of limited in that moment, and you just need to take a deep breath and forge ahead because that’s what you gotta do.” When the researcher asked Mrs. Ellen if she perceived relying on personal resources as critical for coping with stressors in the classroom, she replied with, “yeah, yeah, I think so. You’re constantly, constantly coping with 10 different things at one time, because you have 10 different little individuals wanting something different...and you just sort of learn to keep your head on the swivel.” It is noted that Mrs. Ellen’s score on the CCWJSI is among the lowest of all survey respondents based on her survey results (see Table 2.5), suggesting her perceptions of job-related stress is relatively lower than other respondents. Whether this teacher’s relatively low level of perceived job stress is associated with her reported use of regulation and coping strategies for meeting the challenging demands in the classroom (e.g., seeking support from colleagues, deep breathing, reframing a situation with statements such as “it has nothing to do with you,” being quiet within herself and in the moment, problem solving on how to deal with a situation calmly) remains to be explored.

Findings from External Report

This author's local context has also recognized that there is a need to build the capacity of ECE providers and teachers in caring and supporting the needs of children with emotional and behavioral difficulties. Upon completing the needs assessment as detailed in the previous sections, I later gained access to an external report of a large-scale study conducted in the same county by a nearby university research center, which investigated on ECE teachers' capacity to address children's emotional and behavioral needs (Social Science Research Center, 2017). This study was conducted between March and September of 2016 at the request of the Early Childhood Mental Health Collaborative, a group of diverse community-based organizations that aims to improve the behavioral and mental health outcomes for young children in the local county. In this study, 715 center and family-based ECE teachers and providers were randomly selected for a telephone interview, for the purposes of investigating the knowledge and experiences of ECE providers caring for young children exhibiting behavioral or mental health challenges.

Key findings indicated approximately 30% of ECE providers reported they were caring for at least one child with behavioral or mental health challenges in their program, and 36.9% of the providers reported having asked a child to permanently leave their program due to behavior challenges while 20.8% of providers had or would refuse to accept a child with behavior or emotional challenges into their program. Physical aggression (i.e., threatening the safety or causing harm to others) was the most commonly cited reason for asking a family to withdraw the child. The mean level of comfort for ECE providers and teachers caring for children with emotional and behavioral challenges was lower than that of caring for children with the majority of other types of conditions or developmental disorders (e.g., communication disorder, physical

impairment, hearing or visual impairment, Attention Deficit Hyperactivity Disorder, Autism, medical conditions such as asthma, diabetes, or seizure disorder). In addition, lack of training and skills needed was cited as the number one reason why ECE providers may not choose to care for a child with emotional or behavioral needs.

Results from the external study also offered findings in relations to the first research question explored in my needs assessment, which noted that more than four in ten ECE providers and teachers reported they, or an assisting staff member, had not received professional training or technical assistance in caring for children with behavioral or mental health difficulties. Many of the survey respondents perceived that workshops, conferences, or site visits by a specialist are useful methods of training, although the latter is much less common or widely available.

Overall, survey respondents stated they would welcome more training to support their capacity in caring for children with emotional and behavioral problems. Collectively, key findings from this external report (Social Science Research Center, 2017) corroborate the practice of excluding children with emotional and behavioral challenges from ECE settings remains prevalent by asking families to permanently withdraw children from the program or declining to accept children with a history of emotional and behavioral challenges into a program, and ECE teachers' perceived lack of training, skills, and comfort in caring for these children contribute to the problem of practice.

Summary

To explore potential contributing factors to the problem of practice discussed in chapter one of this manuscript and manifested in my professional context, I conducted a needs assessment using a mixed methods approach incorporating both quantitative and qualitative data (e.g., web-based survey and in-person interview) gathered from ECE teachers employed in a

local public K-12 school district. Key findings suggested that 1) ECE teachers have limited time and resources to access professional learning opportunities on children's socioemotional development, 2) existing professional development may not adequately prepare ECE teachers to work with children's challenging behaviors or promote positive responsiveness to children's emotional needs in the classroom, and 3) there is a need to foster ECE teachers' capacity to develop personal resources (e.g., emotion regulation and coping strategies), which can take many years of teaching experience to acquire in order to effectively cope with job-related stresses. Furthermore, a recent external study conducted by a local university research center substantiated the need to promote knowledge, skills, comfort, as well as efficacy beliefs of ECE teachers' ability to care for children exhibiting emotional and behavioral challenges. In the next chapter, I will review the literature for empirical support of a potential study that may address some of the actionable components of findings from the current needs assessment.

Chapter 3 - Interventions that Promote Professional and Emotional Capacity of Early Care and Education Teachers

As described in the previous chapter, ECE teachers within my professional context have limited time and resources to access professional learning opportunities on children's socioemotional development, and generally perceive that existing professional learning are not adequately preparing them with knowledge and skills to support the developmental needs of children with emotional and behavioral difficulties. In addition, there is a need to foster ECE teachers' capacity to develop personal resources (e.g., emotion regulation and coping strategies), which can take many years of teaching experience to acquire in order to effectively cope with job-related stresses, particularly when working with children whose behaviors are perceived to be challenging. This chapter will begin by first exploring interventions in the literature that promote ECE teachers' professional and emotional capacity in working with children exhibiting dysregulated emotions and behaviors in the classroom, then discussing outcomes across the teacher, classroom, and student levels, and finally proposing a conceptual model for a study that addresses relevant factors contributing to the current problem of practice.

Teacher Training on Supporting Children's Social-Emotional Competence

Extensive research exists on professional training that aims to increase teachers' knowledge and use of evidence-based practices to promote children's social-emotional development and reduce problem behaviors, ranging from systematic and prescriptive programs targeting social skills instruction, classroom and behavior management, family-school partnerships, to school-wide positive behavior interventions (e.g., Bierman et al., 2008; Domitrovich, Cortes, & Greenberg, 2007; Pahl & Barrett, 2007; Reinke, Stormont, Webster-Stratton, Newcomer, & Herman, 2012; Sugai & Horner, 2006). One comprehensive approach is supporting ECE teachers and providers' implementation of evidence-based positive behavior

support through consultation with early childhood mental health specialists (Carter & Van Norman, 2010). Positive behavior intervention and supports include tiered levels of promotion, prevention, and intervention strategies, with key components such as 1) building positive relationships between children, families, and educators, 2) creating a safe, supportive, and engaging classroom environment, 3) providing targeted instruction on social-emotional skills, and 4) developing individualized behavior supports for children with intensive needs (Hemmeter, Ostrosky, & Fox, 2006). Consultation with mental health specialists in early childhood care and education settings offers hands-on support, individualized feedback in the classroom context and setting, as well as opportunities for teachers to ask questions regarding implementation, reflect on their existing practices, and engage in data-based decision making when examining student outcomes (Carter & Van Norman, 2010).

Indeed, this comprehensive approach has recently garnered attention and interest for application in the early care and education settings with promising results (Fox, Carta, Strain, Dunlap, & Hemmeter, 2010; Hemmeter, Snyder, Fox, & Algina, 2016; Perry & Kaufmann, 2009). Positive outcomes have been reported across various levels that include improving social skills and reducing challenging behaviors among children (Hemmeter et al., 2016), fostering a long-term communicative, trusting, and collaborative relationship between families and the school system (Kuhn, Marvin, & Knoche, 2017), and reducing center expulsion rates (Vinh, Strain, & Davidon, & Smith, 2016). Benefits have been documented even for young children who have experienced trauma and from culturally diverse backgrounds (Hurley, Saini, Warren, & Carberry, 2013). As for teacher outcomes, a research synthesis conducted by Brennan, Bradley, Allen, and Perry (2008) found that supporting ECE professionals' work with children's challenging behaviors through consultation may increase staff knowledge and efficacy in

children's emotional and behavioral needs, increase teachers' sensitivity, improve quality of ECE classrooms and settings, as well as decrease teacher stress and turnover. Teachers' effectiveness at implementing evidence-based practices and strategies that promote children's social, emotional, and behavioral development is also expected to increase (Carter & Van Norman, 2010).

The current landscape, however, suggests early care and education settings in general implement policies and practices that only encourage the use of universal promotion or prevention strategies (e.g., establishing positive relationships, setting classroom and school rules and routines, encouraging use of prosocial behaviors) or intensive intervention strategies (e.g., exclusionary discipline practices such as suspensions and expulsions, individual behavior plans) (Longstreth, Brady, & Kay, 2013). The use of targeted instruction to directly teach the social-emotional skills that are critical for at-risk children to learn and develop, in contrast, is minimally reported or emphasized (Longstreth et al., 2013). As such, there is a clear need to increase the capacity of ECE teachers in their knowledge and use of evidence-based practices from a more balanced approach that incorporates promotion, prevention, and intervention strategies to better support the socioemotional needs of children within their natural learning environments.

Despite the mounting empirical evidence of positive outcomes, implementing a tiered framework to comprehensively support the universal, targeted, and individualized needs of all children through consultation with a specialist (e.g., early childhood mental health consultant) can be time and resource intensive. Such approach often requires trained clinicians or consultants to support program implementation and sustainability, as well as facilitate family-school partnership (Kuhn et al., 2017; Sheridan, Knoche, Edwards, Bovaird, & Kupzyk, 2010), leading to increased human and financial resources, which are not often available across the

early care and education system. McClelland and colleagues (2017) also caution the need to consider that early childhood centers and providers have available resources to commit (e.g., time, space) to ensure that barriers to fidelity of implementation are minimized (Dusenbury, Brannigan, Falco, & Hansen, 2003). Perhaps this need for exhaustive resources to implement evidence-based and efficacious programs explain why half of the participants in the needs assessment who felt attending brief professional development opportunities (e.g., workshop, conference, webinar) did not adequately prepare them to work with students' emotional or behavioral needs.

Given the extensive research base and promising results around implementing tiered levels of positive behavior prevention and support strategies to promote children's social, emotional, and behavioral outcomes, it is unsurprising the Early Childhood Mental Health Collaborative implemented this approach in response to study findings by the Social Science Research Center (2017). The Early Childhood Mental Health Collaborative, a partnership across multiple local professional, public health, medical, and early intervention service organizations, has since invested extensive resources from public and private funding into the Early Childhood Mental Health and Wellness Program (ECMHWP) to strengthen the capacity of ECE teachers in creating an inclusive and caring environment for children at-risk of behavioral and mental health disorders (Social Science Research Center, 2017). The ECMHWP aims to connect ECE teachers, families, and children to early mental health intervention services and supports through an ongoing consultative relationship with specialists by building teachers' capacity to engage in sustainable and evidence-based practices, based on the framework of tiered levels of positive behavior supports, to effectively prevent and intervene when children exhibit emotional and behavioral challenges in their ECE environments. This partnership approach between teachers

and mental health professionals in the early child and education setting is increasingly being implemented across the U.S. (Duran et al., 2009), and is now being adopted in this author's local context for the first time.

Although the ECMHWP, which appears to be a robust and empirically supported approach in the literature (e.g., Fox et al., 2010; Hemmeter et al., 2016; Kuhn et al., 2017; Perry & Kaurfmann, 2009; Vinh et al., 2016) is underway in the local context providing ECE teachers with professional and technical assistance and promoting knowledge and skills to support the socioemotional needs of children, there is still a gap in this type of programming. Specifically, there remains a need to foster ECE teachers' capacity to develop personal resources to cope with work-related stresses, such as when working with children whose behaviors are perceived to be challenging. Indeed, researchers have recently begun to emphasize building the capacity of teachers' own social-emotional well-being alongside their students' by incorporating lessons such as stress management and mindfulness, on the basis that ECE teachers can effectively implement evidence-based practices when they themselves have the capacity to model the social-emotional skills that they are being asked to teach (Jennings & Greenberg, 2009; McClelland et al., 2017).

As discussed earlier in this manuscript, teaching is a profession involving intensive emotional labor and practice (Chang, 2009; Hargreaves, 1996). Thus, a more comprehensive approach to the professional development of ECE teachers is needed besides increasing their knowledge and use of evidence-based practices that are developmentally appropriate and supportive of young children whose behaviors they may find challenging (Lang et al., 2020). Jennings and Greenberg (2009) hypothesized there can be a "synergistic effect" (p. 515) when professional training focuses on supporting both teachers' social-emotional competence and

implementation of teaching practices to promote children’s social-emotional competence. The proposed study discussed in the next chapter, therefore, will explore how to support ECE teachers’ social-emotional competence and well-being in an effort to maximize the effectiveness of evidence-based professional learning opportunities that focus on teaching practices.

Theoretical Framework

Recognizing that existing theories at the time were limited in their scope to explain the complexity of human nature, behavior, and learning, Bandura (1986) introduced social cognitive theory to emphasize the significant role and influences of the social environment on one’s learning. The theoretical model of triadic reciprocal determinism (see Figure 3; Bandura, 1986), in particular, highlights the interactional processes and influences between one’s environment, behavior, and personal factors. Within this model, Bandura (1986) contended a bidirectional relationship exists between each pair of factors (e.g., behavior influences and can be influenced by environment) and the magnitude of influence between factors can differ depending on the activity or context, although the role of personal factors (e.g., cognition) on human development and learning appears to have been increasingly emphasized in Bandura’s work (Tudge & Winterhoff, 1993).

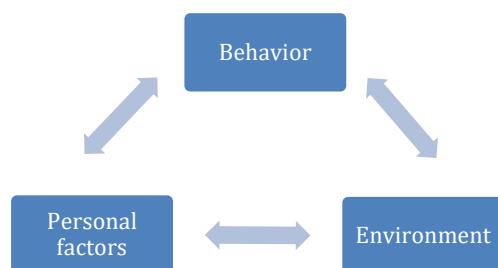


Figure 3. Bandura’s model of triadic reciprocal determinism. Adapted from *Social Foundations of Thought and Action: A Social Cognitive Theory* (p. 24), by A. Bandura, 1986, Englewood Cliffs, NJ: Prentice-Hall. Copyright 1986 by Prentice-Hall, Inc.

More contemporary theorists (e.g., Alexander, Schallert, & Reynolds, 2009; Bruning, Schraw, & Norby, 2011), in their efforts of linking cognitive psychology to educational practices, have continued to reinforce Bandura's (1986) theory that both environment and personal characteristics contribute to human behaviors to some degree, and none should be overlooked when examining the learning process. In particular, Bandura's (1986) triadic reciprocal determinism offers a sound theoretical basis for understanding the teaching and learning processes of developing social-emotional competence, which is defined as "the skills, behaviors, and attitudes students and adults need to effectively manage their affective, cognitive, and social behavior" (Yoder, 2013). Specifically, social-emotional competence involves self-awareness and management of personal emotions, social awareness, relationship skills, and responsible decision-making (Collaborative for Academic, Social, and Emotional Learning [CASEL], 2020). In the context of early care and education settings, studies have found that relationships exist across classroom environment (e.g., preschool classroom chaos and students' challenging behaviors), teachers' cognition (e.g., use of emotional regulation and coping strategies), as well as teachers' behaviors (e.g., quality and type of reactions teachers exhibit in response to children's emotions) (Jeon et al., 2016).

Personal Factors – Interplay of Cognition and Emotion Among Teachers

As previously mentioned, Tudge and Winterhoff (1993) suggest the role of personal factors (i.e., cognitive and affective characteristics) has been increasingly emphasized in the relationships outlined in Bandura's (1986) model for triadic reciprocal determinism. From a neuroscientific standpoint, neural systems and neurophysiological markers connect human emotion and cognition and are implicated in the process of emotion regulation (Dennis, 2010). In particular, the author suggests the anterior cingulate cortex is implicated given its interactions

with the ventral (which is activated for affective arousal and information) and dorsal (which is activated for cognitive processes involving effortful and executive control) networks of the prefrontal cortex. Dennis (2010) further proposes two pathways to explain the underlying processes and development of emotion regulation, and potential differences in neural processes between individuals exhibiting adaptive versus maladaptive emotion regulation in response to environmental demands and contexts. The first pathway focuses on one's abilities to exercise cognitive control (e.g., attention, inhibition) during emotionally challenging events or contexts, which are likely to increase the demands to modulate interpersonal behaviors. The second pathway considers the timing in which an individual attends and responds to emotionally charged stimuli.

Although the scientific community maintains a dominant perspective that cognition and emotion are two separate and contradictory processes to each other in the context of emotion regulation (i.e., "cool" cognition needs to control "hot" emotions), Dennis (2010) argues the interconnectedness between the frontal lobe and limbic systems are both dynamic and complex, and that emotions (both positive and negative) have the capacity to enhance or inhibit cognitive control processes. As such, Dennis (2010) proposes the need to adopt a complementary view to recognize that emotion and cognition play an interactive and integrated role in the process of regulating one's emotions.

In what may be a seminal article on the role of teachers' emotions in the context of teaching and learning, Sutton and Wheatley (2003) point out that theorists and researchers across the fields of psychology, sociology, and education do not agree on a uniform definition of emotion, but tend to hold a multi-componential view. That is, emotions encompass multiple processes including one's *appraisal* (i.e., judgment or interpretation of an event in relations to

one's goals, concerns, or motives), *subjective experience* (i.e., one's private mental state), *physiological change* (i.e., effects on physiology such as heart rate), *emotional expression* (i.e., nonverbal expressions such as facial changes), and *action tendencies* (i.e., tendencies for response or action that can be up or down-regulated). More importantly, Sutton and Wheatley (2003) argue that emotions have the capacity to influence teachers' cognition (e.g., attention, memory, problem solving), motivation, and behavior, along with implications on teachers' efficacy beliefs, adoption of new teaching practices, interactions and relationships with students, appraisals of students' behaviors, as well as classroom management and discipline. Indeed, the prosocial classroom model by Jennings and Greenberg (2009) is one conceptual framework that reflects this view of interconnectedness between a teacher's cognition, emotion, behaviors, and ability to effect changes in the classroom environment.

Teachers' Emotions and the Classroom

The prosocial classroom model (Figure 4; Jennings & Greenberg, 2009) highlights the reciprocal relationships between teachers' personal factors, behaviors, and social environment. In particular, the authors posit the importance of promoting teachers' social-emotional competence and well-being to bring about positive changes in their abilities to effectively implement social-emotional learning, manage classrooms, and maintain healthy teacher-student relationships, which would directly or indirectly influence the quality of classroom climate and students' socioemotional outcomes. Consequently, improved classroom and student outcomes are expected to cyclically relate to improved teacher social-emotional well-being, and so forth.

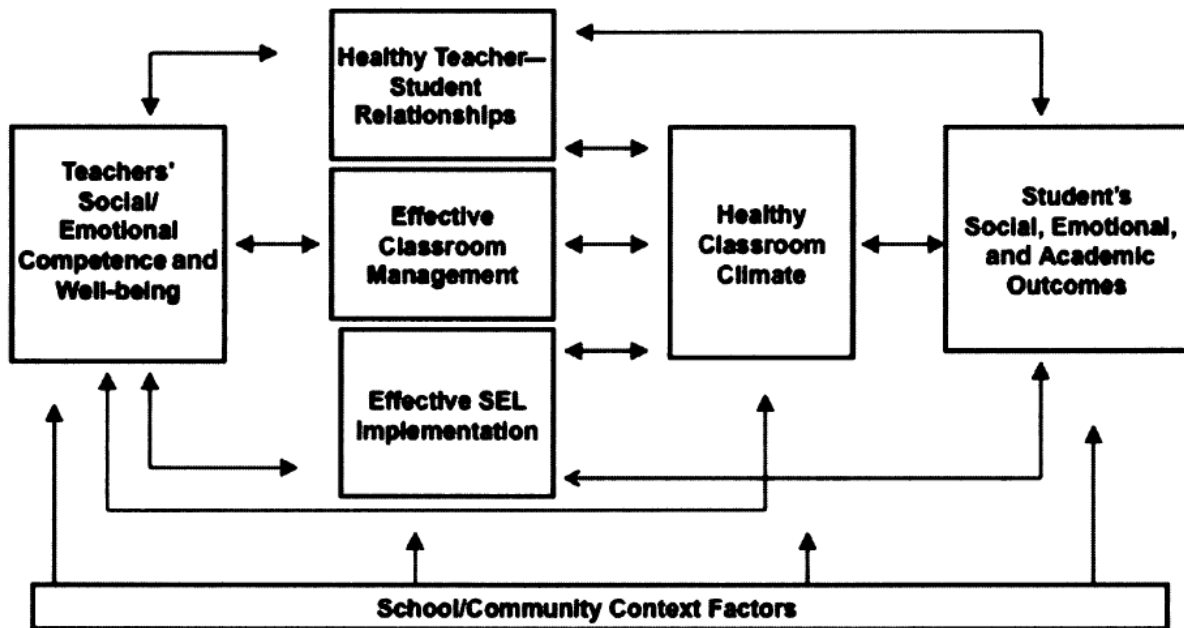


Figure 4. The prosocial classroom model. Reprinted from “The Prosocial Classroom: Teacher social and emotional competence in relation to student and classroom outcomes,” by P. A. Jennings, and M. T. Greenberg, 2009, *Review of Educational Research*, 79, 491-525. Copyright 2009 by the American Educational Research Association.

Indeed, many studies have since evaluated the relationships proposed in this model (e.g., Biglan et al., 2013; Jennings et al., 2013; Lang et al., 2020; Roeser et al., 2013) with promising results. Teacher-level outcomes (e.g., teachers’ social-emotional competence and well-being, efficacy beliefs), however, have remained to be the primary focus of measured outcomes, with few studies examining proximal (e.g., teacher-student relationships, classroom management, social-emotional learning implementation) and distal (e.g., children’s social, emotional, or behavioral functioning) outcomes. The following sections will explore such studies in greater details.

Training on Teachers’ Social-Emotional Competence and Well-Being

The prosocial classroom model (Jennings & Goldberg, 2009) begins with teachers’ social-emotional competence and well-being. As previously mentioned, social-emotional

competence involves intrapersonal and interpersonal processes that include one's self-awareness and management of personal emotions, responsible decision-making, social awareness and relationship skills (CASEL, 2020). Likewise, the construct of well-being is multifaceted and complex, although Cumming and Wong (2019) proposed a holistic approach to conceptualizing the construct for early childhood educators, which they defined as:

A dynamic state, involving the interaction of individual, relational, work–environmental, and sociocultural–political aspects and contexts. Educators' well-being is the responsibility of the individual and the agents of these contexts, requiring ongoing direct and indirect supports, across psychological, physiological and ethical dimensions (p. 12).

This definition not only highlights the importance of early childhood educators' mental and physical health when examining their well-being, but also acknowledges the multiple influences and interactions at play across individual, organizational, and systemic structures.

Cumming and Wong (2019) further pointed out the construct of well-being has not been sufficiently or clearly defined by past researchers but appears to be a construct related and limited to the measures used in empirical studies. In particular, researchers have recently focused their attention on early childhood educators' psychological and emotional wellness (e.g., Jennings et al., 2013; Jeon, Buettner, & Hur, 2016; Royer & Moreau, 2015) by examining variables such as job attitudes, teaching efficacy, stress, burnout, or mental health (e.g., mindfulness, emotion knowledge and regulation). Resilience, a closely related construct to emotional well-being, has also been an area of focus for researchers in recent years. Resilience has been described as a personal resource that serves as a critical protective factor for predicting teacher well-being as well as buffering the deleterious effects of working in the teaching

profession (Pretsch, Flunger, & Schmitt, 2012). In their extensive review of the literature, Mansfield, Beltman, Broadley, and Weatherby-Fell (2016) conceptualize resilience as follows:

In the context of the teaching profession, resilience may be conceptualized as a *capacity*, a *process* and also as an *outcome*. Resilience involves the *capacity* of an individual teacher to harness personal and contextual resources to navigate through challenges, the dynamic *process* whereby characteristics of individual teachers and of their personal and professional contexts interact over time as teachers use particular strategies, to enable the *outcome* of a teacher who experiences professional engagement and growth, commitment, enthusiasm, satisfaction, and wellbeing (p. 80).

Similar to the perspectives of Cumming and Wong (2019), Mansfield and colleagues (2015) propose developing teachers' personal and contextual resources for the purpose of fostering resilience against occupational challenges and stressors.

Challenging Behaviors and Teachers' Social-Emotional Well-Being

Indeed, Hastings (2002) conducted a review of available research and suggested that staff's emotional reactions mediate the impact in which clients' challenging behaviors have on staff psychological well-being (e.g., stress levels) in clinical settings. Chang (2013) similarly found that teachers' appraisals, regulation, and coping strategies explain the relationship between students' disruptive behaviors and teachers' emotional outcomes in the areas of stress and burnout. A more recent study by Zinsser, Zulauf, Nair Das, and Silver (2019) found that ECE teachers who recommend student expulsion use stress management strategies that are considered short-term or temporary (e.g., taking a few minute break away from the situation), as opposed to teachers who do not recommend student expulsion and use more strategies that promote internal cognitive reframing or seek out external social supports. Consequently, Zinsser and colleagues

(2019) propose there is merit to evaluate how promoting teachers' emotional health and resilience through the process of reflecting and reframing teacher-student relationships and interactions that may be perceived as stressful, may have an impact on requests for student expulsions. Collectively, these findings suggest there is a need to support adults' cognitive and emotional responses to challenging events in the classroom to promote better teacher and student outcomes.

Interventions to Promote Teachers' Social-Emotional Competence and Well-Being

Various interventions exist to improve preservice and in-service teachers' emotional well-being in hopes of effecting positive changes and outcomes at the classroom and student levels. In particular, providing explicit instruction on therapeutic practices and strategies that promote teachers' mindfulness, stress management and relaxation, resilience, as well as emotional competence (e.g., knowledge, awareness, and regulation of emotions) have garnered attention among researchers in recent years (e.g., Biglan et al., 2013; Jennings et al., 2013; Lang et al., 2020; Roeser et al., 2013; Taylor et al., 2016). A detailed summary of intervention studies that are discussed in this chapter, in regards to study sample, location, design, duration, as well as intervention program and components, can be found in Table 3.1. Key findings from these studies are further discussed in the following subsections.

Table 3.1

Summary of Research on Teachers' Social-Emotional Competence and Well-Being

Authors	Sample	Location	Design	Exp. Group	Control Group	Duration	Intervention	Intervention Component
Benn et al. (2012)	K-12 educators + parents of children with special needs	U.S. – small Midwestern city	RCT (waitlist control)	31	29	Twice a week over 5 weeks	Stress Management and Relaxation Techniques (SMART-in-Education) program	<ul style="list-style-type: none"> • 36 hours of didactic instruction, modeling, group discussion and practice • Nine 2.5 hour sessions on mindfulness practice, homework assignments, daily sitting practice and monitoring • Mindfulness-based stress reduction practices and components (e.g., emotion theory, regulation, forgiveness, kindness and compassion, application of mindfulness to parenting and teaching)
Biglan et al. (2013)	ECE program staff & family consultants for children with developmental disabilities	U.S. - Northwest	RCT (waitlist control)	23	19	Two workshops over 2-3 weeks	Acceptance and Commitment Therapy (ACT) workshops	<ul style="list-style-type: none"> • Two 3.5-hour brief workshops on ACT principles and exercises (e.g., awareness and acceptance of thoughts and feelings about a situation, promotion of work values) • One booster session one month after 2nd workshop • Site administrators and trainers promoted ongoing use of strategies during staff & supervisory meetings

Authors	Sample	Location	Design	Exp. Group	Control Group	Duration	Intervention	Intervention Component
Cook et al. (2017)	Secondary teachers	U.S. – Midwest region	RCT block controlled	22	22	5 weeks	ACHIEVER Resilience Curriculum (ARC)	<ul style="list-style-type: none"> • Five 2.5-hour sessions with direct instruction on knowledge of resilience and habits, video demonstration of skills and habits in action, individual personalized plan for applying skills at work and personal lives • Practice partner for teaching and accountability purposes • Each session started with reflection activities • Three emails sent each week on targeted resilience practices for the week
Flook et al. (2013)	Elementary teachers	U.S. – Midwestern	RCT (waitlist control)	10	8	8 weeks	Modified Mindfulness-Based Stress Reduction (mMBSR) course	<ul style="list-style-type: none"> • 26 hours of group practice and instruction (2.5 hours per week + 6 hour day-long session) on topics related to mindfulness, meditation, yoga, stress • Participants expected to practice 6 days/week for 15-45 minutes from guided recordings • Informal practices during a work day
Garner et al. (2018)	Preservice teachers (some with preschool)	U.S.	RCT	43	44	6 weeks	Mindfulness-based practices (MBP) and social-	<ul style="list-style-type: none"> • Two-hour weekly sessions to promote knowledge of and practice with mindfulness meditation, breathing techniques, dimensions of emotional competence and

Authors	Sample	Location	Design	Exp. Group	Control Group	Duration	Intervention	Intervention Component
	teaching experience)						emotional learning (SEL) intervention	<p>regulation, role of emotions in children's learning, relationship building, and coping with challenging behaviors, and resilience.</p> <ul style="list-style-type: none"> • Lectures, role-playing, hypothetical case studies, group discussions and work • Each session included 15 minutes of guided mindfulness and meditation exercises by a long-term practitioner. • Control group received meditation training only without SEL content
Jennings et al. (2013)	PreK-12 th general & special education teachers and specialists	U.S. - Northeast	RCT (waitlist control)	27	26	30 hours over 4-6 weeks	Cultivating Awareness and Resilience in Education (CARE for Teachers)	<ul style="list-style-type: none"> • 30-hour across 4 day-long sessions with direct instruction on emotion skills, mindfulness, stress reduction, compassion practices • 20 min. individual coaching session by phone • 6-hour booster session about 2 months after last session
Lam & Wong (2017)	ECE teachers & young children	Hong Kong	Pre- and post-test quasi-experimental	106 ECE teachers	n/a	8 weeks	modified Wisconsin Pyramid Model for Supporting Social Emotional	<ul style="list-style-type: none"> • Blended learning activities (e.g., online multimedia study, lectures, discussions, role-playing) for training on assessment of children's social-emotional well-being, and ECE teachers' emotional literacy

Authors	Sample	Location	Design	Exp. Group	Control Group	Duration	Intervention	Intervention Component
				n (ages 3-6 years)			Competence in Infants and Young Children	<ul style="list-style-type: none"> • 3 workshops for hands on and small group experience to design an evidence-based curriculum to support children's social-emotional development. Participants given 2 months to implement curriculum in their classroom.
Lang et al. (2020)	ECE teachers (of children 6 weeks – 5 years old)	U.S. - Midwestern	Pre- and post-test quasi-experimental	63	n/a	2 weeks	Social Emotional Learning for Teachers (SELF-T)	<ul style="list-style-type: none"> • 5 online modules with multimedia content related to stress, physiological effects, and reduction strategies • Printed packets with application activities and exercises
Poulin et al. (2008) – <i>study 2</i>	Preservice teachers in undergraduate program	U.S.	Quasi-experimental	28	16	8 weeks	Mindfulness-Based Wellness Education (MBWE) program	<ul style="list-style-type: none"> • Mindfulness skills, stress reduction education taught through students' elective course on educator stress and burnout • Provided CDs and wellness workbooks for guided practice 5 days per week for 15-20 minutes daily
Roeser et al. (2013)	K-12 teachers	Canada + U.S.	RCT (waitlist control)	54	59	8 weeks	SMART-in-Education	<ul style="list-style-type: none"> • 36 hours over 11 sessions of didactic instruction and experiential activities (e.g., guided practice, yoga, group discussions, small-group learning) on mindfulness, self-compassion,

Authors	Sample	Location	Design	Exp. Group	Control Group	Duration	Intervention	Intervention Component
								<p>coping with stress, emotional resilience and regulation</p> <ul style="list-style-type: none"> • Weekly group discussions of homework and home practice
Singh et al. (2013)	ECE teachers & children (ages 5-8)	U.S.	Case study	3 teachers + 18 children	n/a	8 weeks	Mindfulness training	<ul style="list-style-type: none"> • 2-hour weekly (8 sessions total) individual teaching and training sessions on mindfulness-based meditation techniques • Daily homework meditation practices for 5 days a week and 20-30 minutes each day, for the next 16 weeks
Taylor et al. (2016)	K-12 teachers	Canada	RCT (waitlist control)	26	30	9 weeks	Stress Management and Relaxation Training (SMART)	<ul style="list-style-type: none"> • 36 hours over 11 sessions of explicit instruction, facilitated group exercises, and group discussions on mindfulness-based stress reduction, emotion skills, and compassion and forgiveness practices • 16 hours total of daily home practice

Teachers' emotional well-being and perceived stress. Interventions that have focused on improving teachers' emotional competence and well-being, as well as reducing teachers' perceived job and personal stress, have shown promising results despite the variability across study samples, designs, and components. In their study, Biglan and colleagues (2013) investigated whether workshops of mindfulness training combined with therapeutic approach (e.g., acceptance and commitment therapy) would have an impact on the psychological flexibility and well-being (e.g., mindfulness, depression, job motivation, job satisfaction, sense of efficacy, burnout, stress) among early childhood special education teachers. Mindfulness training emphasizes one's ability to show awareness of, be present with, and accept one's thoughts and emotions, as means of improving his or her capacity for regulating or reducing emotional reactivity to an event or experience (Becker, Gallagher, & Whitaker, 2017). Findings showed that participants experienced decreased levels of depression and higher levels of personal accomplishment, with improvements sustaining over time past the initial follow-up by researchers. However, it should be noted that administrators at the sites where study participants were recruited made sustained efforts to promote the ongoing use of therapeutic principles and strategies during staff and supervisory meetings (Biglan et al., 2013). This reinforces that organizational structures and contextual resources play an integral role in promoting educators' resilience and well-being (Cumming & Wong, 2019).

In addition to psychological and emotional functioning indicators (e.g., anxiety, depression, mindfulness, positive and negative affect, self-compassion, forgiveness), emotion regulation is one particular aspect of teachers' social-emotional competence and well-being that has been extensively studied, considering its associations with teacher stress, exhaustion, and burnout (Chang 2013; Tsouloupas et al., 2010). Indeed, researchers have found that teachers

reported an increased use of cognitive reappraisal strategies when regulating emotional arousal to external events or situations following a teacher professional development program on emotion skills, mindfulness and stress reduction practices, and compassion practices (Jennings et al., 2013). School-age teachers experienced an increased sense of self-efficacy in regulating emotions at work in the study conducted by Taylor and colleagues (2016), whereas ECE teachers caring for infant, toddler, and preschool-age children also reported feeling better prepared to handle their own stress and emotions after participating in Lang and colleagues' (2020) intervention program that aimed to promote teachers' emotional knowledge. Likewise, reduced teaching and job stress have been reported across studies (Biglan et al., 2013; Roeser et al., 2013; Taylor et al., 2016).

In a randomized controlled study, Jennings and colleagues (2013) set out to determine to what extent do teachers who participate in a professional development program show improvements in measures related to their general well-being, mindfulness, efficacy, and burnout. Components of the program by Jennings et al. (2013) include emotion skills instruction, mindfulness and stress reduction practices, and compassion practices, and results from the study indicate participation in the program had significant positive effects on all measured outcome variables. As such, the professional development program shows promise in supporting teachers' social-emotional competence and well-being (i.e., by reappraising and regulating emotional reactivity to a stressful experience, reducing stress-related physical symptoms, improving teaching efficacy and sense of personal accomplishment), which in turn helps promote supportive teacher-student relationships, particularly for students who are at-risk for school failure (Jennings et al., 2013). However, the authors also noted that a teacher professional development program at this level of intensity for time and resources (i.e., a 30-hour

program delivered across four day-long sessions over a four to six-week period, individualized coaching sessions over the telephone, ongoing local group support activities, a six-hour booster session two months after the last treatment session) can be unusual, though may be necessary for behavioral change to occur.

Similar intervention effects, such as decreased psychological symptoms (e.g., anxiety, depression), job stress, and burnout, as well as improvements in mindfulness, self-compassion, and physical health for teachers, have also been found across other studies (e.g., Benn et al., 2012; Flook et al., 2013; Poulin, Mackenzie, Soloway, & Karayolas, 2008; Roeser et al., 2013; Taylor et al., 2016). However, traditional mindfulness-based training often involves didactic instruction and group practices led by experienced trainers and practitioners in mindfulness, along with exercises that participants are expected to engage in on a daily basis. Despite the positive outcomes observed, participants have expressed concerns that expectations for homework exercises, which often range from 20-45 minutes for at least five days per week, can be too demanding (Poulin et al., 2008).

More recently, Cook and colleagues (2017) conducted a pilot study of an intervention program grounded on theories of change and positive psychology, which focuses on resilience training and mindfulness-based practices. Using a direct instruction approach (consisted of building conceptual knowledge, modeling, using video demonstrations, creating personalized action plans, and practicing with an accountability partner), participants in the study experienced a moderate reduction of job-related stress and a moderate increase in job satisfaction. Findings from this study corroborate the existing literature (e.g., Biglan et al., 2013; Jennings et al., 2013; Lang et al., 2020) that an intervention program grounded in multiple therapeutic theories and

practices, beyond just one area of focus (e.g., mindfulness), can help promote teacher emotional outcomes.

Nonetheless, despite the positive effects on various aspects of teachers' social-emotional competence and well-being noted across these studies, Lang and colleagues (2020) argued that there is a need for research to consider a comprehensive approach of teacher training that promotes teachers' personal stress management, resilience, and emotional competence, as well as offers explicit instruction and guidance on developmentally appropriate and evidence-based practices that support children's social-emotional needs. A study conducted by Garner and colleagues (2018) examined the effects of incorporating mindfulness-based practices (e.g., meditation, breathing techniques) for preservice ECE teachers, along with content on social-emotional learning (e.g., knowledge of emotional competence and regulation, role of emotions in children's learning, relationship building between adults and children, resilience and coping strategies with children's challenging behaviors). In this randomized study, researchers found that mindfulness, emotional competence (i.e., perceiving, understanding, using, and regulating emotions), and child-centered beliefs about challenging behaviors improved for both groups, but there was a larger increase in all measures for the intervention group in comparison to the control group who only received training on practices to promote participants' emotional health only. Results from this study reinforce the need to provide professional training on both teaching practices and teachers' social-emotional competence and well-being, to better promote children's social-emotional outcomes.

Teachers' responsiveness. As previously described in this manuscript, teachers' emotion responsiveness (i.e., ECE teachers' genuine care, interests, and guidance to support children's emotional experiences in the classroom and engagement in positive teacher-child

interactions) is one of the key indicators of high-quality ECE environment (Hyson et al., 2006). The extent and manner in which ECE teachers respond to children's emotional experiences can influence children's development of emotional knowledge and behaviors (Morris et al., 2013), considering that emotionally responsive teachers (i.e., warm, sensitive, and responsive to child's emotional needs) have been found to be better able to promote children's emotion regulation skills (Bailey et al., 2016). In their pilot study, Lang and colleagues (2020) also investigated whether professional development on promoting ECE teachers' well-being alone could have influenced their practices and responsiveness to children's social-emotional needs. Findings indicated mixed results, wherein ECE teachers in the study sample reported an increased likelihood of encouraging children to label and share about their emotions, but also reported an increased likelihood of reacting negatively (e.g., using disciplinary or indifferent responses) to children's negative emotions. Lang and colleagues (2020) consequently suggested a need for professional development that is comprehensive in providing training on developmentally appropriate practices and guidance that can promote children's social and emotional outcomes, in addition to fostering ECE teachers' social-emotional competence.

Teacher efficacy. Besides understanding changes in indicators of psychological or emotional well-being, researchers have also investigated intervention effects of teachers' social-emotional competence and well-being training on teachers' sense of efficacy, which has been shown to increase (e.g., Benn et al., 2012; Biglan et al., 2013; Jennings et al., 2013; Poulin et al., 2008). This is not surprising considering the linkage between teacher self-efficacy and well-being (Hastings & Bham, 2003). Self-efficacy, in general is derived from Bandura's (1977) social cognitive theory in relations to an individual's belief in his or her own capacity to bring about actions, which has implications on the individual's thoughts and behaviors including

perceptions of external situations, sustained efforts to overcome challenges, as well as resilience in response to adverse circumstances.

According to Bandura, four sources of efficacy information include *mastery experience* (perception of past successful or competence performance and considered to be the strongest source of efficacy), *vicarious experience* (opportunity to observe a targeted skill being modeled by another person, particularly one whom the observer identifies with), *verbal persuasion* (feedback from colleague or supervisor, particularly one who is viewed as credible or trustworthy, to influence one's decision to initiate and sustain efforts to try a new task or skill), and *physiological states* (level of physiological and emotional arousal that can contribute to feelings and self-perceptions of competence in teaching). Perhaps teachers' social-emotional competence and well-being can be thought of being closely aligned to one's physiological states, wherein high levels of arousal can reduce capability in thinking about and utilizing one's skills (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998).

Teacher efficacy, thus, is the "extent to which the teacher believes he or she has the capacity to affect student performance" (Berman, McLaughlin, Bass, Pauly, & Zellman, 1977, p. 137) or "teachers' beliefs or conviction that they can influence how well students learn, even those who may be difficult" (Guskey & Passaro, 1994, p. 4). Efficacy, in essence, involves teachers' belief (personal factors) in their capacity to attain a goal (e.g., improving students' learning or prosocial behaviors) by effecting changes in their own behaviors and classroom context (environment). Indeed, efficacy beliefs are thought to be a determinant of one's thoughts (e.g., am I capable of solving this problem?) and emotional reactions (Pajares, 1996), as well as a predictor of behavior (Tschannen-Moran et al., 1998). More specifically in the context of ECE settings and in relations to the current problem of practice, Gebbie, Ceglowski, Taylor, and Miels

(2011) described teacher efficacy as “a teacher’s perception about his or her ability to have a positive effect on a child’s behavior” (p. 44) and considered it to be one of the critical components of teacher’s effectiveness in behavior support and management.

Given the relationship between teacher efficacy and emotional arousal, it is therefore unsurprising that researchers have also examined the connection between teacher efficacy and stress. Indeed, teachers’ self-perceived stress related to student behavior management and discipline was found to be negatively associated with teacher efficacy (Collie et al., 2012). In their study with ECE teachers from preschool and childcare center, Bullock, Coplan, and Bosacki (2015) found there was a positive relationship between ECE teachers’ classroom management efficacy and openness to experience, one of the personality traits of interest to the researchers. Bullock and colleagues (2015) hypothesized this may be due to the relations between an individual’s openness to experience and use of problem-focused coping strategies, or action-oriented strategies to change a situation such as working toward eliminating the stressor or seeking assistance to solve a problem (Carver, 1997).

Teachers’ emotional well-being and teaching practices for social-emotional competence. Research has further highlighted the interconnectedness between teachers’ well-being, efficacy, and teaching practices. Following the delivery of a resilience-based curriculum, Cook and colleagues (2017) found that besides a moderate decrease in perceived stress and moderate increase in teacher efficacy as well as job satisfaction, the intervention also helped foster stronger intentions to implement evidence-based teaching practices within study participants. This study brings attention to the potential relationship that exists between teachers’ well-being and implementation of effective teaching practices that promote children’s social-emotional competence, considering previous research has also shown that stress and

burnout are common barriers to teachers' willingness to adopt and use evidence-based practices to promote student outcomes (Aarons, Fettes, Flores, & Sommerfield, 2009). In a comprehensive review, Yoder (2013) identified 10 most frequently used teaching practices that promote students' social-emotional learning and competence, with examples such as using developmentally appropriate classroom management and disciplinary strategies, using language that encourages students to monitor and regulate their emotions and behaviors, allowing students to make responsible choices about their work and classroom environment, creating a warm and supportive environment between students and adults, promoting opportunities for cooperative learning, and teaching social-emotional competencies through modeling, practicing, feedback, and coaching. Many of these teaching practices mirror those outlined in the prosocial classroom model by Jennings and Greenberg (2009), such as developing healthy teacher-student relationships and implementing effective classroom management and strategies for social-emotional learning, as potential linkages between teachers' well-being and classroom or student outcomes. For these reasons, Cook and colleagues (2017) urged organizational and systemic leaders to build an infrastructure that promotes knowledge of and provides resources to foster teacher well-being and resilience, reduce teacher stress and burnout, and ultimately create "a stable and emotionally competent workforce that is committed to implementing the best practices possible to achieve positive outcomes for students" (p. 24). This sentiment reflects the underlying purpose of the proposed intervention.

Teachers' Emotional Well-Being and Children Outcomes

Empirical studies, as described above, have primarily focused on measuring outcomes for study participants, resulting in scant literature that investigates the direct effects of changes in teachers' emotional well-being on children or classroom quality outcomes. In one mixed-

methods study, Singh and colleagues (2013) investigated whether teacher training on mindfulness-based meditation techniques would have an effect on the behaviors of preschoolers in their classrooms. Quantitative data from the study indicated that preschoolers (of the teachers who participated in the training) exhibited increased compliance with adult requests, as well as decreased challenging behaviors and negative peer interactions. Qualitative findings from teacher interviews offer insights on the potential changes within teacher-child interactions, including teachers' reduced attention and vigilance on children's maladaptive behaviors, willingness to let go of using traditional or familiar classroom management strategies, and being present with and accepting of (rather than avoiding or redirecting) children's misbehaviors. Although there appears to be well-established evidence in the literature that training on mindfulness, resilience, and stress management can improve teachers' emotional well-being, this study by Singh and colleagues (2013) supports the notion that positive changes at the teacher level can improve teacher-child interactions and consequently, students' social and behavioral outcomes in the classroom.

More recently, Lam and Wong (2017) conducted an eight-week professional training for ECE teachers in Hong Kong that included blended learning activities (e.g., online multimedia study, lectures, discussions, role-playing) covering topics such as teachers' emotional literacy and communication, and developmentally practices that promote children's social-emotional development. The intervention also included skills-based workshops on assessing children's social-emotional well-being, and developing a personalized curriculum to promote children's social-emotional outcomes to be implemented in the participants' classrooms. Due to limitations set forth by the study's funding source, the researchers could not measure teacher-level outcomes. Nonetheless, Lam and Wong (2017) found a significant increase in children's

prosocial behaviors, as well as decrease in anxiety-withdrawal and anger-aggression behaviors. Findings from this study corroborate the recommendations of Lang and colleagues (2020), who pointed out the merit of promoting ECE teachers' knowledge and skills in developmentally appropriate guidance and practices for children's social-emotional learning, as well as teachers' emotional knowledge and capacity in order to be more effective in supporting the needs of children under their care. However, to the best of this author's knowledge, studies by Lam and Wong (2017) and Singh and colleagues (2013) appear to be the only ones to date that have directly measured student-level outcomes. Thus, there is an ongoing need for research to investigate the specific mechanisms linking teachers' improved socioemotional outcomes to those of students.

Need for Brief and Context-Specific Intervention

As previously discussed, concerns exist over participants' perceptions that daily homework exercises can be overwhelmingly demanding, as well as the extensive training that is traditionally required of providers of mindfulness-based training (Poulin et al., 2008). Furthermore, limited time to engage in opportunities for professional development was among one of the contributing factors to the current problem of practice reported by ECE teachers during the needs assessment. Recognizing that interventions sometimes need to be adapted due to reasons such as "time constraints, community norms, the availability of resources and regulatory restrictions," (Dusenbury et al., 2003, p. 251), one recent pilot study conducted by Lang et al. (2020) offers a potential solution to the specific challenges faced within the author's local context. Lang and colleagues (2020) delivered a brief online professional development course, the Social-Emotional Learning for Teachers (SELF-T), for improving the knowledge and practice of stress-management and resilience strategies to ECE teachers working with infant to

preschool-age children. In their first pilot study, participants were informed the course takes approximately three hours to complete all self-paced lessons, and were instructed to complete all lessons within a two-week timeframe. Despite a significantly reduced dosage of intervention in comparison to other studies (e.g., Jennings et al., 2013; Roeser et al., 2013), the researchers found that participants' self-reported use of stress reduction and reappraisal emotion regulation strategies increased, with participants' knowledge and awareness of stress having the most significant gains (Lang et al., 2020).

Unexpectedly, participants in the pilot study by Lang and colleagues (2020) reported an increase in perceived stress between pre- and post-test surveys, despite also perceiving their ability to handle stress and emotions had improved following participation in the intervention. The researchers hypothesized the brief two-week duration of the study may have contributed to teachers' increased awareness of the presence or pervasiveness of stress in their lives immediately following the course activities, and anticipated the effects to fade over time. That is, teachers' perceived stress can be expected to decrease as they continually engage in the use of stress prevention and reduction strategies over time (Lang et al., 2020). Indeed, decreased perceived stress has been observed in other studies that lasted over eight weeks (Roeser et al., 2013; Taylor et al., 2016). The capacity of a brief online professional development course to increase ECE teachers' knowledge and use of strategies that promote emotional well-being, resilience, and stress management in a two-week period is nonetheless promising, although there is a call for future research to explore whether program participation is associated with decreased perceived stress over a longer period of time. In addition, it should be noted that Lang and colleagues (2020) measured participants' general perceived stress, which can include stressors in participants' personal contexts and lives, whereas other studies (e.g., Biglan et al., 2013; Roeser

et al., 2013; Taylor et al., 2016) measured occupational or teaching-specific stress. It would be of interest to explore whether differences in perceived stress across personal and job-related domains are observed.

Although a pilot study, Lang and colleagues (2020) point out SELF-T differs from other stress-reduction, mindfulness-based, or therapeutic interventions available online and to the public. The first reason being it is less time and resource intensive to deliver to participants, which makes it more scalable within the field of early care and education, and the second reason for its emphasis on teachers' emotional well-being and interactions with children. This unique emphasis reinforces the idea proposed by Dennis (2010) and Tsouloupas and colleagues (2010), in that there is a need to better understand and measure emotion regulation during task performances that are relevant to teachers and their experiences in the classroom, as opposed to general affect tendency given that emotion regulation is context-specific and the interplay between emotion and cognition may vary across contexts and individuals. This recommendation echoes Bandura's (1986) hypothesis that the activity or context contributes to the magnitude of influence between personal, behavioral, and environmental factors in one's learning and development. More importantly, professional learning needs to take into consideration teachers' personal factors in an effort to change their behaviors and environments (i.e., classroom) to support the socioemotional needs of young children with challenging behaviors.

Process of Professional Development

In addition to the limited availability of professional development opportunities for early childhood educators, Pianta and colleagues (2009) argued the opportunities that are available rarely align with what is considered best practice or evidence-based (that is, offering targeted and job-embedded supports on teachers' instructional and relational practices), and consequently

result in negligible gains in student outcomes. For this reason, the author will discuss the implications of adult learning theories and principles on designing helpful and relevant professional development, which remains an area of need for ECE teachers.

Recognizing that there is a lack of consensus on the meaning of and what constitutes as professional development in the field of early care and education, Buysse, Winton, and Rous (2009) proposed a definition and conceptual framework (e.g., the who, what, and how) of professional development. The authors defined professional development as “facilitated teaching and learning experiences that are transactional and designed to support the acquisition of professional knowledge, skills, and dispositions as well as the application of this knowledge in practice” (Buysse et al., 2009, p. 239). To effectively promote participants’ skills, knowledge, and disposition, which are critical components for sustained change in practices, Schachter (2005) as well as Jensen and colleagues (2016) posit that professional development should be informed by principles of adult learning theories. Specifically, Rohlwing and Spelman (2014) identified four recurring themes when adult learning theories are embedded in professional learning: value in adult learners’ experiences, capacity for self-reflection, collaborative dialogues for sharing learning and constructing knowledge, and consideration for the social and cultural contexts in which learning takes place. These themes or features echo principles guided by the sociocultural theory of development, which places an emphasis on learners’ prior knowledge and experiences, understanding and use of shared language, perceived agency on available tools, as well as capabilities to solve problems within their situated contexts (Gee, 2008). In a broader sense, professional development grounded in the principles of adult learning acknowledges that the learning experience is a social process and influenced by the interactions between the learner and his or her environment (Bandura, 1986).

To better understand the state of professional development in early care and education, Schachter (2015) conducted a systematic and rigorous review of the literature and identified several shortcomings or limitations in existing studies. First, the content of instruction targeted in professional learning has primarily focused on language and literacy; thus, expanding the content to include other areas of studies (e.g., math, science, social studies, social-emotional learning) is necessary to improve early childhood educators' general knowledge and efficacy. Second, previous studies that were included in Schachter's (2015) review generally provide insufficient descriptions of both content and process of professional learning; thus, limiting the studies' replicability and conclusions on the effectiveness of the intervention. Finally, Schachter (2015) points out that existing studies often do not measure teachers' perceptions of ongoing usefulness or relevance after the intervention was completed, resulting in limited evidence for sustained and long-term impacts on teacher practices.

Looking forward, Schachter (2015) recommends drawing from various theories and resources (e.g., adult learning theories, literature from early childhood and K-12 education) when designing professional learning to expand the strategies available to educators, researchers, and providers of professional learning, and consequently, improve children outcomes. In addition, designers and providers should not consider professional development as an intervention process, but a "teacher-centered process" (p. 31) that respects the various sources of knowledge, beliefs, skills, and experiences each learner brings, as well as their interconnectedness to the learners' context (e.g., classroom). Jeon, Buettner, and Hur (2016) similarly propose using a person-centered approach for improving teacher quality by targeting participants' individualized needs, given the vast differences across individual characteristics (e.g., professional background, classroom practices, job attitudes) among early childhood educators. With these theoretical

components in mind, potential processes (Schachter, 2015) to consider when developing a professional learning program for the current problem of practice will be explored in the remaining sections of this chapter.

Reflective Practice

One critical component of effective adult learning is providing opportunities for active learning and in-depth engagement with the content (Desimone & Garet, 2015), which may be achieved through processes of engaging in dialogues, asking questions, giving and receiving feedback, problem-solving, and meaningful reflections throughout these inputs and feedback loops (Darling-Hammond et al., 2017; Learning Forward, 2011; Rohlwing & Spelman, 2014). Reflective practice, in particular, is considered to be an essential process for adult learning by facilitating the professional development of teachers as they move along the continuum of being a novice to becoming an expert (Darling-Hammond et al., 2017). O'Connor and Diggins (2002) described reflective practice as “a cycle that involves stopping to consider practices and the reasons for them, thinking critically about alternative perspectives and changing practices based on new understandings” (as cited in McFarland, Saunders, & Allen, 2009, p. 506). It is by creating a cognitive dissonance that encourages practitioners to reflect on the purpose of current practice, question its effectiveness, and recognize what changes may be needed (Anderson, 2017; Spillane et al., 2002). Furthermore, reflective practice encourages practitioners to reflect beyond the observable explicit behaviors and skills, but the associated implicit feelings and emotions related to the experience of working with a child (Neilsen Gatt, Watson, & Siegel, 2011).

In their qualitative study, Williams and Grudnoff (2011) compared novice and experienced teachers' perceptions of the usefulness of reflecting on their practices. All participants reported feeling skeptical and doubtful in the beginning, before they learned to

embrace the meaningfulness and relevance of engaging in a structured reflection process. For beginning teachers, reflection brings an opportunity to be aware of and describe their practices, while it provides experienced teachers the ability to understand the reasons behind their practices and serves as a useful tool for reflecting on opportunities for improvement (Williams & Grudnoff, 2011). The differences in depth of reflections between novice and experienced teachers may be explained by the interactions between their scope of teaching experiences and worldview, and the different types and levels of reflection that may exist ranging from literal thinking of day-to-day technical practices to conceptual and critical thinking that challenges one's assumptions and beliefs (e.g., Hatton & Smith, 1994; Mezirow, 1998; Ojala & Venninen, 2011).

Beyond the inward ability to think about one's personal actions and practices, Virmani and Ontai (2010) found that early childhood educators who received reflective-focused training and supervision showed increases in their insightfulness, that is the ability to see, understand, and accept the motives and behaviors of a child from the child's perspective. By encouraging early childhood educators to reflect upon their teacher-child relationships and the emotional experiences and interactions occurring in the classrooms from multiple perspectives, Virmani and Ontai (2010) suggest the process will deepen teachers' understanding, connections, and sensitivity to the needs of children, resulting in a more responsive and supportive caregiving environment. In addition to the potential benefits on children's socioemotional development, Leroux and Théorêt (2014) further conclude an empirical relationship exists between teachers' resilience and engagement in reflective practices. Collectively, evidence exists to support using reflective practices as means for professional development and learning, with the potential of bringing positive outcomes to both early childhood educators and children in their care.

To provide researchers more specific guidelines, Brinamen and Page (2012) recommend that reflective practices occur frequently and regularly (no less than twice monthly), in a welcoming and safe environment wherein teachers can express and process their emotions and thoughts, not be used for evaluative purposes, with a consistent and predictable person with whom teachers can build a relationship, and take place in a setting where the practice is encouraged. Ojala and Venninen (2011) also found that interviews are more conducive for studying and deepening early childhood educators' reflective practices than the use of surveys, likely because reflection is a dynamic process that can be better supported when one engages in shared thinking, dialogue, and collaboration with another person.

Delivery of Professional Development

The advance of the internet has allowed professional development to be delivered through a new medium beyond more conventional methods such as print materials and face-to-face interactions. Clark (1983), however, argued that technological medium is merely a more efficient and lower-cost vehicle in which content is delivered, and one should not expect to see different learner outcomes and achievement by the change of media alone. As a counterargument, Kozma (1994) posited the need to consider the affordances that media offer to support users' engagement in learning. From an interactionist perspective, learning with media involves the user's interactions with the embedded content and features chosen by the designer, and is influenced by the knowledge, goals, beliefs, and behaviors of the user; thus, making the learning experience different for each user (Kozma, 1994). For example, a teacher may choose to spend more time engaging in a topic that is of interest to her when content is online and self-paced, as opposed to when content is delivered in real time at a pace guided by the instructor or peers.

Furthermore, Dede and colleagues (2009) pointed out benefits of online professional development for educators include being more scalable and accommodating of learners' busy schedules than those requiring face-to-face interactions, as well as offering resources that may not be readily available in the local context. Recalling that a person-centered approach (Jeon, Buettner, & Hur, 2016) should be considered when designing professional development to target the individualized needs and interests of ECE teachers and providers, and given the benefits of increased efficiency and convenience as well as lower cost, a self-paced professional development provided on an online platform is a worthy method to consider for the current problem of practice.

Web-based prevention and intervention on emotional well-being. Results have been promising from research examining the effectiveness of web-based prevention and intervention programs that aim to promote psychological and emotional well-being with the general population. In their meta-analysis of randomized controlled trials that examined the effects of preventive online mindfulness-based interventions on well-being (i.e., stress, mindfulness), Jayawardene, Lohrmann, Erbe, and Torabi (2017) found that benefits of online-based protocols and studies include being a “more convenient and cost-effective strategy, compared to traditional face-to-face interventions, especially in the context of busy, hard-to-reach, but digitally-accessible populations” (p. 150), while still showing medium effects on participants' perceived stress and small effects for mindfulness. Even more interestingly, effects were found to be sustained or increased at follow-up time points (Jayawardene et al., 2017).

Similar effects were found in a study conducted by Heber and colleagues (2016) with the general working population with elevated symptoms of stress. Following the screening process, participants with self-reported high levels of stress were randomly assigned to a waitlist control

group or a treatment group for an internet-based stress management intervention to address occupational stress. The seven-session intervention covered topics related to problem solving and emotion regulation strategies and included one booster session. Participants in the intervention group could also choose to what extent they received written feedback from an e-coach or received automated messages on their devices related to application strategies related to the session topics. Outcome variables were collected at seven-week post-intervention, as well as during six-month and 12-month follow-ups. Researchers reported that not only were there significantly large effect differences on perceived stress between the two groups, the effects for the treatment group were maintained at the 12-month follow-up. Overall, results suggest a web and mobile-based intervention has a long-term effect on reducing occupational stress and can be a viable alternative to face-to-face interventions.

Web-based professional development in early care and education. Currently, knowledge and application of online-based professional learning targeting teachers and care providers working in early care and education is limited (Lang et al., 2020). One established program, MyTeachingPartner (MTP), is a web-based system that provides technical assistance to ECE teachers working with at-risk preschoolers, specifically in supporting teacher implementation of empirical-based practices for teaching language and literacy, as well as implementation of a curriculum designed to support children's social-emotional competence by promoting teacher-children relationships and classroom management (Kinzie, Whitaker, Neesen, Kelley, Matera, & Pianta, 2006; Pianta et al., 2008). The system includes multimedia materials (e.g., video demonstrations) of exemplar teaching practice and activities, opportunities to engage in a collaborative professional development relationship with a consultant through videoconferencing, as well as dynamic design where selected users can create and submit content

to enhance community of knowledge. Preschool teachers who received real-time consultation and feedback have been found to experience significantly more gains in the quality of teacher-children interactions than those who only accessed and viewed the online content (Pianta et al., 2008). Developers of the system also received positive feedback from teachers on the perceptions of value, merit, and usefulness of the web-based system; however, Kinzie and colleagues (2006) explained such perceptions may be moderated by teachers' levels of participation as well as access to technical and professional supports. The complexity and extensive resources required to create the web-based system, as well as provide teachers with ongoing technical supports were notable challenges or limitations discussed by the researchers.

To the best of this author's knowledge, the pilot study of SELF-T, the online professional development self-paced course (Lang et al., 2020) described in the earlier sections of this chapter, is the only study to date that focuses on teachers' emotional wellness and resilience and specifically targeted at those working in early care and education settings. The ability to deliver knowledge and practice related to stress-management and resilience during tasks and situations specific and relevant to the ECE teachers' context, combined with its brief duration and availability at no-cost to the public, make it a feasible option to consider as one component of the proposed study to address the identified needs from the current problem of practice.

Conclusion and Overview of Proposed Study

Researchers have recently begun to emphasize fostering teachers' own social-emotional well-being alongside their students', on the basis that teachers can more effectively implement evidence-based practices when they themselves have the capacity to model the social-emotional skills they are being asked to teach (Garner et al., 2018; Jennings & Greenberg, 2009; Lang et al., 2020; McClelland et al., 2017). Indeed, researchers propose there is a "synergistic effect"

(Jennings & Greenberg, 2009, p. 515) when professional training focuses on promoting teaching practices that promote children's social-emotional outcomes, as well as teachers' social-emotional competence and well-being. This chapter offered a theoretical framework and reviewed pertinent literature around interventions on teachers' emotional competence and well-being. Bandura's (1986) triadic reciprocal determinism within his social cognitive theory offers a sound theoretical basis for conceptualizing the teaching and learning processes of social-emotional competence. In particular, the prosocial classroom model (Jennings & Greenberg, 2009) brings attention to teachers' social-emotional competence and well-being along with its implications on teaching practices, classroom quality, and student outcomes.

Intervention studies discussed in the current chapter have aimed to promote teachers' social-emotional competence and well-being. Despite varied designs, samples, and components grounded in different therapeutic theories and practices (e.g., mindfulness-based, stress management, relaxation, acceptance and commitment therapy), results have been promising in promoting teacher outcomes including improved emotional well-being, resilience, teaching efficacy, as well as decreased stress and burnout (e.g., Benn et al., 2012; Biglan et al., 2013; Cook et al., 2017; Jennings et al., 2013; Lang et al., 2020; Roeser et al., 2013; Taylor et al., 2016). In addition to a positive relationship with teachers' willingness and intent to implement effective teaching practices (Cook et al., 2017), there is emerging empirical support that improved teachers' emotional well-being is linked to improved classroom and children outcomes (Lam & Wong, 2017; Singh et al., 2013).

The literature further highlights the importance of ECE teachers' situated experiences, capacity for problem-solving and self-reflection, and opportunity for collaborative dialogues to construct learning and knowledge, when designing evidence-based professional development

based on the principles of adult learning theories (Jensen et al. 2016; Rohlwing & Spelman, 2014; Schachter, 2015). Reflective practice is arguably essential in the process of adult learning, wherein learners engage in meaningful reflections through shared dialogues, question posing, giving and receiving of feedback, critical thinking about current practices and implicit beliefs or assumptions that accompany those practices, as well as consideration for alternative perspectives (Darling-Hammond et al., 2017; McFarland et al., 2009; Spillane et al., 2002). Furthermore, web-based delivery of prevention and intervention programs on emotional well-being as well as professional development for teachers and providers in early care and education have gained traction in recent years (e.g., Heber et al., 2016; Lang et al., 2020; Pianta et al., 2008). Its advantages include increased scalability and efficiency, more accommodating of learners' busy schedules, lower costs, and allow for learners' self-paced engagement with content (Dede et al., 2009; Kozma, 1994; Lang et al., 2020).

Combined with results from the needs assessment (see chapter 2) that highlight a need for context-relevant, accessible, and effective professional development for ECE teachers, Figure 5 illustrates the conceptual framework for a proposed study for the current problem of practice. In the next chapter, I will discuss specific details to the design of a study that examines the effects of a comprehensive professional development program that offers explicit instruction and guidance on developmentally appropriate and evidence-based teaching practices, as well as promotes ECE teachers' personal stress management, resilience, and emotional competence.

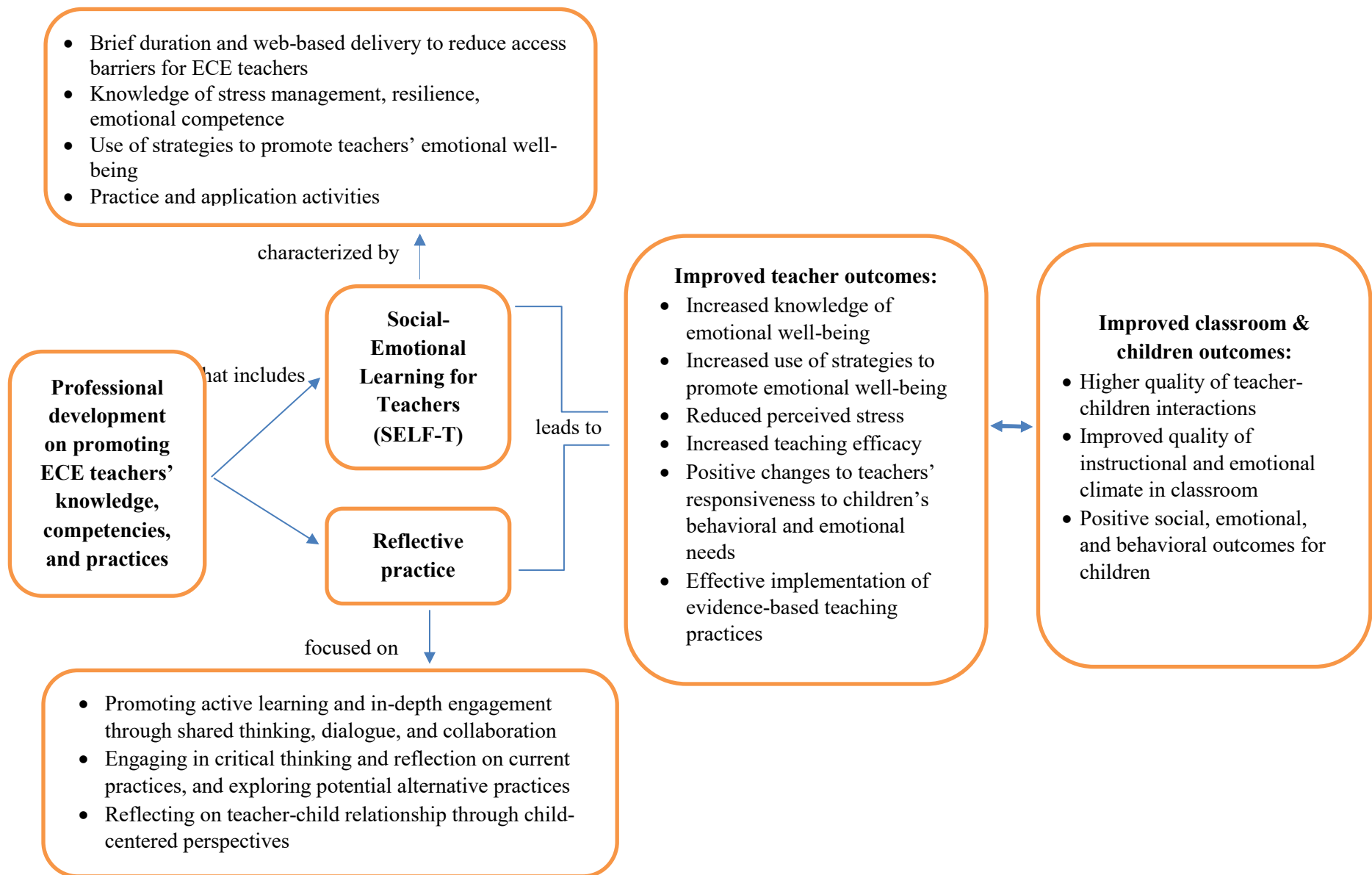


Figure 5. Conceptual model of proposed study for problem of practice.

Chapter 4 - Study Design: Method and Procedure

As discussed in the previous chapter, ECE teachers' emotional competence and well-being is linked to perceived stress, resilience, and teachers' sense of efficacy. Due to challenges posed by COVID-19 that limited opportunities to carry out an intervention study in the context wherein the needs assessment described earlier was conducted, I instead investigated the effects of ECE teachers' participation in a comprehensive professional development program conducted as part of a pilot study, Virtual Lab School (VLS) Momentum. This study was conducted by a research team at the Ohio State University (OSU) between August 2019 to December 2020 (PI: Dr. Sarah Lang). The professional development program aimed to improve the quality of and equip ECE teachers in a midwestern state with the professional competencies needed to successfully obtain their Child Development Associate (CDA) credential. This program offered participants opportunities to complete web-based coursework asynchronously and bi-weekly one-to-one coaching sessions where participants received support and feedback from individuals with expertise in the ECE field (i.e., a minimum of a bachelor's degree in early childhood education or a related field plus extensive experiences in the field as teachers, care providers, or trainers). Coaches also received intensive training in the program coursework as well as ongoing collaboration and reflections with a lead coach.

The web-based content included 21 courses that were presented in a fixed order and designed to be self-paced, although participants were encouraged to complete one course every two weeks. These comprised of 15 Foundational courses that aligned with the professional competencies and standards set by the NAEYC (e.g., family engagement, professionalism, child abuse prevention and identification, learning environments, child development in the areas of cognitive, social-emotional, physical, language and communication) and six Focused Topics

courses designed to further strengthen professional knowledge and practices relevant to specific subject matters (e.g., cultural and language diversity, trauma-informed care, supporting children with challenging behaviors). Social-Emotional Learning for Teachers (SELF-T) was the first of these six Focused Topics courses.

Social-Emotional Learning for Teachers (SELF-T)

The web-based professional development course, SELF-T, consisted of five modules (i.e., Social Emotional Learning for Teachers: An Introduction; How We Feel; How We Think; What We Can Do on Our Own; What We Can Do Together) with contents focused on understanding stress, emotional wellness, and physiological effects, as well as strategies for self-management (e.g., stress reduction, cognitive reframing, emotional reappraisal, physical and mental relaxation) and for promoting emotional well-being and resilience in the classroom with children and workplace with colleagues. Each module also followed the Learn, Explore, Apply, and Demonstrate (LEAD) structure used within all 21 courses and intended to support learners' knowledge acquisition as well as application. In the Learn section, participants were introduced to the module objectives and engaged with the multimedia content by reading and watching videos of evidence-informed content designed to promote knowledge and competencies related to the module topic. The Exploration section offered examples and activities that promoted critical thinking and self-reflection in relations to stress and self-care strategies. The Application section further provided tools and exercises to support participants' learning by applying strategies in their everyday interactions with children, families, or colleagues in the ECE workplace. Finally, the Demonstrate section had three multiple-choice questions to briefly assess participants' understanding of module objectives and content.

Coaching Sessions

What set VLS Momentum apart from other professional development opportunities more commonly available to the ECE workforce was each participant was also assigned to work with a coach for the entire duration of the program. Each dyad met for at least one hour every two weeks to discuss feedback on submitted activities and assessments, clarify any questions participants had about the coursework, facilitate reflections on participant's learning from each course in relations to their professional practices, and provide support as ECE teachers prepared professional portfolios for their CDA application. The original program design also intended for coaches to observe their teachers in the classrooms to provide in-vivo constructive feedback and support to promote the quality of caregiving and learning environments, instructional activities, and adult-child interactions (Lang et al., 2021). However, observations had to be discontinued as a result of the COVID-19 pandemic and bi-weekly coaching sessions shifted to a virtual format as opposed to in-person meetings.

Coaching is one form of job-embedded support that offers targeted and field-based feedback to strengthen ECE teachers' capacity to apply their learning, and is considered a critical driver for promoting the use of evidence-based practices into the classrooms (Snyder, Hemmeter, & Fox, 2015). Based on Bandura's (1986) notion that learning is a social process, coaching sessions provided opportunities for sources of efficacy such as vicarious experiences (e.g., learning how a skill is used or applied by coaches with expertise in the field of ECE) and verbal persuasion (e.g., listening to or receiving feedback from coaches can influence a participant's decision to initiate or sustain efforts to try out a new skill) to occur. In addition to providing opportunities for reflective practices and collaborative dialogues to take place as ECE teachers shared their learning and constructed knowledge (Bandura, 1986; Rohlwing & Spelman, 2014),

the individualized format of these coaching sessions offered a teacher-centered approach to professional development described by Jeon, Buettner, and Hur (2016) and Schachter (2015), which respects the knowledge, skills, and experiences each teacher brings, the relevance and interconnectedness to their classroom and workplace environments, and teachers' capacity to solve problems within their own situated contexts (Gee, 2008).

Purpose of the Study

As described in the previous chapter of this manuscript, Lang and colleagues (2020) conducted a pilot study in which ECE teachers completed the web-based SELF-T course in a self-study format to explore whether it could be a scalable yet less time and resource intensive resource to promote teachers' emotional well-being and interactions with children. Considering Jennings and Greenberg's (2009) proposition that a "synergistic effect" (p. 515) can take place when professional learning focuses on practices that promote both teachers and children's social-emotional competence, and the importance of reflective practice in the process of adult learning (Darling-Hammond et al., 2017; McFarland et al., 2009; Spillane et al., 2002), the overall purposes of this collaborative study with the VLS Momentum research team were twofold. First, my study aimed to understand how the SELF-T course contributed to ECE teachers' knowledge and use of strategies to promote their emotional well-being, self-care, and stress management (Lang et al., 2018; Lang et al., 2020). The current study also extended the works of Lang and colleagues (2020) by exploring whether the SELF-T course offered added value to ECE teachers' experiences and learning from their overall professional development program designed to promote their understanding and use of evidence-based teaching practices for providing high quality ECE environments and promoting children's outcomes, including their social, emotional, and behavioral health.

The logic model (see Appendix E) illustrates the relationships between inputs, outputs, and activities from the professional development program conducted by the VLS Momentum research team. The proximal and distal outcomes of interest in the current study included ECE teachers' knowledge and use of strategies to promote emotional well-being, perceived stress, teaching disciplinary efficacy, and responsiveness to challenging behaviors and emotions in the classroom. The research questions for this study addressed both process and outcome evaluations, which included the following:

Process Research Questions:

RQ 1: To what extent are ECE teachers participating in the SELF-T course engaged?

RQ2: What are ECE teachers' overall experience with the professional development program?

RQ2A: To what extent do ECE teachers feel comfortable with professional development delivered through a web-based platform?

RQ2B: Do ECE teachers report any barriers to completing activities of the professional development program during the COVID-19 pandemic?

RQ2C: What are ECE teachers' perceived satisfaction and usefulness of SELF-T course content?

Outcome Research Questions:

RQ3: To what extent do ECE teachers demonstrate changes in their knowledge of emotional well-being following completion of SELF-T course?

RQ3A: To what extent do ECE teachers demonstrate increased *knowledge of emotional well-being* following completion of SELF-T course?

RQ3B: What do ECE teachers report about their *knowledge of emotional well-being* following completion of SELF-T course?

RQ4: What do ECE teachers report about their *use of strategies that promote emotional well-being* following completion of SELF-T course?

RQ5: To what extent is participation in the SELF-T course associated with ECE teachers' *perceived stress*?

RQ6: To what extent is participation in the SELF-T course associated with ECE teachers' *teaching disciplinary efficacy*?

RQ7: To what extent is participation in the SELF-T course associated with ECE teachers' *responsiveness to challenging behaviors and emotions in the classroom*?

I hypothesized that participation in the professional development program, which included the SELF-T course for promoting ECE teachers' social-emotional competence and well-being, would result in an increase in their knowledge and use of strategies that promote emotional well-being. Furthermore, ECE teachers would report completion of the SELF-T course as part of their overall professional development program is associated with reduced levels of perceived stress, as well as positive changes to their teaching disciplinary efficacy and responsiveness to challenging behaviors and emotions in the classroom.

Research Design

A convergent parallel mixed methods design (Creswell & Plano-Clark, 2018) was used in the current study to obtain different but complementary data using both quantitative and qualitative methods. As noted in Onwuegbuzie and Leech (2006), mixed methods studies can offer complementarity, in which findings from qualitative data are used to elaborate, enhance, or clarify statistical results from the quantitative strand, as well as triangulation, that is finding

converging and corroborating data using different methods while studying the same phenomenon. In a convergent parallel mixed methods design, both quantitative and qualitative strands are equally important for addressing the study's research questions (Creswell & Plano-Clark, 2018). Procedurally, quantitative and qualitative data were gathered and analyzed separately, and later integrated to determine how results converge or diverge from each other for a more complete understanding of the research questions (Creswell & Plano-Clark, 2018).

Process Evaluation

A process evaluation focuses on the implementation process and gives researchers an ongoing opportunity to assess whether a program is implemented effectively and appropriately (Zhang et al., 2011), as well as to document the actual process and judge the efforts that took place (Stufflebeam, 2003). Essentially, it allows for researchers to substantiate that a program, or components of a program, is being implemented as designed in response to the question, "Is it being done?" Findings can also be used to collect feedback from participants to strengthen program efforts, as well as inform potential revisions to the program components and activities in future iterations (Stufflebeam, 2003). The following subsections will discuss several indicators that were examined in a process evaluation for this study, specifically indicators of intervention dosage, participant responsiveness, context, and quality of program delivery.

Indicators of intervention dosage. Measuring dosage, as defined by the amount of program content and activities received by participants, gives critical information about fidelity of implementation considering the research setting can be difficult to control in social sciences research (Dusenbury et al., 2003). Fidelity of implementation is the extent to which research activities are implemented as planned and intended (Zhang et al., 2011).

Studies that measure dosage may include participant self-reports, attendance data, or observations by an objective party (Dusenbury et al., 2003). Considering the web-based content of SELF-T was accessible and uniform to all participants, there should be no variability in the implementation in terms of content. Instead, data collected by the VLS Momentum research team from the learning management system (LMS) that houses the SELF-T course (<https://cbus.virtuallabschool.org>) were analyzed. These data included participants' log-in records for viewing course content as well as the completion rate of a three-question quiz at the end of each module designed to assess participants' understanding of lesson objectives and content, which provided information on the amount of SELF-T course content received by participants.

Indicators of participant responsiveness. Dusenbury and colleagues (2003) define participant responsiveness as the degree to which participants are engaged in the program content and activities. Thus, engagement and responsiveness to two key components of program activities (i.e., self-study and coaching session) were included. Data from the LMS provided information on participants' completion of application activities presented across SELF-T modules, as well as completion of pre- and post-test content knowledge assessments. These assessments were conducted at the beginning and end of each of the 21 courses, and included the same five multiple choice questions and three short answer questions to assess participants' knowledge related to the course. Post-test assessments included additional questions for a total of 10 multiple choice questions and six short answer questions.

Coaching sessions also served as an opportunity to promote ECE teachers' active learning and in-depth engagement with the content (Desimone & Garet, 2015) of SELF-T, as well as application of strategies to reduce stress and promote self-care through dialogues and

reflections (Darling-Hammond et al., 2017; Rohlwing & Spelman, 2014). Given these contributions, engagement and responsiveness to coaching session for SELF-T were measured from participants' responses to Focused Topics guiding questions facilitated by their coaches.

Indicators of context. One of the main reasons to consider the context within a process evaluation is to identify potential barriers or challenges to meeting the needs of the participants (Stufflebeam, 2003). Although there is increasing support for the use and feasibility of providing web-based interventions or training on emotional wellness and resilience (e.g., mindfulness, stress reductions, self-care) in general, this is not yet well-established or known within the ECE teaching population (Lang et al., 2020). Given the limited empirical studies available in the literature, this study investigated “To what extent do ECE teachers feel comfortable with professional development delivered through a web-based platform?” based on participants' feedback on the posttest research survey to understand whether this mode of delivery poses as potential means of access or barrier to professional learning for ECE teachers. Indeed, there is an underlying assumption that participants are able to access and complete web-based content and program activities suggesting that ECE teachers would possess adequate technological knowledge and capabilities, as well as a certain degree of openness and comfort with engaging in professional learning besides the traditional face-to-face setting and format (see “Inputs,” “Outputs,” “Assumptions,” and “External Factors” of logic model in Appendix E). It is, therefore, critical to investigate whether such assumptions are accurate in the context of delivering a web-based professional development program to ECE educators.

In addition, initial recruitment for the VLS Momentum pilot study began in August 2019 but program activities were implemented well into the year of 2020 when the COVID-19 pandemic began. This global event disrupted coaches' ability to conduct classroom observations

and shifted coaching sessions with their ECE teachers to a virtual format as opposed to in-person meetings, which differed from the original design of the program. Emerging research has also highlighted the negative impacts of COVID-19 on the financial, physical, mental, and emotional health of the ECE workforce (Nagasawa & Tarrant, 2020; Swigonski et al., 2021). The current study consequently investigated to what extent ECE teachers reported barriers to completing activities of the professional development program during the COVID-19 pandemic.

Participants' feedback can offer insights on barriers experienced by ECE teachers in the context of a global event that disrupted various aspects of everyday lives and brought many challenges across personal and professional domains.

Indicators of quality of program delivery. Dusenberry and colleagues (2003) describe quality of program as the degree of effectiveness in which the provider delivers program components. ECE teachers' perceived satisfaction and usefulness of SELF-T course content were measured through participants' feedback on the post-test research survey conducted by the VLS Momentum research team (e.g., Likert-scale survey items developed by Lang and colleagues (2020) to measure perceptions of course content and materials, helpfulness in understanding and improving well-being, and usefulness in ECE teachers' work with colleagues and children), and responses in follow-up interviews conducted in the current study. Evaluating the quality of program delivery also highlights to what extent the underlying assumption that ECE teachers provided accurate self-reporting of their learning experiences with program activities was satisfied (see "Assumptions" in logic model in Appendix E).

Outcome Evaluation

As shown in the logic model, proximal outcomes of this study included ECE teachers' knowledge and use of strategies to promote emotional well-being. To understand whether the

SELF-T course offered added value to ECE teachers' experiences and learning from their overall professional development program, distal outcomes in the areas of perceived stress, teaching disciplinary efficacy, and responsiveness to challenging behaviors and emotions in the classroom were also investigated. I examined a combination of quantitative and qualitative data to evaluate and inform outcome results.

Methods

This section provides details on study procedures including participant recruitment, instrumentation, as well as data collection, management, and analyses.

Participants and Procedure

This study took place in collaboration with the VLS Momentum research team at OSU that included the sharing of existing research data for review, as well as participant recruitment, development of instrument, and data collection for follow-up interviews. The sample for the current study was a sub-sample of the larger study conducted by the VLS Momentum research team. The population included teachers who had not yet obtained a CDA and were employed in ECE programs located in a midwestern state. The research team targeted centers that served at least 10 or more children and had a 2-star or lower ranking in the statewide 0-5-star quality rating and improvement system (Step Up to Quality, or SUTQ), as efforts to increase local families' access to high quality ECE programs and meet the growing demands and requirements set out by the state government (i.e., all ECE programs that receive publicly funded child care funding and benefits need to reach at least a three-star rating by the year of 2025). Recruitment took place on a rolling basis between August 2019 to January 2020, while program activities took place between September 2019 to December 2020. ECE teachers were expected to complete all program activities within 12 months from their initial start date.

Overall, 135 ECE teachers across 29 child care centers initially participated in the professional development program, with 77 ECE teachers (41 infant/toddler teachers and 36 preschool teachers) consented to be in the research sample by sharing their training records from the LMS for analysis purposes and completing research surveys. Study report by Lang, Odean, Tebben, and Buettner (2021) indicated the initial research sample had the following characteristics in age ($M=35$; $SD=11$; range=19-59), years of work experiences ($M=4.3$; $SD=3.0$; range=1-8), ethnicity (4% Hispanic or Latinx), race (64% White, 32% Black, 4% Biracial), gender (96% female), and spoken languages other than English (28% of teachers reported speaking Arabic, Chinese, French, Somali, Spanish, or Tagalog).

SELF-T course participants. Of the 77 ECE teachers who consented to participate in the research sample, 23 remained in the professional development program and completed the SELF-T course (16th of 21 courses). The demographics of these SELF-T participants with training records available for analyses are described in Table 4.1.

Recruitment and sample of follow-up interviews. Of the 23 ECE teachers who completed the SELF-T course, 19 participants successfully completed all of the requirements of the professional development program. All of the 19 participants were invited to participate in an individual follow-up interview to explore their overall learning and experiences in the program and SELF-T course. We anticipated that at least 12 out of the 19 ECE teachers would consent to participate, and intended to sample six teachers who successfully obtained their CDA credential and six teachers who had not yet obtained their credential to further understand their experiences. Participants were to be randomly selected and contacted until we met the proposed sample size of 12, which would be adequate to achieve data and theoretical saturation while not

being too large to extract meaningful and rich data (Onwuegbuzie & Collins, 2007; Onwuegbuzie & Leech, 2007).

Participants were initially contacted by email from a member of the VLS Momentum research team. Follow-up phone calls were made if no response was received from recruitment emails after five days. We used a recruitment script for both methods and sent up to three reminder emails and three recruitment calls. If participants did not respond, we contacted a next set of participants in the random selection pool. To ensure participants' understanding of the research prior to providing consent, details of the consent form were shared and explained in the recruitment email or phone scripts, such as purpose, procedures, requirements from participants, or potential risks and benefits associated with the research study. Unique links to the online consent waiver through Qualtrics were sent by email and allowed for opening and reading multiple times before consenting. At the start of each interview, the interviewers ensured that participants understood the consent form and answer any questions they had. Each interviewee was also offered a \$50 electronic gift card as a token of appreciation for their time and participation.

Out of the 19 participants, three ECE teachers declined to participate and one individual could not be reached with the contact information available on file. No responses were received from seven individuals. Eight ECE teachers initially signed the consent form to indicate their interest to participate, but only five individuals confirmed their availability for an interview appointment. Two participants did not show up on the day of their scheduled appointments due to health or technology issues and could not be reached despite three attempts to reschedule. Table 4.2 provides descriptive details of the final sample of three ECE teachers, and their pseudonyms, who participated in follow-up interviews.

Table 4.1

Demographics of SELF-T Participants

Variables	<i>n</i>	%	M (SD)
Gender	14	-	-
Female	14	100%	-
Year of birth	14	-	1986 (6.53)
Race	14	-	-
White/European-American	10	71.4%	-
Black, African-American	3	21.4%	-
Bi-racial	2	14.3%	-
Multi-racial	1	7.1%	-
Latino/Hispanic background	14	-	-
Yes	2	11.3%	-
No	12	85.7%	-
Educational attainment	14	-	-
High school diploma or GED	4	28.6%	-
Some college but no degree	7	50.0%	-
Associate or Bachelor's degree	3	21.4%	-
Language(s) spoken	16	-	-
English	16	100%	-
Other (in addition to English)	7	43.8%	-
Annual gross salary	12	-	-
\$5,001-\$10,000	1	8.3%	-
\$10,001-\$15,000	1	8.3%	-
\$15,001-\$20,000	7	58.3%	-
\$20,001-\$25,000	3	25.0%	-

Table 4.2

Demographics of Follow-Up Interview Participants

Variables	Ms. Abbey	Ms. Bailey	Ms. Casey
Gender	Female	Female	Female
Years worked in ECE field	7	15	8
Race / Ethnicity	White	White	Asian
Languages	English	English	Other
CDA credential status	Obtained	Obtained	Obtained
Currently working in ECE?	Yes	Yes	Yes
Current title or position	Lead Teacher	Lead Teacher	Lead Teacher
# of hours per week of work in ECE	37	40	40
How does it compare to pre-COVID?	Fewer hours	More hours	About the same
# of children in classroom	10	13	10
How does it compare to pre-COVID?	Higher number	About the same	Fewer number
Current annual gross salary	\$20,000-\$29,999	\$40,000-\$49,999	\$10,000-\$19,999
How does it compare to pre-COVID?	Higher income	About the same	Lower income

Note. ECE = Early care and education. CDA = Child Development Associate.

Data collection. Following a convergent parallel mixed methods design (Creswell & Plano-Clark, 2018), data for both process and outcome evaluations were concurrently gathered to address the respective research questions. An inter-university data use agreement was completed and approved to gain access to de-identified research data shared by the VLS research team at OSU. Existing data were in multiple formats including those gathered by the online LMS pertaining to participants' activities for the SELF-T course (e.g., pre- and post-test content knowledge assessments), ECE teachers' responses to guided reflection questions facilitated and recorded by their coaches, and pre- and post-test research surveys (e.g., categorical and Likert-scale items, open-ended responses). Each participant was assigned a confidential participant identification number to ensure anonymity and could be matched across each data source.

Follow-up interviews. An associate from the VLS Momentum research team who had no prior interactions with the participants during the pilot study and I conducted individual semi-structured interviews with three ECE teachers who successfully completed all requirements of the professional development program and consented to participate in a follow-up interview for the current study. Each interview lasted for 60-90 minutes and was conducted on recorded Zoom sessions. Interviews were scheduled at a time that was mutually convenient for interviewers and interviewee, and took place between August to September of 2021. Each interviewee also completed a demographic survey through Qualtrics that took five minutes to complete and included questions on participants' characteristics such as gender, ethnicity, educational attainment, years of experience in early care and education, position, and current employment status (i.e., hours worked per week, income, number of children) and prior to COVID-19.

Instrumentation

Learning management system (LMS). Each participant had a unique login account to access the web-based professional development courses. Data collected by the LMS and utilized by the VLS Momentum research team included participants' login activities (i.e., the most recent date and time in which the participant logged in) and progress toward course and program activities (e.g., completion of the three-question quiz at the end of each module under Demonstrate section designed to assess participants' understanding of lesson objectives and content; completion of pre- and post-test content assessments at the end of each course; see Appendix G and H). Data collected from the LMS were used to measure participants' intervention dosage and engagement related to their SELF-T coursework.

SELF-T content knowledge assessments. At the start of each course, ECE teachers completed a pre-test content knowledge assessment consisting of five multiple choice questions

(e.g., *What kind of experiences stick in our brains because they can help us survive dangerous situations? Which of these is an example of a healthy emotional regulation strategy?*) and three short answer questions (e.g., *Describe how stress might prevent you from providing nurturing care*) to assess participants' professional competency and knowledge toward key content objectives. Participants' performance on pre-test assessments also informed their coaches of ECE teachers' existing knowledge and level of support and feedback that may be needed in the upcoming course. At the end of the course, participants completed a post-test assessment consisted of a total of 10 multiple choice questions and six short answer questions inclusive of the same ones from pre-test assessment. Responses to both online pre- and post-test assessments were recorded by the LMS.

SELF-T guiding questions. As a result of COVID-19, coaches were unable to provide in-person observations, feedback, and modeling for ECE teachers in the classroom context as originally intended in the program design. The VLS Momentum research team instead developed a series of guiding questions that were open-ended and meant to promote ECE teachers' reflection on their professional knowledge or practices during their coaching sessions held via audio or video-conferencing (e.g., *What about this course surprised you? What challenged or changed your thinking?*). Information gathered during these coaching conversations was meant to reflect each ECE teachers' strengths and areas of growth relative to the key objectives of each course, and allow coaches an opportunity to provide meaningful, relevant, and constructive feedback. Participants' responses to guiding questions gathered during their coaching session for the SELF-T course were examined in this study.

VLS Momentum research surveys. All participants of the professional development program were invited to be a part of the VLS Momentum research study that also included pre-

and post-test surveys administered at the start and end of the professional development program (Appendix F). Gift cards were offered to incentivize ECE teachers' participation in the research study. Online surveys were administered through Qualtrics and consisted of demographic questions, items developed by the research team, as well as existing measures used to examine participants' outcomes related to the following variables of interest in the current study.

Knowledge of emotional well-being. ECE teachers' knowledge of emotional well-being was examined using the 12 items created by Lang and colleagues (2020) in their pilot study with SELF-T. Participants responded to each statement using a five-point scale (1 = *very untrue of me*; 5 = *very true of me*). An exploratory factor analysis of the scale conducted by Lang et al. (2020) suggested seven items that measure participants' understanding of stress (Cronbach's $\alpha = .71$, e.g., *I am able to define the emotions I feel when I am stressed.*), and five items that measure participants' knowledge of self-care strategies (Cronbach's $\alpha = .89$, e.g., *I know how to use muscle relaxation to reduce my stress.*).

Perceived stress. The VLS Momentum research team used the four-item version of the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) to measure the degree to which ECE teachers perceived their lives to be unpredictable or uncontrollable. Using a five-point Likert scale (1 = *never*, 5 = *very often*), participants were asked to rate their perceived stress over the past month (e.g., *In the last month...how often have you felt that you were unable to control the important things in your life?; How often have you felt confident about your ability to handle your personal problems?; How often have you felt that things were going your way?; How often have you felt difficulties were piling up so high that you could not overcome them?*). This shorter and validated PSS scale has an acceptable internal consistency (Cronbach's $\alpha = .60$) and is regarded to be acceptable for use in research purposes given the less time it takes to

complete in combination with other measures (Cohen & Williamson, 1988; Karam et al., 2012; Mitchell, Crane, & Kim, 2008).

Teaching disciplinary efficacy. The VLS Momentum research team used three items adapted from Bandura's (1997) Teacher Self-Efficacy Scale (*I can get children to follow classroom rules; I can control disruptive behavior in my classroom; I can prevent problem behavior on the playground*) to measure participants' teaching disciplinary efficacy on a five-point scale (1 = *not at all like me*, 5 = *a lot like me*). This measure has an internal consistency of .84 (Buettner et al., 2016).

Teachers' responsiveness. To measure ECE teachers' responsiveness to challenging behaviors and emotions in the classroom, the VLS Momentum research team used a shortened version of the Coping with Children's Negative Emotions Scale (CCNES; Fabes et al., 1990) along with the Coping with Children's Challenging Social Interactions (CCCSI; Lang, et al., 2017). The short form of CCNES included five scenarios in which children may exhibit challenging or negative emotions and applicable to ECE teachers and classrooms (e.g., *If a child in my class is participating in a group activity and makes a mistake and then gets upset and is on the verge of tears, I would...*). For each scenario, three possible positive reactions (expressive encouragement, emotion-focused reactions, and problem-focused reactions) and two possible negative reactions (punitive reactions and minimization reactions) were presented as response options. Respondents were asked to rate their likelihood of responding to each option using a seven-point Likert-type scale (1 = *very unlikely*, 7 = *very likely*). Therefore, participants for the current study were asked to respond to a total of 25 items (five response options across five emotional scenarios). An internal consistency of .76 for positive reactions and .82 for negative reactions was found in Lang and colleagues' (2017) study.

The CCCSI was originally developed by Lang and colleagues (2017) to measure teachers' responsiveness to challenging behaviors from children during difficult social situations (e.g., *If a child in my class hit another child for the first time, I would...*). Similar to the format of CCNES, participants were presented with two scenarios and asked to indicate the likelihood in which they would respond on a seven-point scale (1 = *very unlikely*, 7 = *very likely*). A total of seven items represented positive social guidance (e.g., *ask the children to share their own ideas and feelings with one another*) and four items represented negative social guidance (e.g., *send the child who hit to a space to be alone until I determine they can play again*) across the two scenarios. Internal reliability was found to be .82 for positive social guidance and .63 for negative social guidance (Lang et al., 2017).

Semi-structured interview protocol. Individual follow-up interviews were conducted using a semi-structured interview protocol collaboratively developed by the VLS Momentum research team and me (Appendix K). The protocol included open-ended questions that aimed to explore the following from ECE teachers who completed all professional development program requirements: 1) supports, resources, and barriers ECE teachers experienced during their participation in the VLS Momentum project, 2) participants' experiences and relationships with their coach during their participation in the VLS Momentum project, 3) participants' perceptions of changing the format of coaching from in-person to virtual sessions as a result of COVID-19, 4) potential differences in participants' professional practices following completion of VLS Momentum project, 5) potential differences in participants' knowledge and use of strategies for promoting their emotional well-being, and 6) potential differences in participants' perceived stress, emotion responsiveness, and teaching efficacy in supporting children's emotional and behavioral needs in their professional context.

Data Analysis

Quantitative data. SELF-T content knowledge assessments and research surveys were shared by the VLS Momentum research team through .sav files, which were imported and analyzed by this researcher using SPSS. First, descriptive statistics of each variable were examined. To answer research questions related to variables in the outcome evaluation (e.g., knowledge of emotional well-being, perceived stress, teaching disciplinary efficacy, responsiveness to challenging behaviors and emotions in the classroom), inferential statistics were also conducted to compare means from pre- and post-test scores in repeated measures using either the parametric dependent sample t-test or non-parametric Wilcoxon Signed-Rank test, depending on whether tests of assumptions for normality were met. An alpha level of .05 was used for all statistical tests.

Qualitative data. Qualitative data are intended to provide more in-depth and richer information as well as for the purposes of data triangulation and complementarity (Teddlie & Tashakkori, 2003) with results from quantitative strand. Hsieh and Shannon (2005) described three approaches to qualitative content analysis, two of which were used to analyze qualitative data in the current study. I used *directed* content analysis (Hsieh & Shannon, 2005), wherein codes were primarily derived from theory and defined before data analysis, to analyze participants' written accounts of their learning in SELF-T content knowledge assessments and guiding questions. I read each set of files from beginning to end twice to immerse in the data and get a sense of the whole picture (Hsieh & Shannon, 2005), and highlighted texts that related to participants' description of knowledge or use of strategies for promoting teachers' emotional well-being. Codes and categories were informed by previous empirical studies (e.g., Jennings et

al., 2013; Jennings et al., 2017) and content discussed in SELF-T modules to guide the meaning-making and interpretation of the data for research questions in the current study.

The initial coding process aimed to identify all instances related to the predetermined categories (e.g., emotional, cognitive, physiological, behavioral) and subsequent analysis involved reviewing the evidence within each category to identify potential subcategories (Hsieh & Shannon, 2005). Subcategories were generated using descriptive coding (Miles, Huberman, & Saldaña, 2014). The final review involved paying close attention to consider any potential relations or linkages across and within each category (Braun & Clark, 2006), along with using rank order comparisons to determine the frequency of codes used in representing the broad categories (Hsieh & Shannon, 2005).

Interviews. Professional transcription service was used for recorded Zoom sessions of individual semi-structured interviews. Considering the open-ended nature of the interview questions to understand a phenomenon (i.e., ECE teachers' experiences and learning from SELF-T), I used *conventional* content analysis that allowed for codes to be generated and defined from the data during the analysis process, rather than using predetermined codes or categories (Hsieh & Shannon, 2005). I read each transcript from beginning to end twice to immerse in the data and got a sense of the whole picture (Hsieh & Shannon, 2005), before highlighting texts of participants' descriptions related to variables of interest in each research question.

Continuing with the conventional approach discussed in Hsieh and Shannon (2005), initial codes were created from the highlighted texts to generate first impressions or thoughts. Specifically, I used both elemental and affective methods (Miles et al., 2014) to approach the coding process, resulting in a mix of descriptive, in vivo, process, emotion, and values codes to capture the richness of the data more comprehensively. I continued to review the remaining

transcripts using the emergent codes, as well as created new ones for any data that did not fit into the existing codes (Hsieh & Shannon, 2005). Following the first cycle coding process, I proceeded with a second cycle process to sort the codes into potential emergent categories, and in particular, paid close attention to any potential relations or linkages with each other (Braun & Clark, 2006; Hsieh & Shannon, 2005).

Researcher subjectivity. Patton (2002) argues that the researcher is a key instrument in both data collection and analysis of qualitative research. Indeed, Braun and Clarke (2006) point out that themes do not emerge from the data alone, instead themes emerge based on the interpretation and meaning assigned by the researcher. Because the researcher's perspective influences the interpretation of data and significance of findings, Shenton (2005) proposes disclosing the researcher's background, qualifications, or experiences that may be relevant to the study in order to establish one's credibility and trustworthiness. As the researcher, I did not hold supervisory positions nor was I professionally affiliated with the participants in this study. My professional worldview and role as a school psychologist who regularly consults with ECE teachers to promote children's social, emotional, and behavioral outcomes might have influenced the processes of filtering and interpreting the data. Although subjectivity exists in the meaning making and interpretation of qualitative data, Patton (2002) affirms that it is possible to minimize biases in qualitative inquiry when researchers engage in reflexivity. By asking and reflecting upon *what I know* and *how I know it* (Patton, 2002) throughout the process of data analysis, I aimed to accurately reflect the participants' experiences rather than my past and ongoing experiences of working with ECE teachers, or prior knowledge from reviewing scholarly literature and studies.

Guba (1981) further argued for the need to establish trustworthiness and rigor in qualitative research. Beyond engaging in reflexivity in which I examined how my background, interests, and beliefs might have influenced the processes of data collection and analyses, I also employed strategies such as member checking (i.e., paraphrasing participants' responses during individual semi-structured interviews to ensure interviewers' understanding accurately reflected participants' experiences), dense description of participants' background information in both SELF-T and interview samples to the best of my knowledge (e.g., relevant details to personal and professional contexts), and external auditing by my dissertation adviser and committee to ensure they could easily trace and understand the progression of data analysis and findings (Krefting, 1991). Finally, the triangulation of multiple methods and data sources (e.g., SELF-T content knowledge assessments, guiding questions during coaching sessions immediately following completion of SELF-T, semi-structured interviews) as well as investigators (e.g., blind-coding of SELF-T content assessments by research assistant, interviews conducted by VLS Momentum research team member who did not have previous interactions with interviewees and myself, an external collaborator to the research team) were perhaps strengths in the current study in establishing the dependability and credibility of qualitative findings (Krefting, 1991).

Summary matrices. Summary matrices illustrate the alignment between the proposed research questions, instrumentation used for operationalizing the variable, and procedures for data collection and analysis (see Tables 4.3 to 4.9).

Table 4.3

Process Evaluation Summary Matrix: Engagement

RQ 1: To what extent are ECE teachers participating in the SELF-T course engaged?

Variable	Instrumentation	Data Collection		Data Analysis
		Source(s)	Frequency	
<i>Intervention dosage</i> Amount of program content and activities received by participants	SELF-T <i>Demonstrate</i> multiple-choice questions	VLS Momentum LMS	At least once for each module	Descriptive statistics
<i>Participant responsiveness</i> Degree to which participants are engaged in program content and activities	SELF-T content knowledge pre-and post-test assessments	VLS Momentum LMS	Twice (start and end of course)	Descriptive statistics
	SELF-T Focused Topics guiding questions	Coaching records	Once (end of course)	Descriptive statistics

Note. SELF-T = Social-Emotional Learning for Teachers. VLS = Virtual Lab School. LMS Learning management system.

Table 4.4

Process Evaluation Summary Matrix: ECE Teachers' Overall Experience

RQ2: What are ECE teachers' overall experience with the professional development program?

RQ2A: To what extent do ECE teachers feel comfortable with professional development delivered through a web-based platform?

RQ2B: Do ECE teachers report any barriers to complete the activities of the professional development program during the COVID-19 pandemic?

RQ2C: What are ECE teachers' perceived satisfaction and usefulness of SELF-T course content?

Variable	Instrumentation & sample questions	Data Collection		Data Analysis
		Source(s)	Frequency	
Context (RQ2A, 2B) Potential means of access or barriers to meet participant needs	VLS Momentum survey items (e.g., “ <i>If there is another online training opportunity, I am likely to take advantage of the opportunity.</i> ” “ <i>Which of the following, if any, were barriers to completing the VLS Momentum coursework during the COVID-19 pandemic? (select all that apply)</i> ”)	VLS Momentum research sample	Once (post-test)	Descriptive statistics
	Interview protocol (e.g., “ <i>During the project, we switched from in-person to virtual coaching due to COVID-19. If we offer the VLS again, what format or combination of coaching formats would you consider ideal, if there wasn’t a pandemic complicating things? Why?</i> ” “ <i>From your perspective what kinds of supports or systems were missing or do you wish you had?</i> ”)	Interview sample	Once (follow-up interview)	Conventional content analysis (Hsieh & Shannon, 2005)
Quality of program delivery (RQ2C) Degree of effectiveness in delivering program components	VLS Momentum survey items (e.g., “ <i>Please select your 3 favorite courses.</i> ” “ <i>Please select your 3 least favorite courses.</i> ”)	VLS Momentum research sample	Once (post-test)	Descriptive statistics
	Interview protocol (e.g., “ <i>Can you tell me about your overall experience with the information covered in SELF-T, which focuses on your own well-being?</i> ”)	Interview sample	Once (follow-up interview)	Conventional content analysis (Hsieh & Shannon, 2005)

Note. VLS = Virtual Lab School. PD = professional development.

Table 4.5

Outcome Evaluation Summary Matrix: Knowledge of Emotional Well-Being

RQ3: To what extent do ECE teachers demonstrate changes in their *knowledge of emotional well-being* following completion of SELF-T course?

RQ3A: To what extent do ECE teachers demonstrate increased *knowledge of emotional well-being* following completion of SELF-T course?

RQ3B: What do ECE teachers report about their *knowledge of emotional well-being* following completion of SELF-T course?

Outcome variable	Instrumentation & sample questions	Data Collection		Data Analysis
		Source(s)	Frequency	
Knowledge of emotional well-being (RQ3A)	VLS Momentum research surveys - Knowledge of stress and self-care strategies (Lang et al., 2020) (e.g., <i>I am able to define the emotions I feel when I am stressed. I know how to use muscle relaxation to reduce my stress.</i>)	VLS Momentum research sample	Twice (pre- and post-test)	Descriptive statistics
	SELF-T content assessments – 5 multiple choice questions (e.g., <i>Which statement describes what resilience is? Which of these is an example of a healthy emotional regulation strategy?</i>)	VLS Momentum research sample	Twice (start and end of SELF-T course)	Descriptive & inferential statistics
	SELF-T content assessments – blind-coding of 2 short answer questions (e.g., <i>Describe how stress might prevent you from providing nurturing care</i>)	VLS Momentum research sample	Twice (start and end of SELF-T course)	Descriptive & inferential statistics
Knowledge of emotional well-being (RQ3B)	SELF-T content assessments – 2 short answer questions (e.g., <i>Describe how stress might prevent you from providing nurturing care</i>)	VLS Momentum research sample	Twice (start and end of SELF-T course)	Directed content analysis (Hsieh &

				Shannon, 2005)
SELF-T guiding questions (e.g., <i>What about this course surprised you? What challenged or changed your thinking?</i>)	Coaching records	Once (end of course)	Directed content analysis (Hsieh & Shannon, 2005)	
Interview Protocol (e.g., <i>What have you learned in the SELF-T course, which focuses on your own emotional well-being and the role it may play in the classroom (or childcare) environment?</i>)	Interview sample	Once (follow-up interview)	Conventional content analysis (Hsieh & Shannon, 2005)	

Note. SELF-T = Social-Emotional Learning for Teachers. VLS = Virtual Lab School.

Table 4.6

Outcome Evaluation Summary Matrix: Use of Strategies

RQ4: What do ECE teachers report about their *use of strategies that promote emotional well-being* following completion of SELF-T course?

Outcome variable	Instrumentation & sample questions	Data Collection		Data Analysis
		Source(s)	Frequency	
Use of strategies	SELF-T guiding questions (e.g., <i>How will you incorporate the information in this course into your personal practice and/or work with children and families?</i>)	Coaching records	Once (end of course)	Directed content analysis (Hsieh & Shannon, 2005)
	Interview Protocol (e.g., <i>What strategies have you used to prevent or manage stressful experiences in your work, such as when you're addressing or responding to a challenging behavior?</i>)	Interview sample	Once (follow-up interview)	Conventional content analysis (Hsieh & Shannon, 2005)

Note. SELF-T = Social-Emotional Learning for Teachers.

Table 4.7

Outcome Evaluation Summary Matrix: Perceived Stress

RQ5: To what extent is participation in the SELF-T course associated with ECE teachers' *perceived stress?*

Outcome variable	Instrumentation & sample questions	Data Collection		Data Analysis
		Source(s)	Frequency	
Perceived stress	VLS Momentum research surveys – 4-item Perceived Stress Scale (Cohen et al., 1983) (e.g., <i>In the last month, how often have you felt that you were unable to control the important things in your life?</i>)	VLS Momentum research sample	Twice (pre- and post-test)	Descriptive statistics
	Interview Protocol (e.g., <i>How has the SELF-T coursework make a difference, or not, in how you perceived stress at work or in your personal life?</i>)	Interview sample	Once (follow-up interview)	Conventional content analysis (Hsieh & Shannon, 2005)

Note. SELF-T = Social-Emotional Learning for Teachers. VLS = Virtual Lab School.

Table 4.8

Outcome Evaluation Summary Matrix: Teaching Disciplinary Efficacy

RQ6: To what extent is participation in the SELF-T course associated with ECE teachers’
teaching disciplinary efficacy?

Outcome variable	Instrumentation & sample questions	Data Collection		Data Analysis
		Source(s)	Frequency	
Teaching disciplinary efficacy	VLS Momentum research surveys – 3-item adapted from Bandura’s (1997) Teacher Self-Efficacy Scale (e.g., “ <i>I can get children to follow classroom rules,</i> ” “ <i>I can control disruptive behavior in my classroom</i> ”) from Buettner et al. (2016)	VLS Momentum research sample	Twice (pre- and post-test)	Descriptive statistics
	Interview Protocol (e.g., <i>How has the SELF-T coursework make a difference, or not, in the confidence of your ability to support children engaging in challenging behaviors in the classroom (or childcare setting)?</i>)	Interview sample	Once (follow-up interview)	Conventional content analysis (Hsieh & Shannon, 2005)

Note. SELF-T = Social-Emotional Learning for Teachers. VLS = Virtual Lab School.

Table 4.9

Outcome Evaluation Summary Matrix: Teachers' Responsiveness

RQ7: To what extent is participation in the SELF-T course associated with ECE teachers' responsiveness to challenging behaviors and emotions in the classroom?

Outcome variable	Instrumentation & sample questions	Data Collection		Data Analysis
		Source(s)	Frequency	
Teachers' responsiveness	VLS Momentum research surveys – shortened version of CCNES from Fabes et al. (1990) (e.g., <i>If a child in my class is participating in a group activity and makes a mistake and then gets upset and is on the verge of tears, I would...</i>) and CCCSI (Lang et al., 2017) (e.g., <i>If a child in my class hit another child for the first time, I would...</i>)	VLS Momentum research sample	Twice (pre- and post-test)	Descriptive statistics
	Interview Protocol (e.g., <i>What differences have you noticed in how you emotionally respond to children's behaviors that may be challenging?</i>)	Interview sample	Once (follow-up interview)	Conventional content analysis (Hsieh & Shannon, 2005)

Note. VLS = Virtual Lab School. CCNES = Coping with Children's Negative Emotions Scale. CCCSI = Coping with Children's Challenging Social Interactions.

Chapter 5 – Study Findings and Discussion

This chapter presents findings from both process and outcome evaluations of the current study. Detailed results for each of the seven main research questions are described below. Following a discussion of pertinent findings, I will conclude by addressing potential limitations of this study as well as future implications to consider for practices, policies, and research related to ECE teachers' social-emotional competence.

Findings

Process Evaluation

RQ 1: To what extent are ECE teachers participating in the SELF-T course engaged?

For the SELF-T course, all participants were expected to answer questions in the Demonstrate section at the end of each of the five modules with 100% accuracy, pass the post-test content knowledge assessments, and respond to guided reflection questions with their assigned coaches before they could proceed to begin and view the next course. In the VLS LMS, participants needed to achieve 100% accuracy on the three multiple-choice questions in the Demonstrate section before they could proceed to the next module. Unlimited retakes were allowed and the LMS did not record the number of retakes needed by each participant.

To successfully pass the content knowledge assessments, participants needed to correctly answer at least eight of the 10 multiple choice questions and all six short answer question, based on their coaches' assessment and feedback. Content knowledge assessments could be repeated up to three times as needed to demonstrate understanding of course content, and coaches provided individualized support for ECE teachers who needed additional assistance to demonstrate mastery toward course objectives. I received records of SELF-T Focused Topics

Guiding Questions for 22 of the 23 course participants. The VLS Momentum research team explained that one participant's responses to guiding questions were not received and included as part of research records, because the assigned coach left the project shortly after the participant completed the SELF-T course and was unable to submit the records prior to departure. This overall programmatic structure and supports designed by the VLS Momentum research team and embedded within each course, including SELF-T, suggested that all participants demonstrated adequate intervention dosage and engagement in order to achieve foundational understanding of key objectives and content.

RQ 2: What are ECE teachers' overall experience with the professional development program?

This research question of ECE teachers' overall experience was answered by examining their self-reported level of comfort with a professional development program delivered through a web-based platform, barriers to completing activities particularly during conditions under COVID-19, and perceived satisfaction and usefulness of SELF-T course content. Results are described in detail below.

RQ2a) To what extent do ECE teachers feel comfortable with professional development delivered through a web-based platform?

VLS research surveys. In general, ECE teachers who completed all coursework requirements in the VLS Momentum study and the post-test research survey ($n = 11$) found the web-based platform and format of the professional development program favorable and reported being likely to pursue future online professional development opportunities if available.

Table 5.1

Comfort with Web-Based Professional Development from Participants of VLS Momentum

	<i>n</i>	Min	Max	Median	Mean (SD)
Comfort with web-based professional development	11	4	5	5	4.64 (.45)

Interviews. Interview participants similarly described the benefits of participating in web-based professional development. Ms. Casey shared her preference to participate in her home after work hours where “I’m relaxed, quiet, nobody bother me, nobody call me. I don’t have any stress. No limited time...” and ultimately, the coaching sessions that occurred over video-conferencing was a good fit for her. When asked if future iterations of VLS should offer coaching using an in-person or virtual format, both Ms. Casey and Ms. Bailey suggested it should depend on participants’ preferences and needs. For example, Ms. Bailey highlighted that “I feel like everybody learns differently...some people don’t like talking to other people...but I mean, I think as long as both are available...as long as they can choose which one works best for them,” to acknowledge the need to make different options available for adult learners.

RQ2b) Do ECE teachers report any barriers to completing activities of the professional development program during the COVID-19 pandemic?

VLS research surveys. Respondents of the VLS Momentum study post-test research survey were asked to indicate if they experienced any barriers to completing the coursework during the COVID-19 pandemic. Respondents had the option to select all the barriers that applied as well as provide their own response. For the 11 ECE teachers who completed the post-test survey, the following were reported as barriers: not having in-person coaching ($n = 3$), not

having reliable internet access ($n = 2$), having other responsibilities (e.g., taking care of children, family, or a different job) ($n = 2$), and lack of money ($n = 1$). Five respondents reported experiencing no barriers, and no respondents indicated not having a device to complete the coursework or lack of employment as barriers to completing coursework requirements during the pandemic.

Interviews. Although the three interviewees did not explicitly state they experienced barriers as a result of COVID-19 that limited their ability to complete the professional development activities, each of them mentioned experiencing various challenges (e.g., decline of physical health requiring medical procedures, stress, loss of sleep, family death, responsibilities at work and home) throughout the course of their VLS training. Two interviewees also described perceived barriers faced by their colleagues. For example, Ms. Abbey pointed out that “I know when the pandemic hit most of our employees dropped the program just...like all the stress and everything like that,” whereas Ms. Casey shared that “unfortunately, nobody finished the course on time because there’s pandemic time. They’re [*sic*] family issues. There are kids problem.” to highlight potential challenges faced by ECE teachers who initially signed up to participate but later withdrew from the professional development program following the start of the pandemic.

RQ2c) What are ECE teachers’ perceived satisfaction and usefulness of SELF-T course content?

VLS research surveys. None of the 11 respondents on the VLS Momentum post-test research survey selected SELF-T as their top three least favorite, or most favorite, course out of the 21 courses they took for the professional development program. Family Engagement ($n = 4$), Creative Expression ($n = 3$), Creating Gender Safe Spaces ($n = 3$), and Supporting Language Diversity ($n = 3$) were among the most commonly selected for most favorite courses, while

Program Management ($n = 3$) and Creating Gender Safe Spaces ($n = 6$) were most commonly selected for least favorite courses.

Interviews. All three interviewees highlighted the stresses involved working in the field of ECE. Ms. Abbey, who works with the infant and toddler age group, pointed out that “it does get stressful listening to the same high pitch screaming all day long.” Meanwhile, Ms. Bailey described the difficulties in compartmentalizing her lives at work and at home:

Kids are stressful. And then, we come home to our own kids, and it's just, you never leave your kids. So, it's just hard. And when you love the kids that you work with, and you treat them as your own, it's hard sometimes when something negative happens, or they leave. I mean, it's hard on you.

Ms. Casey, who has worked in the ECE field for eight years, recalled that the “first three years is the hardest,” and went on to describe it to be “a very sensitive job. I feel like that, because a lot of things...happen, so make sure your eyes always need to be open. Your eyes and your ear always need to be open,” to highlight the various demands faced by ECE teachers in the classroom.

Interviewees consequently explained their perceived usefulness or benefits of SELF-T content. For example, Ms. Abbey described how the coursework increased her ability to handle work-related stresses and use stress management or reduction strategies to promote her reflective practices and confidence as an ECE provider:

It taught me how to kind of handle the more stressful situations...it helped me to figure out like ways to make sure that I was calm so they could essentially be calm. I know that I never would have thought of like meditation, especially during naptimes,

wherein I can kind of reflect on the day and figure out what can I do better tomorrow.

Pointing out things that I know, and just being confident about those things.

Likewise, Ms. Bailey detailed how the SELF-T coursework helped her realize the challenges she faces are common among those in the ECE workforce, as well as offered her strategies to openly discuss with her colleagues on issues that may threaten their social and emotional well-being:

I think it again helps me realize that I'm not the only one that has the same problems. And it's taught me how to try to help other people and help them be honest and open with what's going on. I mean, unfortunately, it's a hard field. And people don't realize that it's not babysitting. They don't realize that so then they get upset, and they get stressed. And they don't know how to handle that sometimes.

Consequently, Ms. Bailey shared that “some people don't realize how stressful it is, and they don't know how to handle that stress. So, they get burnt out too quickly. And then, they leave and then we just have our shortage of childcare teachers,” to suggest that helping ECE teachers understand and promote their own social-emotional well-being may partially address staff turnover and shortages in the field.

One interviewee, Ms. Bailey, in particular also mentioned the timeliness of the SELF-T course amidst the pandemic. She recalled discussing frequently about the course content with her coach, “because COVID was happening. And it was a good time, I guess, to do it, because I mean, everybody was stressed and stuck at home. And I remember us just really, really talking about it,” to discuss how this course provided an avenue for her to explore her own emotional well-being and strategies to buffer the stresses brought on by the pandemic.

Outcome Evaluation

RQ3: To what extent do ECE teachers demonstrate changes in their knowledge of emotional well-being following completion of SELF-T course?

This research question of ECE teachers' knowledge of emotional well-being was investigated by examining a variety of quantitative and qualitative data sources to understand their knowledge of stress and stress prevention or reduction strategies. Results are described in detail below.

RQ3a) To what extent do ECE teachers demonstrate increased knowledge of emotional well-being following completion of SELF-T course?

SELF-T content assessments – multiple choice. There were five multiple-choice questions on the SELF-T pre- and post-test content assessment (e.g., *Which statement describes what resilience is? Which of these is an example of a healthy emotional regulation strategy? What kind of experiences stick in our brains because they can help us survive dangerous situations?*). Programmatic structure of VLS Momentum allowed participants to retake the post-test assessment until they reached a minimum of 80% accuracy, or 4 out of 5 correct responses. To measure ECE teachers' knowledge of emotional well-being, I compared the means between participants' first pre-test attempt and first post-test attempt, and again between their first pre-test attempt and final post-test attempt.

To determine whether a parametric or nonparametric statistics is appropriate for the current research question, I conducted several tests of assumptions for normality. If assumptions were met, a dependent sample t-test would be conducted to measure statistical differences between the means. If assumptions were not met, non-parametric Wilcoxon Signed-Rank test would be conducted instead.

Table 5.2

Descriptive Statistics of SELF-T Multiple-Choice Content Assessments

	First pre-test attempt (<i>n</i> = 23)	First post-test attempt (<i>n</i> = 23)	Final post-test attempt (<i>n</i> = 23)
Mean	3.70	4.43	4.65
Median	4.00	5.00	5.00
Standard Deviation	1.06	.84	.49
Minimum	0	2	4
Maximum	5	5	5
Skewness	-1.81	-1.52	-.68
Kurtosis	5.89	1.89	-1.69

I used several graphical and statistical methods to conduct tests for normality. A visual examination of histograms for differences between pre-test and first post-test attempt scores, as well as pre-test and final post-test attempt scores, suggested adequate representation of a normal distribution. A normal Q-Q plot, which showed that data points were generally close to the linear line, was also used as a graphical representation to determine normality. Numerical values for skewness and kurtosis of differences between pre and post-tests were calculated. Results fell within the rules of thumb suggested by Hair, Black, Babin, and Anderson (2010) and Byrne (2010), in which values between -2 and +2 for asymmetry and -7 to +7 for kurtosis may be considered acceptable. Results from the Shapiro-Wilk test, however, suggested tests of normality were not satisfied for both sets of scores ($p < .001$).

Despite potential violations of assumptions for normal distribution, I conducted a one-tailed dependent sample t-test considering the reasonable sample size ($n = 23$). Results demonstrated statistically significant differences between pre-test and first post-test attempt scores, $t(22) = -3.23, p = .002$, as well as pre-test and final post-test attempt scores, $t(22) = -4.49, p < .001$. Because not all tests of assumption for normality were met which may suggest

deviance from normal distribution to some degree, as sensitivity analyses, I also conducted the non-parametric Wilcoxon Signed-Rank test to determine whether similar results would be obtained. Indeed, results indicated the difference between pre-test and first post-test attempt scores were statistically significant, $T = 108.00, Z = -2.86, p = .004$. Likewise, the difference between pre-test and final post-test attempt scores were also statistically significant, $T = 146.50, Z = -3.46, p < .001$.

Table 5.3

Dependent Sample T-Test for SELF-T Content Assessment on Knowledge of Emotional Well-Being

	<i>n</i>	1 st Pre-Test Attempt Mean (SD)	1 st Post-Test Attempt Mean (SD)	P-value Pre- vs. 1 st Post	Final Post-test Attempt Mean (SD)	P-Value Pre- vs. Final Post
SELF-T content assessment – 5 multiple choice questions	23	3.70 (1.06)	4.43 (.84)	.002**	4.65 (.49)	<.001***

Note. SELF-T = Social-Emotional Learning for Teachers. * $p < .05$, ** $p < .01$, *** $p < .001$. A Wilcoxon Signed-Rank test produced similar results of statistically significant differences between means.

VLS research surveys. Of the 23 ECE teachers who completed the SELF-T coursework, only four responded to both pre-test and post-test research surveys for VLS Momentum, which also included Likert-scale items related to participants’ knowledge of stress (e.g., *I am able to recognize when I am stressed; Stress affects me physically*) and stress reduction techniques (e.g., *I work to change my thoughts in response to my stress; I know how to use stress reduction techniques with children*) (Lang et al., 2020). Higher score means more self-perceived knowledge. Due to the small sample size, means were not aggregated but individually reported for each participant in Table 5.4, with additional variables provided to give readers a better

understanding of contextual information on participants' experiences with employment, income, and work hours that might have been impacted by COVID-19. The results of pre- and post-test mean differences suggest two participants reported a slight decrease in their knowledge of stress and stress reduction techniques, while two participants reported gains in their knowledge. Although no statistical tests could be conducted to determine statistical significance of the differences between pre- and post-test means due to the limited sample size, one possible explanation for the slight decrease in knowledge may be due to ECE teachers' enhanced understanding of what stress is as well as its presence and impact in their lives following their completion of SELF-T coursework. In other words, what may appear to be decreased knowledge may be a reflection of participants realizing the limits of their presumed knowledge base about stress and effective management strategies. Indeed, similar results were also reported by participants in Lang and colleagues' study (2020), who further hypothesized that such effects should fade with time as teachers continue to engage in the use of stress prevention and reduction strategies.

Table 5.4

Study Participants' Individual Responses on Demographics and Means of Knowledge of Emotional Well-Being in Pre- and Post-Test Research Surveys

	Highest level of education	Employment during COVID-19	Changes in work hours & income	Unemployment benefits during COVID-19?	Knowledge of Emotional Well-Being	
					Pre-test Mean	Post-test Mean
Participant 1	College degree	Same employer; did not go in to work	Worked a lot less hours; A lot more income	Yes	4.60	4.40
Participant 2	Some college but no degree	Same employer; worked under pandemic license	Worked somewhat less hours; Somewhat less income	No	3.30	3.20
Participant 3	Some college but no degree	Unemployed or furloughed	Worked a lot more hours; About the same income	Yes	2.60	3.30
Participant 4	Some college but no degree	Same employer; did not go in to work	Worked a lot less hours; A lot less income	Yes	3.00	4.50

SELF-T content assessments – short answers. The VLS Momentum research team also employed blind coding of short answer responses gathered in SELF-T content assessments. Two of the questions in particular relate to participants’ knowledge of stress (*Describe how stress might prevent you from providing nurturing care*) and emotional regulation strategies (*List three positive strategies you can use to help deal with negative emotions*). Given that tests of assumptions for normality and equal variance were not met, the non-parametric Wilcoxon Signed-Rank test was used to analyze mean differences from pretest to posttest for each question. Results indicated no statistically significant differences between pretest and posttest means for the questions on knowledge of stress, $T = 4.00$, $Z = -.577$, $p = .56$, as well as for knowledge of emotional regulation strategies, $T = .00$, $Z = -1.73$, $p = .08$.

Table 5.5

Descriptive Statistics of Blind-Coded Scores for SELF-T Short Answer Responses

	Stress on Nurturing Care		Positive Strategies for Negative Emotions	
	Pre-test ($n = 23$)	Post-test ($n = 23$)	Pre-test ($n = 23$)	Post-test ($n = 23$)
Mean	2.91	2.96	2.96	2.83
Median	3.00	3.00	3.00	3.00
Standard Deviation	.29	.21	.21	.49
Minimum	2	2	2	1
Maximum	3	3	3	3
Skewness	-3.14	-4.80	-4.80	-2.99
Kurtosis	8.61	23.00	23.00	8.95

RQ3b) What do ECE teachers report about their *knowledge of emotional well-being* following completion of SELF-T course?

SELF-T content assessments - short answers. In addition to VLS Momentum research team’s blind coding of short answers, I used directed content analysis on participants’ responses to both short answer items on SELF-T pre-test and post-test content assessments to

explore potential changes in participants' knowledge of emotional well-being. The first item (*Describe how stress might prevent you from providing nurturing care*) was analyzed based on codes and categories informed by the content discussed in SELF-T modules to examine participants' knowledge of stress prior to and after completion of the course. Appendix L offers a comprehensive display of examples used to guide the development of codes and categories for analysis. Table 5.6 lists the frequencies of categories that were used to generate the overall theme, that is, participants' responses across pre-test and post-test assessments suggested a firm understanding of how stress plays a role in their *emotional*, *cognitive*, and *physiological* states, *behavioral* reactions, as well as their *environments*. Regarding one's *emotional* state, participants described how stress can "feel physically overwhelming, crying or yelling, can feel like you have no control," "put you in a bad mood," or make one feel "irritable." *Cognitively*, participants stated that stress can make one "become fixated on it and practically ignore everything else," "too tired to stay on task," "cloud your thinking in ways that make it difficult to make successful decision," and result in a "lack of motivation to teach, solve problems, and provide care." Regarding how stress may influence one's *physiological* state, responses included "headaches, fatigue, irritability," "not wanting to eat or sleep," or "not enjoy doing things I used to."

Participants' short answer responses further suggested an understanding of how stress can have an effect on their *environments*. For example, ECE teachers stated it can "create an unhealthy environment for children" and "make them feel unsafe or uncomfortable." One participant noted that consequently, "children also feed off that energy and can cause a stressful class altogether," which seems to support the hypothesized reciprocal relationships between teachers' and children's social-emotional well-being as well as the classroom climate in the prosocial classroom model (Jennings & Greenberg, 2009).

A review of participants' responses across pre-test and post-test assessments indicated statements related to how stress influences one's cognitive state, as well as responsiveness and interactions with children remained the most frequently cited. There was a slight increase of occurrences in which participants mentioned how stress may have an effect on one's emotional state and classroom environments.

Table 5.6

Frequencies of Categories from Pre-Test and Post-Test SELF-T Short Answers – Stress on Nurturing Care

Categories	Pre-Test Frequency	Post-Test Frequency
Emotional state	4	8
Cognitive state	16	17
Physiological state	4	3
Behavioral reactions		
Interactions with children	7	11
Interactions with others	4	1
Responsiveness	6	8
Professional commitments	5	5
Environments	4	8

Note. Frequency refers to the number of times mentioned across all participants’ responses.

The analysis of SELF-T participants’ responses for the second short answer item (*List three positive strategies you can use to help deal with negative emotions*) to examine their knowledge of emotion regulation strategies was conducted based on codes and categories informed by studies from Jennings et al. (2013), Jennings et al. (2017), and content provided in SELF-T modules. Indeed, strategies described by ECE teachers across both pre-test and post-test content assessments indicated their understanding of how positive or negative emotions relate to *cognitive, emotional, physiological, and behavioral* responses (Table 5.7 and Appendix M).

Regarding *cognitive* responses, defined by this researcher as being aware of or making a change to one’s thoughts or beliefs, participants reported practices such as reframing or reappraising a situation (e.g., “think differently about a situation,” “reappraisal”), distraction (e.g., “work toward a more positive thought,” “think of happy thoughts or a happy place”), positive affirmations or self-statements (e.g., “saying positive affirmations to yourself”), thought review or journal (e.g., “writing down feelings,” “ask yourself it is fact or opinion”), and compartmentalization (e.g., “try and leave personal matters and issues at home”). *Emotional*

response, as defined by being aware of or making a change to one's feelings or emotions, was also highlighted in participants' writing. These included strategies such as identifying triggers (e.g., "recognize what triggers the emotions"), embracing the negatives (e.g., "accept that bad feelings are occasionally unavoidable"), labeling (e.g., "talking it out," "label the emotions," "give voice to the negative feelings...then say it out loud"), and avoiding negative influences (e.g., "avoid angry, grumpy, and pessimistic people").

SELF-T participants also mentioned strategies indicative of being aware of or making a change to one's *physiological* response. Practices such as engaging in physical activities or relaxation (e.g., "get lots of rest," "muscle relaxation – slowly tense and untense muscle groups," "go for a walk"), breathing exercises (e.g., "focus on breathing"), taking a break (e.g., "find a place to relax that is private"), and meditating (e.g., "meditation") were commonly described. Finally, in regards to *behavioral* responses suggesting an awareness of or intent to take actions toward the negative emotions, participants reported strategies that included engaging in problem solving (e.g., "confront it, try to find a solution"), participating in leisure activities (e.g., "listen to music," "use pleasant activities like reading," "doing something you enjoy and are good at"), and finding social supports (e.g., "talking with friends," "ask for help from a coworker," "talk to the director").

The frequencies in which participants described these strategies appeared to be similar between pre-test to post-test assessments, except for the strategy of reframing or reappraising a situation, which increased from being mentioned only once on pre-test assessments to six times on post-test assessments across the 23 participants following completion of SELF-T coursework.

Table 5.7

Frequencies of Categories from Pre-Test and Post-Test SELF-T Short Answers – Positive Strategies for Negative Emotions

Categories	Pre-Test Frequency	Post-Test Frequency
Cognitive		
Reframing / reappraising	1	6
Distraction	7	6
Positive affirmations	1	3
Thought review / journal	2	2
Compartmentalization	0	1
Emotional		
Identifying triggers	1	0
Embracing the negatives	2	0
Labeling	6	5
Avoiding negative influences	0	1
Physiological		
Physical activity or relaxation	13	14
Breathing exercises	16	11
Taking a break	3	3
Meditation	0	4
Behavioral		
Problem solving	2	0
Leisure activities	7	4
Social supports	10	10

Note. Frequency refers to the number of times mentioned across all participants' responses.

SELF-T guiding questions. A similar approach to analyzing participants' responses to one of the guiding questions posed during coaching sessions was used (*What about this course surprised you? What challenged or changed your thinking?*). A change in ECE teachers' *knowledge of emotional well-being or stress and its effects* was most commonly described, such as an increased understanding or awareness of stress (e.g., "learning not all stress is bad," "recognize, identify, and deal with stressors," "I thought it was so true that the children's challenging behavior can raise your stress level"), effects on oneself (e.g., "it was new to me that

feelings could lead to having physical stress,” “made me realize I have a lot of anxiety,” “thinking about the frequent headaches, maybe a sign of stress,” “everything is related to each other and stress, physical health and emotional well-being are related to each other”), and effects on others (e.g., “Reducing stress helps a lot in my relationship with children and my colleagues”). One teacher commented on the timeliness of the content covered in SELF-T and that it was a “good course to have” considering the stresses brought on by the pandemic for her families and coworkers.

ECE teachers also described a change in their *knowledge of coping strategies* across cognitive, emotional, physiological, and behavioral domains. In relations to the cognitive domain, participants described being informed of how the brain tends to “focus on the negative,” understanding the need to “changing that negative thinking into positive thinking,” and being aware that one can be “so used to thinking a certain way that it’s normal to us to think a certain way.” Participants also reported the importance of acknowledging and labeling their own feelings as well as teaching children to label theirs, although one ECE teacher noted she had further questions on how to teach, model, and manage emotions in developmentally appropriate ways with young children. SELF-T participants further stated a change in their understanding of coping strategies to manage physiological responses to stressors, such as how meditation, muscle relaxation, yoga, or stretching can be “helpful and important for the body” and an intention to incorporate these practices into the classroom environment. In addition, ECE teachers acknowledged that asking for help, talking to trusted individuals, or writing gratitude notes were several behavioral strategies they learned to cope with challenging days or moments.

SELF-T participants also discussed the *importance of self-care*, by stating the need to focus on their own well-being in addition to the children under their care. One ECE teacher

mentioned how job training in this field often focuses on children’s needs, while another teacher stated that “sometimes we lose focus on yourself...or taking care of yourself” in the process of providing care to others. Furthermore, an ECE teacher described how the SELF-T coursework was “new information for me to think about myself” because her cultural and religious backgrounds emphasized on the importance of caring for others (e.g., children, husband, family). Consequently, the content of SELF-T reminded these participants to also turn the focus onto themselves and their own lives.

Finally, two ECE teachers stated there was *no change or new information* they received from the SELF-T coursework. For example, one reported that the overall content was not surprising to her, whereas another teacher informed her coach that she had heard or known the information prior to the course.

Table 5.8

Frequencies and Examples to Categories from SELF-T Guiding Questions – Challenges or Changes to Thinking

Categories	Frequency	Examples
Knowledge of emotional well-being or stress and its effects	11	<p>“Made me realize I have a lot of anxiety. Need to stop and think”</p> <p>“not all stress is bad”</p> <p>“feelings could lead to having physical stress”</p> <p>“I thought it was so true that the children’s challenging behavior can raise your stress level”</p> <p>“thinking about the frequent headaches, may be a sign of stress”</p> <p>“how to recognize, identify, and deal with stressors”</p>
Knowledge of coping strategies		
Cognition	7	<p>“related most to the How We Think lesson”</p> <p>“optimism can be learned”</p> <p>“changing that negative thinking into positive thinking is something I need to remember to do”</p>

		<p>“we are so used to thinking a certain way that it’s normal to us to think a certain way”</p> <p>“even when there is both positive and negative things happening, most focus is on the negative”</p>
Emotion	3	<p>“label it, takes away some of power”</p> <p>“label emotions and trying to get the kids to label their emotions as well”</p>
Physiological	4	<p>“yoga in the classroom...we all need to get our bodies moving in calm way”</p> <p>“the muscle relaxation was very helpful”</p> <p>“mediation [<i>sic</i>] helpful and important for the body. It is something that requires practice and learning to get better at it”</p>
Behaviors	3	<p>“need to ask for help. Talk to trusted people and take time for myself”</p> <p>“ways to cope with my harder days”</p> <p>“write a gratitude note”</p>
Importance of self-care	4	<p>“this was new information for me to think about myself.”</p> <p>“thinking differently about out everyday lives. Our job is to watch after children and all of the training focuses on them.”</p>
No change or new information	2	<p>“Not a lot of it was new. I had heard the information before”</p>

Note. Frequency refers to the number of times mentioned across all participants’ responses.

Nonetheless, it may be noteworthy to highlight one ECE teacher’s statement on her emerging understanding of how the use of coping strategies can influence both teacher and children’s emotional well-being. She noted that she had tried to practice muscle relaxation exercises on her own and with children in her classroom during the week, and described the incidence when she told the children to “lay on the ground and get them to stretch. Then they were all on top of me. That led to playing. We distracted ourselves from big emotions.” This teacher further shared the sentiment that her week “felt stressful and fun. I felt myself

stepping back and counting to ten. It really helps to see it unfold,” which supports the potential benefits of putting knowledge gained from the SELF-T course into practice for herself and with others.

Interviews. One of the three interviewees, Ms. Casey, stated that terms and content covered in SELF-T, such as learning what physical, social, and emotional well-being are and how they can be connected, were overall new information for her. While the other two interviewees noted the information was not entirely new to them, the SELF-T course reminded them to acknowledge that there are difficult days or moments at work but also be mindful of how their demeanors can have an effect on their classrooms or the children under their care. For example, Ms. Abbey described how as she engages in strategies such as meditation and reflective practices, she is acknowledging that:

It’s really important to have like a clear head when you’re going into a classroom right that - or, I mean, any classroom really because they can kind of sense your energy... No one is perfect. I’m sure we all have like our days that are better than others...it kind of helped me manage that so that I could be the best version of myself for the classroom.

Ms. Bailey similarly acknowledged the potential effects of stress on her classroom environment, while also highlighted the importance of managing one’s stress effectively because of the lengthy amount of time children are spending under ECE teachers’ care and observing how their teachers are responding to or coping with difficult or challenging times:

I can tell a difference in my classroom when I’m - and having a bad moment or a bad day, or I’m stressed...And because they’re with us usually from open to close. And so, I know

it's mostly from us. They see all this. And so, I can tell when I'm having a bad day. And then, the whole classroom is starting to crumble, I guess.

Ms. Bailey concluded that she had previously known about the importance of teachers' emotional well-being. Nonetheless, the SELF-T course "made me feel good that I knew I was doing the right thing. Not only for myself, but my family, anything that - my work, my kids, I was there for my kids more," by reinforcing her knowledge on how she can promote her own well-being as well as the relationships she had in both personal and professional domains.

RQ4: What do ECE teachers report about their *use of strategies that promote emotional well-being* following completion of SELF-T course?

SELF-T guiding questions. I again used a directed approach to content analysis for participants' responses to one of the guiding questions posed during coaching sessions (*How will you incorporate the information in this course into your personal practice and/or work with children and families? Name at least three strategies connected to this course you will now use in your practice.*). Indeed, participants' responses suggested the intent to promote an increased understanding and use of prevention or reduction strategies for stress within themselves and others (e.g., children, families, colleagues), which aligned to a key objective of the SELF-T course and discussed in two of the modules (i.e., *What We Can Do On Our Own; What We Can Do Together*). Similar to their short answer responses on the SELF-T content assessments, ECE teachers reiterated an intent to incorporate strategies targeting their cognitive, emotional, physiological, and behavioral responses to stressors that may challenge their emotional well-being during their coaching sessions (Table 5.9).

Table 5.9

Frequencies and Examples to Categories from SELF-T Guiding Questions – Personal and Professional Practice

Categories	On Their Own		With Others	
	Frequency	Examples	Frequency	Examples
Cognitive	11	“change how I think – learn my triggers” “writing in a journal the things that you are grateful for” “remembering not to fall into thinking traps” “thinking about and visualizing a happy place” “positive self-statements”	2	“modeling how to challenge the negative beliefs in sensitive, developmentally appropriate ways” “teach the kids gratitude”
Emotional	4	“changing my reaction to children’s behavior / strong emotions” “focus on emotional regulation strategies” “being disciplined about labeling my feelings”	4	“help children build strategies that help them to know their feelings” “sharing strategies for negative emotions with the class”
Physiological	19	“meditation and breathing exercises” “Practice tensing and relaxing your muscles so you have a better understanding how it feels when stressed and unstressed”	12	“read books about being calm. ‘calm your body.’” “try yoga with children” “breathing techniques – with teachers and families” “incorporate more exercise in classroom”
Behavioral	10	“address the actual problem that is causing the behavior, rather than just focusing on the behavior” “positive environment for children” “positive redirection”	3	“help co-workers deal with behavioral children” “helping children to learn to enjoy reading as a way of relax”

		“asking for help and helping others when she sees stress”		
General	1	“stress relieving activities”	7	“talk with your fellow teachers and caregivers about the importance of reducing stress and share” “create a space for children to de-stress”

Note. Frequency refers to the number of times mentioned across all participants’ responses.

Strategies to manage one’s *physiological* responses (e.g., meditation, exercising) were most frequently mentioned by ECE teachers to do on their own and with others. A new category, *general*, was created to capture participants’ general desire to promote self or others’ understanding of stress or self-care and its importance, although they did not state specific strategies to achieve the goal. What may be noteworthy to highlight were one ECE teachers’ intent to “changing my reaction to children’s behavior / strong emotions” and addressing “the actual problem that is causing the behavior, rather than just focusing on the behavior,” as well as another teacher’s statement on the need to promote “positive redirection” and a “positive environment for children.” Similar to the hypothesized short and long-term outcomes or impact specified in the logic model (Appendix E), these statements suggested few ECE teachers demonstrated an understanding of the potential relationships between their own emotional well-being, emotional response to challenging behaviors, and practices to promote teacher-child interactions and classroom environment, following completion of SELF-T.

Interviews. Responses from SELF-T guiding questions described above offer insights on ECE teachers’ intent to implement practices that promote emotional well-being for themselves or others. Follow-up interviews conducted for the current study, which took place several months

to one year after participants completed their SELF-T course, provide further understanding on whether ECE teachers implemented these strategies into their professional practices as well as their experiences. Similar to findings from SELF-T guiding questions, the interviewees mentioned using strategies both on their own and with others. Ms. Abbey described using the following strategies in response to the frequent crying while working with infants and toddlers:

even just like breathing strategies, like paying attention to like what your body is doing in the moment, like am I breathing heavy, am I shaking, and I like a nervous wreck because this kid won't stop crying...take a breather, count to three, take a deep breath...I found that just, honestly, stopping just to take a breath and take in the moment so that you're not going 100 miles a minute just overthinking about what to do, as opposed to just kind of like stopping, and breaking everything down in steps.

Ms. Bailey shared using similar strategies for the challenges she faced at work, such as meeting the needs of a child with developmental delays in her classroom:

I do a lot of breathing and counting to myself. Like, I need to bring that down and count. We actually have - I have a little girl and she's a nonverbal autistic child, and I know nothing about it. And some days, I'm like, "Why she can't tell me what's wrong?" And I'm like, "Hey," she's having a fit and I don't know what she means. I offered her this, this and this. And I'm lucky enough I get to text her mom and be like, "Hey, do you have any ideas?" She's like, "Nope, you just sometimes just have to let her go. Let her do it. Just make sure everybody's safe and she's safe." And that's a lot of breathing for me.

Understanding when to briefly step away from the stressful situation was also commonly described by interviewees. Ms. Bailey, who has experiences working with young children across infant, toddler, and preschool ages, as well as experiences of being both teaching and

administrative staff, shared that taking a break allows one to reset before returning to the classroom:

And you're just like, "You know what? I just need a minute." Go take a five-minute breather and come back and I'm better. They're all happy to see me, like I've been gone for hours, and then, we just reset, restart.

This potential to reset the classroom dynamic or climate was similarly described by Ms. Abbey, who talked about the capacity for reframing or reappraising strategies to promote an ECE teacher's ability to provide responsive care:

But it doesn't have to be that way all day, if that makes sense. So like if you're frustrated when you first get in and if you can't seem to clear your head, I don't necessarily think that you have to be like that all day. I feel like it's, again, about the mindset. And you just have to kind of stop and think about what's happening in that moment so you can do your best for them.

In addition to describing what worked, Ms. Bailey shared that not all strategies or resources presented in the SELF-T course were effective for her. For example, she shared the challenges of journaling at her workplace:

I actually did. I tried, I did try to journal. It wasn't for me, because when I think personally, I was more anxious about somebody finding that and not being able to keep it to myself... And if I would accidentally leave work, I'd be super worried and I'd be anxious, and then it just spiraled. And I was like, "You know what? This isn't really working. This is making it worse sometimes."

This example highlights Ms. Bailey's capacity to be aware of what strategies promoted or hindered her own emotional well-being.

Finally, interviewees described their experiences of sharing their learning from the SELF-T course with colleagues and families at their workplaces. Ms. Abbey discussed the positive experiences of sharing what she learned with her coworker:

yeah, I've kind of shared stuff with her about what I've learned and things like that. She's looked over my binder and stuff, and so we've become friends and stuff, so it's really comfortable. We can talk to each other about certain things, and that always helps.

Meanwhile, Ms. Bailey expressed her gratitude that the web-based resources and information from SELF-T has remained available:

we've taken stuff out of it and we do we try to talk to people about this self-care. And we've got stuff printed off everywhere to try to help us just literal quotes or tidbits of something that says, "We're here. We need help," stuff like that.

Having ongoing access has allowed Ms. Bailey to continue to share what she learned with colleagues and families at her center, and provide her with opportunities to engage with others on learning about and discussing the importance of social-emotional competence for adults.

RQ5: How do ECE teachers describe their *perceived stress* following completion of SELF-T course?

The VLS Momentum research team measured participants' perceived stress using the Perceived Stress Scale (Cohen et al., 1983) in pre- and post-test research surveys. Lower score means lower self-perceived stress. Initial impression of the means reported by participants on pre- and post-tests ($n = 4$) indicated that three out of four ECE teachers experienced an increased level of perceived stress based on self-report.

Table 5.10

Study Participants' Individual Responses on Demographics and Perceived Stress Scale

	Highest level of education	Employment during COVID-19	Changes in work hours & income	Unemployment benefits during COVID-19?	PSS	
					Pre-test Mean	Post-test Mean
Participant 1	College degree	Same employer; did not go in to work	Worked a lot less hours; A lot more income	Yes	1.25	2.00
Participant 2	Some college but no degree	Same employer; worked under pandemic license	Worked somewhat less hours; Somewhat less income	No	1.50	1.75
Participant 3	Some college but no degree	Unemployed or furloughed	Worked a lot more hours; About the same income	Yes	2.50	3.00
Participant 4	Some college but no degree	Same employer; did not go in to work	Worked a lot less hours; A lot less income	Yes	2.00	1.00

Note. PSS = Perceived Stress Scale (Cohen et al., 1983).

Interviews. As described above, all three interviewees reported experiencing various personal and occupational stressors (e.g., decline of physical health requiring medical procedures, loss of sleep, family death, caring for responsibilities at work and home) throughout the course of their participation in the professional development program. Beyond being aware of stressors that were present in their lives, Ms. Abbey further elaborated how the SELF-T

course taught her to recognize signs or symptoms of reduced emotional well-being that she was not previously aware of:

I feel like - because I have high-functioning anxiety, so it kind of like helped me see signs of that that I didn't even know were signs of anxiety. So, it kind of helped me manage that so that I could be the best version of myself for the classroom.

RQ6: How do ECE teachers describe their *teaching disciplinary efficacy* following completion of SELF-T course?

The VLS Momentum research team measured participants’ teaching disciplinary efficacy using the scale of Teaching Disciplinary Efficacy (Buettner et al., 2016) gathered in pre- and post-test research surveys. Higher score means higher sense of teaching efficacy related to discipline. Initial impression of pre- and post-test means reported by participants ($n = 4$) indicated there was no change for one ECE teacher, slight decrease for one ECE teacher, and an increase in sense of teaching disciplinary efficacy for two ECE teachers.

Table 5.11

Study Participants’ Individual Responses on Demographics and Teaching Disciplinary Efficacy

	Highest level of education	Employment during COVID-19	Changes in work hours & income	Unemployment benefits during COVID-19?	TDE	
					Pre-test Mean	Post-test Mean
Participant 1	College degree	Same employer; did not go in to work	Worked a lot less hours; A lot more income	Yes	4.00	5.00
Participant 2	Some college but no degree	Same employer; worked	Worked somewhat less hours;	No	4.00	4.00

		under pandemic license	Somewhat less income			
Participant 3	Some college but no degree	Unemployed or furloughed	Worked a lot more hours; About the same income	Yes	4.67	4.33
Participant 4	Some college but no degree	Same employer; did not go in to work	Worked a lot less hours; A lot less income	Yes	3.67	4.00

Note. TDE = Teaching Disciplinary Efficacy (Buettner et al., 2016).

Interviews. Each of the three ECE teachers highlighted a positive change in their sense of teaching disciplinary efficacy when addressing challenging behaviors in the classroom. For example, Ms. Abbey described her increased confidence in working with children who exhibit biting behaviors:

I feel like I am more like professional about it, and I can kind of teach her how to cope with that situation. Luckily we only have one biter at the moment...it makes you more confident in how to handle situations that are being stressed out and overwhelmed by it. I kind of take the challenge, and I figure out what can I do to help her, and redirect her so that she's not hurting others...I'm able to, like I said, see situations differently. I'm able to run my classroom smoother, better.

Similarly, Ms. Casey shared a recent incident in which another teacher asked her why all children appeared happy and no one was crying in her classroom, to which she replied with "...because I know how to handle it," to signal the confidence she now feels in promoting a more

positive emotional climate for the children under her care. Ms. Bailey also described how the SELF-T course helped her feel more comfortable and confident in talking about social-emotional skills with young children:

I know they're only two, but that doesn't mean anything. They still get angry, just like we do. And they get hurt, and their feelings are hurt. And we always try to talk about it. And I think just by remembering some of those things that I was taught or read, mostly and the SELF-T helped. You're okay talking to the kids about it, I guess.

Considering that SELF-T was one of 21 courses in the teachers' professional development program, it is likely that changes in ECE teachers' knowledge, skills, or disposition were part of the cumulative effects of their overall VLS training. Indeed, Ms. Abbey also described how her overall improved confidence as an ECE provider was reinforced throughout her learning in VLS:

It just kind of reinforced my confidence. Scenarios which I followed or which I do follow in the classroom that I had read about in VLS, I was like, "Okay, I do this in my classroom" like that makes me feel better or that's actually the right way to go about doing this. But it just - it definitely made me feel a lot better about any insecurities that I might have as a teacher in my classroom...I didn't really feel like I had to question anything.

Ms. Abbey further talked about how earning her CDA credential upon completing the professional development program and meeting all credentialing requirements deepened her sense of confidence:

So, I'm able to run my classroom more confidently knowing that I have - my CDA proves that I know what I'm doing and I know what I'm talking about. I just have to have that like information behind me to make me more confident.

Despite challenges in differentiating to what extent changes in interviewees' sense of teaching efficacy can be attributed to SELF-T as opposed to the entirety of their VLS training, the sentiments shared by these three ECE teachers collectively suggested that to some degree, their learning from SELF-T (i.e., a course that aims to promote ECE teachers' emotional well-being) contributed to their overall increased sense of efficacy in managing the classroom effectively and implementing social-emotional learning.

RQ7: How do ECE teachers describe their *responsiveness to challenging behaviors and emotions in the classroom* following completion of SELF-T course?

The VLS Momentum research team measured participants' responsiveness to challenging behaviors and emotions in the classroom using CCNES (Fabes et al., 1990) and CCCSI (Lang et al., 2017) gathered in pre- and post-test research surveys. For the CCNES, higher score means higher likelihood of positive or negative reactions within each corresponding subscale. Initial impression of pre- and post-test means reported by participants ($n = 4$) suggested no change in one participant but an increase in positive reactions for three participants (Table 5.12). A decrease in negative reactions was reported by two participants, while two other ECE teachers reported an increase in negative reactions (Table 5.13).

Table 5.12

Study Participants' Individual Responses on Demographics and CCNES Positive Reactions

	Highest level of education	Employment during COVID-19	Changes in work hours & income	Unemployment benefits during COVID-19?	CCNES Positive Reactions	
					Pre-test Mean	Post-test Mean
Participant 1	College degree	Same employer; did not go in to work	Worked a lot less hours; A lot more income	Yes	7.00	7.00
Participant 2	Some college but no degree	Same employer; worked under pandemic license	Worked somewhat less hours; Somewhat less income	No	5.20	6.07
Participant 3	Some college but no degree	Unemployed or furloughed	Worked a lot more hours; About the same income	Yes	6.53	6.67
Participant 4	Some college but no degree	Same employer; did not go in to work	Worked a lot less hours; A lot less income	Yes	6.93	7.00

Note. CCNES = Coping with Children's Negative Emotions Scale (Fabes et al., 1990).

Table 5.13

Study Participants' Individual Responses on Demographics and CCNES Negative Reactions

	Highest level of education	Employment during COVID-19	Changes in work hours & income	Unemployment benefits during COVID-19?	CCNES Negative Reactions	
					Pre-test Mean	Post-test Mean
Participant 1	College degree	Same employer; did not go in to work	Worked a lot less hours; A lot more income	Yes	1.00	1.60
Participant 2	Some college but no degree	Same employer; worked under pandemic license	Worked somewhat less hours; Somewhat less income	No	1.93	1.53
Participant 3	Some college but no degree	Unemployed or furloughed	Worked a lot more hours; About the same income	Yes	1.98	1.60
Participant 4	Some college but no degree	Same employer; did not go in to work	Worked a lot less hours; A lot less income	Yes	1.50	2.10

Note. CCNES = Coping with Children's Negative Emotions Scale (Fabes et al., 1990).

Similar to the CCNES, higher score means higher use of positive or negative social guidance within each corresponding subscale on the CCCSI (Lang et al., 2017). Initial impression of pre- and post-test means reported by participants ($n = 4$) suggested no change in

one participant but an increase in positive guidance for three participants (Table 5.14). A decrease in negative social guidance was reported by two participants, while two other ECE teachers reported an increase in negative social guidance (Table 5.15).

Table 5.14

Study Participants' Individual Responses on Demographics and CCCSI Positive Guidance

	Highest level of education	Employment during COVID-19	Changes in work hours & income	Unemployment benefits during COVID-19?	CCCSI Positive Guidance	
					Pre-test Mean	Post-test Mean
Participant 1	College degree	Same employer; did not go in to work	Worked a lot less hours; A lot more income	Yes	6.14	7.00
Participant 2	Some college but no degree	Same employer; worked under pandemic license	Worked somewhat less hours; Somewhat less income	No	6.00	7.00
Participant 3	Some college but no degree	Unemployed or furloughed	Worked a lot more hours; About the same income	Yes	6.57	6.57
Participant 4	Some college but no degree	Same employer; did not go in to work	Worked a lot less hours; A lot less income	Yes	6.71	7.00

Note. CCCSI = Coping with Children's Challenging Social Interactions (Lang et al., 2017).

Table 5.15

Study Participants' Individual Responses on Demographics and CCCSI Negative Guidance

	Highest level of education	Employment during COVID-19	Changes in work hours & income	Unemployment benefits during COVID-19?	CCNES Negative Guidance	
					Pre-test Mean	Post-test Mean
Participant 1	College degree	Same employer; did not go in to work	Worked a lot less hours; A lot more income	Yes	4.75	5.25
Participant 2	Some college but no degree	Same employer; worked under pandemic license	Worked somewhat less hours; Somewhat less income	No	3.25	2.00
Participant 3	Some college but no degree	Unemployed or furloughed	Worked a lot more hours; About the same income	Yes	3.50	1.50
Participant 4	Some college but no degree	Same employer; did not go in to work	Worked a lot less hours; A lot less income	Yes	4.50	6.25

Note. CCCSI = Coping with Children’s Challenging Social Interactions (Lang et al., 2017).

Interviews. Each of the three interviewees described a change in their response to challenging behaviors or emotions experienced in the classroom. Ms. Abbey’s response highlighted changes in how she responds by preparing the classroom environment differently or

providing more positive guidance, as well as in her perceptions of challenging behaviors (e.g., trying to understand the potential reasons why a child may be exhibiting difficult behaviors) by:

just trying to look at situations differently...I learned that a biter may go for a specific child if that child has a "great" reaction, which I never even thought of. So, like now I'm kind of looking for that, because we do have a child who keeps getting bit, and the child does scream...So, I learned, within that, also that you redirect by just saying like, "Biting hurts, we don't bite." Leave it at that so you don't pay attention to it, and then just kind of repeat like as needed and walk away so you're not paying that attention to it so that they don't get attention for it, whether it be positive or negative. So, stuff like that that I like to apply. I was having issues with children climbing on our tables because they're accessible...So, I've been redirecting them to our climber that we have, they're like foam blocks with a little mini ball pit, and stuff like that. So, I'm trying to make sure that they have something to climb on, as opposed to our tables.

Ms. Bailey also described her improved capacity to model and teach social-emotional skills to the children in her classroom:

Yes, I feel like I'm really trying to think, and try to figure out how they're feeling and what when I asked them. Like, I tell them and "I understand, I get mad, you get mad. We all get mad. We're allowed to be mad." But I also explain, "Sometimes when I get really mad, I just like to be by myself." And so, being able to tell the kids that this is how I do something, it might not work for you. But I will tell them, "When I'm mad, I want to be by myself. Sometimes I cry, but I don't hurt people."...And I feel like I am more open with telling them how I am feeling and how I can maybe help them.

What is also encouraging to note is that each of the ECE teachers reported positive changes in their emotional responses to stressors experienced in the classroom. Ms. Abbey, who works with infants and toddlers, reported feeling an increased sense of calmness when addressing biting behaviors:

So, last year, we had five biters in the room. We've had 12 kids, five biters; we had to have three teachers in the room. And I remember going home and like crying because it was just so stressful, and it seemed like the same child was getting bit every day, and like it was a lot, because every time you turned around someone was getting bitten. So, I'm definitely a lot more open-minded about like why is this child biting. And again, with the - like why are they biting the same person, I never ever would have thought it's because of the reaction from the child, and that's why that same child is getting bitten. So, that was kind of cool to see that perspective on it. And the ways to like redirect without necessarily having to use a teether or a pacifier, if they don't have one. I didn't really think about the attention aspect of it, positive or negative. Just kind of saying like, "We don't bite. Biting hurts," walking them away, and then just dropping it and leaving it like where it is... So, I feel like I can go into it a little more calm,

Similar to Ms. Abbey, Ms. Casey also described a positive change in her response to children's emotional needs. She recalled "sometimes my hand is shivering a lot" when children were crying in the past, but she now feels she can better manage the situation by acknowledging their need for love, attention, sympathy, and a listening ear. Ms. Casey further reiterated how her increased sense of confidence in her capacity to meet the needs of the children and various demands in the classroom improved her outlook on her job as an ECE teacher:

I'm fine now. Yeah, because I know the solution...Before, I have a lot of problems...a lot of time, I want to think about I want to quit the job because this is very hard job... I'm in a preschool. They have a ratio for 12 to one. So, no, it's too hard for me. Because one of the kids crying, one of the kids [inaudible], and they have the same time on me to be taken to the bathroom...now...I know how to handle it...And really, no one cried. Everybody's quiet, sit down, they're happy, enjoying the circle time. Enjoy the different activities...I love the job now. Before, I don't like the job.

This improved professional commitment was also highlighted in the interview with Ms. Bailey, who recently began working at a center located in a different geographical area that brings new professional challenges (e.g., families primarily from different racial background than Ms. Bailey's, lower socioeconomic backgrounds, higher incidences of child hunger and suspected child neglect or abuse) and stated her current job is much more emotionally demanding. She compared the work environment at her previous and current center as "two totally different night and day scenarios," and that working at the new center "helped me a lot on using the self-care just because their lives are a little bit more difficult. And so, they're going to act out," referring to an increased need to use stress management or reduction strategies due to more frequent occurrences of emotional or behavioral dysregulation from children in the classroom. When asked if the content from SELF-T offered any resources to help her cope with the challenges she currently faces, Ms. Bailey said:

Honestly, yes. I think I would have - I probably would have left a lot sooner... It's a lot to handle on. I mean, it's really, really hard to see things like that...and it takes a lot to be there.

Recalling that ECE teachers were able to identify how stress can reduce one's capacity for professional commitments (refer to research question 3b), it seems reassuring that content covered in the SELF-T course may also counterbalance the negative effects of job-related stresses on teachers' emotional well-being as well as commitment to their jobs.

Discussion

A summary of findings from both process and outcome evaluations of the current study will be discussed in this section. Furthermore, I will also address limitations of the study along with future implications to consider for practices, research, and policies related to ECE teachers' social-emotional competence. Firstly, findings from process evaluation suggest the extensive programmatic structure and supports designed by the VLS Momentum research team and embedded within each course (e.g., meeting the mastery criteria for assessments at the end of each module and course, engaging in reflective practice through a series of guiding questions during coaching sessions) ensured that all SELF-T participants demonstrated adequate intervention dosage and engagement in order to achieve foundational understanding of key objectives and content. Application activities were required to be completed for each of the Foundational courses, but not the Focused Topics courses (e.g., SELF-T) in the VLS Momentum pilot study. Consequently, it is unclear to what extent each participant completed the activities from Exploration or Application sections across all five modules to further inform their level of responsiveness to and engagement with all SELF-T course content. Future implementation of SELF-T may consider tracking more nuanced data to accurately measure participants' intervention dosage, such as the frequency or duration in which participants logged on to view course content, number of retakes required of each participant to achieve 100% accuracy on

Demonstrate questions within each module, as well as completion and submission of application activities that are designed to deepen participants' learning and engagement with the content.

ECE teachers who completed all requirements of the professional development program in the VLS Momentum study generally reported the web-based platform and format was favorable and likely to pursue future online professional development opportunities if available. Participants in follow-up interviews likewise described benefits to engaging in web-based professional development activities, such as increased flexibility and convenience particularly when activities occurred during times with reduced distractions or demands from professional or personal lives. However, interviewees also suggested that program activities should be offered in both in-person and virtual formats in future implementation because each ECE teacher's preferences and needs can differ, suggesting that there is indeed a need for a person-centered approach to designing professional development that meets learners' individualized needs (Jeon, Buettner, & Hur, 2016).

Considering that the COVID-19 pandemic began close to or at the start of the professional development program for these ECE teachers, a few individuals reported facing barriers to completing program activities that included a lack of access to in-person coaching, reliable internet access, financial resources, as well as needing to take care of other responsibilities at work or home. Responses during interviews also highlighted personal circumstances (e.g., medical or health problems, family death) that could emerge during a professional development program lasting up to 12 months and bring unexpected challenges and stresses. Results mirror those from Nagasawa and Tarrant (2020), who found that ECE teachers experienced increased demands and stressors across economic, health, and caregiving domains during the pandemic. It should be noted that responses from the current study were

based on participants who successfully completed all VLS Momentum coursework. Given the attrition of overall study participants, that is from 77 ECE teachers at the start of the research study to 19 ECE teachers who completed all coursework requirements, future researchers may find it helpful to explore the experiences of participants who were unable to complete all requirements or had to withdraw from the professional development program prematurely to gain better insights to challenges or barriers ECE teachers faced during the pandemic.

Although none of the participants selected SELF-T as their top three most or least favorite courses within their VLS training, responses from the three interview participants highlighted ECE teachers' perceived usefulness or benefits of SELF-T. Examples included improving their ability to cope with work-related stresses using stress management or reduction strategies, recognizing that they are not alone in their struggles, promoting reflective practices and sense of confidence, and offering opportunities to openly discuss the topic of social-emotional well-being with colleagues. One interviewee highlighted how teaching stress management to ECE teachers can hopefully alleviate staff turnover and shortages in the field, similar to suggestions from Buettner and colleagues' (2016) study that examined the relationship between ECE teachers' social-emotional capacity and commitment to the profession. The contents of SELF-T were also regarded by an interviewee as being a timely topic in the midst of a global pandemic that brought many physical, mental, and financial challenges to the ECE workforce (Swigonski et al., 2021).

The outcome evaluation of this study also explored the effects of SELF-T on various proximal and distal outcomes. As expected, ECE teachers who completed the SELF-T course experienced an increase in their knowledge of emotional well-being, one of the intended short-term outcomes of this study. Although a positive gain in their knowledge of stress and stress

reduction techniques was not consistently observed across all quantitative data sources, it is possible that the use of different types of measures, time points of data collection, and sample sizes contributed to the inconsistent results. It is also possible that the participants in this study sample began the SELF-T coursework with relatively high baseline knowledge, as demonstrated by the overall high mean scores on short-answer responses during the pre-test content assessments.

Qualitative data nonetheless offered further insights on how SELF-T promoted ECE teachers' understanding of stress and in particular, its effects on one's emotional state and classroom environment. This is unsurprising considering that the SELF-T coursework aims to increase ECE teachers' knowledge on how stress relates to one's mood, body, behavior, and thoughts, as well as how teachers' social-emotional well-being can shape the overall tone of the classroom. Content analysis of SELF-T participants' responses also suggested an increased understanding of the use of reframing or reappraising to more effectively respond to situations that elicit negative emotions. This may be a promising finding since cognitive appraisal has been found to be a more effective emotion regulation strategy in response to classroom stressors (Chang, 2013; Jennings et al., 2013), and is associated with ECE teachers' reduced use of exclusionary discipline practices such as expulsion (Zinsser et al., 2019).

Beyond an increased awareness of stress, its effects on oneself and others, and coping strategies, SELF-T participants also described an increased understanding of the importance of caring for their own well-being in addition to the well-being of those under their care. For the few individuals who reported that even though the content covered in SELF-T might not have been new to them, it was still helpful to reinforce their existing knowledge on how to promote their own well-being, acknowledge that there are difficult days or moments at work, and

remind them how stress can negatively affect the classroom environment and teacher-children interactions. This finding further suggests that SELF-T may have the capacity to foster ECE teachers' knowledge of the associated relationships between teachers' social-emotional well-being, teacher-child relationships, and classroom climate described in the prosocial classroom model (Jennings & Greenberg, 2009).

Current study findings also suggest that completing the SELF-T course was associated with changes in ECE teachers' use of strategies that promotes emotional well-being, which was the second intended short-term outcome. Indeed, study participants' responses during their guided reflection sessions with their coaches indicated an intent to using stress prevention or reduction strategies within themselves and others (e.g., children, families, colleagues) that target their cognitive, emotional, physiological, and behavioral responses to stressors. ECE teachers continued to report sharing and using similar strategies to promote their own and others' emotional well-being during long-term follow-up interviews. Of note, one interviewee highlighted her awareness of what strategies promoted or hindered her own emotional well-being, and may suggest the need for future designers or implementers of professional development (e.g., coach) to take each learner's situation, needs, and preferences into consideration when encouraging ECE teachers to implement strategies into their practices, which again aligns with the recommendations by Jeon, Buettner, and Hur (2016) of using a person-centered approach to promote adult learning.

This study further aimed to understand to what extent completion of the SELF-T course was associated with more distal outcomes, such as participants' perceived stress, teaching disciplinary efficacy, and responsiveness to challenging behaviors and emotions in the classroom. While three out of four respondents reported experiencing an increased level of

perceived stress from pre-test to post-test research surveys, and interviewees collectively described experiencing various personal and occupational stressors throughout the course of their participation in VLS training, such findings were not surprising considering the overall increased stresses experienced by the ECE workforce amidst the COVID-19 pandemic (Nagasawa & Tarrant, 2020; Swigonski et al., 2021). Likewise, previous study findings (e.g., Lang et al., 2020) also suggested a potential for SELF-T participants to report an increase of perceived stress following their course completion as a result of increased knowledge and awareness of stress, along with its manifestations and effects.

Findings from quantitative and qualitative data were inconsistent in determining changes in ECE teachers' teaching disciplinary efficacy. Responses from survey participants descriptively ranged from experiencing a slight decrease, no change, or an increase in their sense of teaching disciplinary efficacy when addressing challenging behaviors or emotions in the classroom. In contrast, ECE teachers who participated in follow-up interviews collectively highlighted a positive change including an increased sense of confidence in working with children who exhibit emotional or behavioral dysregulation, as well as in promoting a more positive emotional climate and teaching about social-emotional skills with the young children under their care.

A lack of clear pattern similarly existed in quantitative data measuring participants' responsiveness to challenging behaviors and emotions in the classroom, as indicated by their self-reported likelihood of using positive or negative guidance and reactions from pre-test to post-test research surveys. Interviewees, however, described a change in their response to challenging behaviors or emotions experienced in the classroom, including preparing the classroom environment differently, providing more positive guidance, perceiving challenging

behaviors from a different perspective, and being better able to model and teach social-emotional skills to children. These reported changes offer further support of Bandura's (1986) model of triadic reciprocal determinism, wherein interactional influences exist between one's personal factors (i.e., ECE teachers' own emotional understanding and regulation), behaviors (i.e., responding with positive guidance, modeling and teaching of social-emotional skills) and environment (i.e., classroom emotional climate).

Interestingly, all three interviewees also reported positive changes in their emotional responses to classroom stressors, such as an increased sense of calmness and improved capacity to attend, sympathize, and listen to the child's needs, as opposed to experiencing negative emotional or physiological effects (e.g., shivering hands, crying) like they used to. One interviewee further highlighted how her learning from the SELF-T course buffered the increased challenges and stressors she faced upon working at a new center and prevented her from leaving the job. These results collectively suggest that promoting ECE teachers' emotional well-being may be able to counterbalance some of the negative effects of job-related stresses and maintain their sense of commitment to the profession (Buettner et al., 2016; Mansfield et al., 2016).

Because SELF-T was one of 21 courses that ECE teachers completed as part of the overall professional development program, this brings challenges to understanding and substantiating to what extent positive changes in interviewees' sense of teaching efficacy or responsiveness to challenging behaviors and emotions can be attributed to SELF-T as opposed to the entirety of their VLS training. Interviewees' responses nonetheless suggested that learning about teachers' social-emotional well-being contributed to some degree to their overall increased sense of efficacy in managing the classroom effectively, implementing social-emotional learning, and maintaining positive teacher-child interactions similar to what Jennings and

Greenberg (2009) hypothesized in their prosocial classroom model. Consequently, collective findings from the current study align with recommendations from prior research (Garner et al., 2018; Lang et al., 2020) and support Jennings and Greenberg's (2009) claim that a "synergistic effect" (p. 515) occurs when professional training focuses on promoting both teachers' and children's social-emotional competence to bring about positive adult and child outcomes.

Limitations

Although results from the current study align with findings from prior empirical research (e.g., Buetter et al., 2016; Chang, 2013; Jeon et al., 2016; Lang et al., 2020.), readers are advised that several potential limitations exist in the current study. First, the small sample sizes limit the generalizability or transferability of findings to ECE teachers outside of this sample or in other contexts. A second limitation is the representativeness of the sample given that all participants were self-selecting and volunteered to participate in a research study. Interview participants were also informed that the follow-up interview was about their overall experiences with VLS Momentum and the SELF-T course, thus, might have biased the sample towards those who had a particularly positive experience or interest in the topic, or limited to only ECE teachers who had more technological experiences and knowledge to participate in web-based professional development and research study activities. The nonrandom nature of the study sample and the design of this pre- and post-intervention study, as opposed to a randomized control trial, also limit the ability to make causal claims about intervention effects on changes observed across repeated measures. Next, the method of using single informants to assess constructs such as emotional well-being, perceived stress, teaching disciplinary efficacy, or responsiveness may be another limitation. Nonetheless, the use of multiple methods (e.g., self-completed content assessments, responses to guiding questions during coaching sessions, research surveys,

interviews) that were conducted at various time points might have reduced potential bias to the findings. Finally, the COVID-19 pandemic occurred near or at the start of the professional development program for many study participants. Beyond creating logistical challenges and interrupting the format or activities intended in the original study design by the VLS Momentum research team (e.g., in-person coaching and classroom observations), this global event also brought on unexpected stresses and demands that threatened individual and collective well-being of the ECE workforce, which were constructs of interest relevant to this study.

Implications for Research, Policy, and Practice

Practice. Findings from this study reinforce the ongoing need to provide training that enhances ECE teachers' internal resources to effectively manage and cope with classroom stressors (Friedman-Krauss et al., 2014), and cultivate a culture that values ECE teachers' social-emotional competence to promote both adult and child outcomes. Participants in the current study highlighted the importance of having a network of social support with center colleagues, administrators, and families to fostering their well-being, which extends the notion that organizational environment, structures, and resources for promoting social-emotional health play an integral role in ECE teachers' resilience and well-being (Cumming & Wong, 2019). Furthermore, study participants discussed how an increased understanding and awareness of one's own emotional well-being promoted their feelings of comfort and openness to talk about and teach social-emotional skills to children. This sentiment reinforces the need to promote ECE teachers' social-emotional competence, and in turn enhance their capacity to model the social-emotional skills they are being asked to teach (Jennings & Greenberg, 2009; McClelland et al., 2017). This increased capacity is especially critical for children who exhibit emotional or behavioral regulation difficulties and are at-risk for underdeveloped social-emotional

competence needed for successful school adjustment (Bailey et al., 2016). It may be worthy for future professional learning opportunities to incorporate supports to enhance ECE teachers' social-emotional competence and well-being, in addition to promoting knowledge and use of evidence-based teaching practices to enhance children outcomes.

As noted in the current study, in-person and web-based options for professional development remain necessary for the ECE workforce given individuals' different learning preferences and needs. This is a point to consider moving forward as designers of professional development have had to explore alternative delivery models and formats, as a result of the COVID-19 pandemic and need for physical distancing which limited in-person options. For ECE teachers who prefer in-person learning, there remains an ongoing need to ensure adequate conditions (e.g., paid planning time, availability of substitutes, streamlined paperwork) exist to reduce work-related stressors and barriers to participating in professional development opportunities (Tebben, Lang, Sproat, Tyree Owens, & Helms, 2021). Furthermore, professional development for ECE teachers needs to go beyond the didactic approach regardless of its delivery format. Researchers have emphasized the need to consider the individual needs and characteristics of each teacher when developing strategies and supports to optimize teacher and child outcomes (Herman, Hickmon-Rosa, & Reinke, 2018). Considering that any changes in knowledge, skills, or disposition described in the current study occurred in a context in which ECE teachers were afforded time and opportunities to engage in reflective practice with their coaches, this type of evidence-based and job-embedded support may be what is necessary to promote a person-centered tailored approach for effective adult learning (Jeon, Buettner, & Hur, 2016), despite being rarely available in existing professional development opportunities (Pianta et al., 2009).

Policy. Bardach's (2012) decision-making framework for policy development seeks to first consider what will happen if no actions are taken against the problem of practice discussed throughout this manuscript. ECE teachers are likely to remain feeling unprepared and experiencing decreased social-emotional capacities to meet the socioemotional needs of young children (Hemmeter et al., 2008; Whitebook et al., 2016). Meanwhile, children with emotion and behavior regulation difficulties remain more likely to be suspended or expelled from their ECE settings than children in k-12 education (Gilliam, 2005; Malik, 2017) and lacking the resources and capacities for successful school adjustment resulting in negative impacts on their academic and social functioning (Denham et al., 2013; Morrison et al., 2010; Williford et al., 2013). Not only will these cyclical effects on children and teachers' negative outcomes remain an ongoing challenge, they have likely exacerbated in the midst of the ongoing global pandemic. Researchers have indeed noted the traumatic experiences that adults and children are facing will require prevention and intervention efforts to support their successful reentry and return to the educational setting (Manning & Jeon, 2020). On the contrary, making a decision to take actions against the current problem of practice will require policymakers to recognize that more resources are still needed to continue the work of researchers, practitioners, and administrators in order to understand how to better promote ECE teachers' well-being and the mechanisms in which better outcomes at the classroom and student-levels can be achieved. Advocacy for policies and resources necessary to build the infrastructure and supports for translating research into practices at a larger scale and implementing evidence-based professional and technical assistance to promote ECE teachers' capacity to support children's social, emotional, and behavioral health (Stegelin, 2018) is also a critical need.

Research. Researchers have recently begun to investigate the benefits of fostering teachers' own social-emotional well-being alongside their students', on the basis that teachers can more effectively implement evidence-based practices when they themselves have the capacity to model the social-emotional skills they are being asked to teach (Jennings & Greenberg, 2009; Lang et al., 2020; McClelland et al., 2017). Empirical studies have primarily focused on measuring outcomes for study participants, resulting in scant literature that investigates the direct effects of changes in teachers' emotional well-being on children or classroom quality outcomes. Nonetheless, few studies have emerged and found positive changes at the teacher level can improve teacher-child interactions as well as increase children's prosocial behaviors and decrease challenging or maladaptive behaviors such as physical aggression (Lam & Wong, 2017; Singh et al., 2013). One should not dismiss the importance of broadening the perspective to consider the conditions and well-being of the adults working with children, solely based on the limited evidence base that is currently available, and instead should recognize that longitudinal studies are still needed to measure distal outcomes over time. It remains to be investigated to what extent a "synergistic effect" (Jennings & Greenberg, 2009, p. 515) may exist and persist when professional training focuses on promoting practices to enhance both teachers' and children's social-emotional competence and well-being.

One particular outcome of interest from this potential "synergistic effect" (Jennings & Greenberg, 2009, p. 515) is ECE teachers' responsiveness to challenging behaviors and emotions in the classroom. Considered to be one of the key indicators of high-quality and emotionally supportive ECE environment (Hyson et al., 2006), findings from the current study revealed inconsistent results in participants' use of positive or negative guidance and reactions in response to children's emotional needs following completion of SELF-T course. Study by Lang and

colleagues (2020) similarly did not find effects of SELF-T on teachers' emotion responsiveness. Results from these studies might have been influenced by the measures used (e.g., CCNES, CCCSI) which aimed to capture ECE teachers' general responses to hypothetical situations in the classroom using predetermined options. I suggest future researchers use open-ended and situation-specific measures (Singh et al., 2013; Taylor et al., 2016) to better understand intervention effects on ECE teachers' responsiveness, considering that teachers' emotion regulation capacity and use of strategies can be diverse and context-specific (Tsouloupas et al., 2010). When COVID-19 restrictions are lifted, future researchers may also consider using multi-informant methods, such as classroom observational measures (Roeser et al., 2012), to capture how changes in ECE teachers' emotional well-being go beyond individual outcomes but also classroom and children outcomes.

Conclusion

Overall findings from the current study are broadly consistent with existing empirical research (e.g., Benn et al., 2012; Biglan et al., 2013; Cook et al., 2017; Jennings et al., 2013; Lang et al., 2020; Roeser et al., 2013; Taylor et al., 2016) that professional development on teachers' social-emotional competence promotes ECE teachers' knowledge of stress and stress management as well as their use of strategies to enhance emotion regulation and well-being. Findings are also in support of the hypothesized relationships in the prosocial classroom model proposed by Jennings and Greenberg (2009), in that teachers' social-emotional well-being is inextricably linked to their capacity to teach and implement social-emotional skills, sense of efficacy in behavior management and discipline, classroom emotional climate, and quality of teacher-child interactions. Finally, collective findings from the current study support Jennings and Greenberg's (2009) claim that a "synergistic effect" (p. 515) occurs when professional

training focuses on promoting both teachers' and children's social-emotional competence to bring about positive adult and child outcomes.

References

- Aarons, G. A., Fettes, D. L., Flores, L. E., & Sommerfield, D. H. (2009). Evidence-based practice and staff emotional exhaustion in children's services. *Behavior Research & Therapy, 47*, 954-960. doi:10.1016/j.brat.2009.07.006
- Ahn, H. J. (2005). Child care teachers' beliefs and practices regarding socialization of emotion in young children. *Journal of Early Childhood Teacher Education, 26*, 283-295. doi:10.1080/10901020500371155
- Alexander, P. A., Schallert, D. L., & Reynolds, R. E. (2009). What is learning anyway? A topographical perspective considered. *Educational Psychologist, 44*, 176-192. doi:10.1080/00461520903029006
- Anderson, E. R. (2017). Accommodating change: Relating fidelity of implementation to program fit in educational reforms. *American Educational Research Journal*. Advance online publication. doi:10.3102/0002831217718164
- Bailey, C. S., Denham, S. A., Curby, T. W., & Bassett, H. H. (2016). Emotional and organizational supports for preschoolers' emotion regulation: Relations with school adjustment. *Emotion, 16*, 263-279. doi:10.1037/a0039772
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215. doi:10.1037/0033-295X.84.2.191
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Barblett, L., Knaus, M., & Barratt-Pugh, C. (2016). The pushes and pulls of pedagogy in the early years: Competing knowledges and the erosion of play-based learning. *Australasian Journal of Early Childhood, 41*, 36-43. doi:10.1177/183693911604100405

- Bardach, E. (2012). *A practical guide for policy analysis: The eightfold path to more effective problem solving* (4th ed., pp. 1–78). SAGE Publications.
- Bassok, D., Latham, S., & Rorem, A. (2016). Is kindergarten the new first grade? *AERA Open*, *1*, 1-31. doi:10.1177/2332858415616358
- Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behavior. *Genetic Psychology Monographs*, *75*, 43-88. Retrieved from <https://www.ncbi.nlm.nih.gov/labs/journals/genet-psychol-monogr/>
- Bayer, J. K., Hiscock, H., Ukoumunne, O. C., Price, A., & Wake, M. (2008). Early childhood aetiology of mental health problems: A longitudinal population-based study. *Journal of Child Psychology and Psychiatry*, *49*, 1166-1174. doi:10.1111/j.1469-7610.2008.01943.x
- Becker, B. D., Gallagher, K. C., & Whitaker, R. C. (2017). Teachers' dispositional mindfulness and the quality of their relationships with children in Head Start classrooms. *Journal of School Psychology*, *65*, 40-53. doi:10.1016/j.jsp.2017.06.004
- Benn, R., Akiva, T., Arel, S., & Roeser, R. W. (2012). Mindfulness training effects for parents and educators of children with special needs. *Developmental Psychology*, *48*, 1476–1487. doi:10.1037/a0027537
- Berman, P., McLaughlin, M., Bass, G., Pauly, E., & Zellman, G. (1977). *Federal programs supporting educational change. Vol. VII: Factors affecting implementation and continuation (Report No. R-1589/7-HEW)*. Santa Monica, CA: The Rand Corporation (ERIC Document Reproduction Service No. 140 432).
- Bernier, A., Carlson, S. M., & Whipple, N. (2010). From external regulation to self-regulation: Early parenting precursors of young children's executive functioning. *Child Development*, *81*, 326-339. doi:10.1111/j.1467-8624.2009.01397.x

- Bettencourt, A., Gross, D., Ho, G., & Perrin, N. (2018). The costly consequences of not being socially and behaviorally ready by kindergarten in Baltimore city. *Journal of Urban Health, 95*(1), 36-50. doi:10.1007/s11524-017-0214-6
- Bierman, K. L., Domitrovich, C., Nix, R., Gest, S. D., Welsh, J., Greenberg, M. T.,...& Gill, S. (2008). Promoting academic and social-emotional school readiness: The Head Start REDI program. *Child Development, 79*, 1802 – 1817. doi:10.1111/j.1467-8624.2008.01227.x
- Biglan, A., Layton, G. L., Jones, L. B., Hankins, M., & Rusby, J. C. (2013). The value of workshops on psychological flexibility for early childhood special education staff. *Topics in Early Childhood Special Education, 32*, 196-210. doi:10.1177/02711121411425191
- Bratsch-Hines, M.E., Mokrova, I., & Vernon-Feagans, L. (2015). Child care instability from 6 to 36 months and the social adjustment of children in prekindergarten. *Early Childhood Research Quarterly, 30*, 106-116. doi:10.1016/j.ecresq.2014.09.002
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*, 77–101. doi:10.1191/1478088706qp063oa
- Breitenstein, S. M., Hill, C., & Gross, D. (2009). Understanding disruptive behavior problems in preschool children. *Journal of Pediatric Nursing, 24*, 3-12. doi:10.1016/j.pedn.2007.10.007
- Brennan, E. M., Bradley, J. R., Allen, M. D., & Perry, D. F. (2008). The evidence base for mental health consultation in early childhood settings: Research synthesis addressing staff and program outcomes. *Early Education and Development, 19*, 982–1022. doi:10.1080/10409280801975834

- Brinamen, C. & Page, F. (2012). Using relationships to heal trauma: Reflective practice creates a therapeutic preschool. *YC Young Children*, 67, 40-48. Retrieved from <http://www.jstor.org/>
- Brock, L. L., & Curby, T. W. (2014). Emotional support consistency and teacher-child relationships forecast social competence and problem behaviors in prekindergarten and kindergarten. *Early Education and Development*, 25, 661-680.
doi:10.1080/10409289.2014.866020
- Bronfenbrenner, U. (1994). Ecology models of human development. In T. N. Postlewaite & Husen, T. (Eds.), *International encyclopedia of education* (2nd ed., Vol. 3, pp. 1643-1647). Oxford, England: Elsevier.
- Brown, C. P. (2010). Balancing the readiness equation in early childhood education reform. *Journal of Early Childhood Research*, 8, 133-160. doi: 10.1177/1476718X09345504
- Brown, C. M., Girio-Herrera, E. L., Sherman, S. N., & Kahn, R. S. (2014). Pediatricians may address barriers inadequately when referring low-income preschool-aged children to behavioral health services. *Journal of Health Care for the Poor and Underserved*, 25, 406-424. doi:10.1353/hpu.2014.0018
- Bruning, R. H., Schraw, G. J., & Norby, M. M. (2011). *Cognitive psychology and instruction* (5th ed.). New York, NY: Pearson.
- Buckrop, J., Roberts, A., & LoCasale-Crouch, J. (2016). Children's preschool classroom experiences and associations with early elementary special education referral. *Early Childhood Research Quarterly*, 36, 452-461. doi:10.1016/j.ecresq.2016.01.016

- Buettner, C. K., Hur, E. H., Jeon, L., & Andrews, D. W. (2016). What are we teaching the teachers? Child development curricula in US higher education. *Child Youth Care Forum*, 45, 155-175. doi:10.1007/s10566-015-9323-0
- Bullock, A., Coplan, R. J., & Bosacki, S. (2015). Exploring links between early childhood educators' psychological characteristics and classroom management self-efficacy beliefs. *Canadian Journal of Behavioural Science*, 47, 175-183. doi:10.1037/a0038547
- Buyse, V., Winton, P. J., & Rous, B. (2009). Reaching consensus on a definition of professional development for the early childhood field. *Topics in Early Childhood Special Education*, 28, 235-243. doi:10.1177/0271121408328173
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. New York: Routledge.
- Carter, D. R., & Van Norman, R. K. (2010). Class-wide positive behavior support in preschool: Improving teacher implementation through consultation. *Early Childhood Education Journal*, 38, 279-288. doi:10.1007/s10643-010-0409-x
- Carter, A. S., Wagmiller, R. J., Gray, S. A. O., McCarthy, K. J., Horwitz, S. M., & Briggs-Gowan, M. J. (2010). Prevalence of DSM-IV disorder in a representative, healthy birth cohort at school entry: Sociodemographic risks and social adaptation. *Journal of the American Academy of Child and Adolescent Psychiatry*, 49, 686–698. doi:10.1016/j.jaac.2010.03.018
- Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, 4(1), 92-100. doi:10.1207/s15327558ijbm0401_6

- Casillas, A., Robbins, S., Allen, J., Kuo, Y., Hanson, M. A., & Schmeiser, C. (2012). Predicting early academic failure in high school from prior academic achievement, psychosocial characteristics, and behavior. *Journal of Educational Psychology, 104*, 407-420. doi:10.1037/a0027180
- Chang M. (2009). An appraisal perspective of teacher burnout: Examining the emotional work of teachers. *Educational Psychology Review, 21*, 193-218. Doi:10.1007/s10648-009-9106-y
- Chang, M. (2013). Toward a theoretical model to understand teacher emotions and teacher burnout in the context of student misbehavior: Appraisal, regulation and coping. *Motivation and Emotion, 37*, 799-817. doi:10.1007/s11031-012-9335-0
- Clark, R. E. (1983). Reconsidering research on learning from media. *Review of Educational Research, 53*, 445-459. Retrieved from <http://www.jstor.org>
- Choe, D. E., Olson, S. L., & Sameroff, A. J. (2013). Effects of early maternal distress and parenting on the development of children's self-regulation and externalizing behavior. *Development and Psychopathology, 25*, 437-453. doi:10.1017/s0954579412001162
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health Social Behavior, 24*, 386-396. doi:10.2307/2136404
- Cohen, S., & Williamson, G. (1988). Perceived stress in a probability sample of the U.S. In S. S. S. Oskamp (Ed.), *The social psychology of health* (Vol. 13, pp. 31-67). Newbury Park, CA: Sage.
- Cole, P. M., Dennis, T. A., Smith-Simon, K. E., & Cohen L. H. (2009). Preschoolers' emotion regulation strategy understanding: Relations with emotion socialization and child self-regulation. *Social Development, 18*, 324-352. doi:10.1111/j.1467-9507.2008.00503.x

- Cole, P. M., Martin, S.E., & Dennis, T.A. (2004). Emotion regulation as a scientific construct: methodological challenges and directions for child development research. *Child development, 75*, 317-333. doi:10.1111/j.1467-8624.2004.00673.x
- Collaborative for Academic, Social, and Emotional Learning (CASEL; 2020). Core SEL competencies. Retrieved from <https://casel.org/core-competencies/>
- Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational Psychology, 104*, 1189-1204. doi:10.1037/a0029356
- Cook, C. R., Miller, F. G., Fiat, A., Renshaw, T., Frye, M., Joseph, G., & Decano, P. (2017). Promoting secondary teachers' well-being and intentions to implement evidence-based practices: Randomized evaluation of the ACHIEVER resilience curriculum. *Psychology in the Schools, 54*, 13-28. doi:10.1002/pits.21980
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: SAGE.
- Cumming, T., & Wong, S. (2019). Towards a holistic conceptualisation of early childhood educators' work-related well-being. *Contemporary Issues in Early Childhood, 20*, 265-281. doi:10.1077/1463949118772573
- Curbow, B., Spratt, K., Ungaretti, A., McDonnell, K., & Breckler, S. (2000). Development of the Child Care Worker Job Stress Inventory. *Early Childhood Research Quarterly, 15*, 515-536. doi:10.1016/S0885-2006(01)00068-0
- Curby, T. W., Downer, J. T., & Booren, L. (2014). Behavioral exchanges between teachers and children over the course of a typical preschool day: Testing bidirectional associations. *Early Childhood Research Quarterly, 29*, 193-204. doi:10.1016/j.ecresq.2014.01.002

- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (with Espinoza, D.). (2017). *Effective teacher professional development*. Palo Alto, CA: Learning Policy Institute. Retrieved from <https://learningpolicyinstitute.org/product/teacher-prof-dev>
- Davis, E., Sawyer, M. G., Lo, S. K., Priest, N., & Wake, M. (2010). Socioeconomic risk factors for mental health problems in 4-5-year-old children: Australian population study. *Academic Pediatrics, 10*, 41-47. doi:10.1016/j.acap.2009.08.007
- Dede, C., Ketelhut, D. J., Whitehouse, P., Breit, L., & McCloskey, E. M. (2009). A research agenda for online teacher professional development. *Journal of Teacher Education, 60*(1), 8-19. doi:10.1177/0022487108327554
- Dempster, N. R., Wildman, B. G., & Duby, J. (2015). Perceptions of primary care pediatricians of effectiveness, acceptability, and availability of mental health services. *Journal of Child Health Care, 19*, 195-205. doi:10.1177/1367493513503585
- Denham, S. A., Bassett, H. H., Sirotkin, Y. S., & Zinsser, K. (2013). Head Start preschoolers' emotional positivity and emotion regulation predict their social-emotion behavior, classroom adjustment, and early school success. *Dialog, 16*, 18-33. Retrieved from <https://journals.uncc.edu/dialog>
- Denham, S. A., Bassett, H. H., & Zinsser, K. (2012). Early childhood teachers as socializers of young children's emotional competence. *Early Childhood Education Journal, 40*, 137-143. doi:10.1007/s10643-012-0504-2
- Denham, S. A., Bassett, H. H., Zinsser, K., & Wyatt, T. M. (2014). How preschoolers' social-emotional learning predicts their early school success: Developing theory-promoting, competency-based assessments. *Infant and Child Development, 23*, 426-454. doi:10.1002/icd.1840

- Denham, S. A., Blair, K. A., DeMulder, E., Levitas, J., Sawyer, K., Auerbach-Major, S., & Queenan, P. (2003). Preschool emotional competence: Pathway to social competence? *Child Development, 74*, 238-256. doi:10.1111/1467-8624.00533
- Dennis, T. A. (2010). Neurophysiological markers for child emotion regulation from the perspective of emotion-cognition integration: Current directions and future challenges. *Developmental Neuropsychology, 35*, 212–230. doi:10.1080/87565640903526579
- Desimone, L. M., & Garet, M. S. (2015). Best practices in teachers' professional development in the United States. *Psychology, Society, & Education, 7*, 252–263. doi:10.25115/psy.v7i3.515
- Domitrovich, C., Cortes, R., & Greenberg, M. (2007). Improving young children's social and emotional competence: A randomized trial of the preschool "PATHS" curriculum. *The Journal of Primary Prevention, 28*(2), 67 – 91. doi:10.1007/s10935-007-0081-0
- Duran, F., Hepburn, K., Irvine, M., Kaufmann, R., Anthony, B., Horen, N., & Perry, D. (2009). *What works? A study of effective early childhood mental health consultation programs*. Washington DC: Georgetown University, Center for Child and Human Development.
- Dusenbury, L., Brannigan, R., Falco, M., & Hansen, W. B. (2003). A review of research on fidelity of implementation: Implications for drug abuse prevention in school settings. *Health Education Research, 18*, 237–256. doi:10.1093/her/18.2.237
- Dvir, Y., Ford, J. D., Hill, M., & Frazier, J. A. (2014). Childhood maltreatment, emotional dysregulation, and psychiatric comorbidities. *Harvard Review of Psychiatry, 22*, 149-161. doi:10.1097/HRP.0000000000000014

- Edwards, N. M. (2017). Teacher perceptions impeding child behavior assessment in an early childhood setting. *Preventing School Failure: Alternative Education for Children and Youth, 61*, 220-233. doi:10.1080/1045988X.2016.1263928
- Eisenberg, N., Hofer, C., & Vaughan, J. (2007). Effortful control and its socioemotional consequences. In Gross, J. (Ed.), *Handbook of Emotion Regulation* (pp. 287-306). Retrieved April 30, 2019 from <https://books.google.com>
- Eisenberg, N., Spinrad, T. L., & Eggum, N. D. (2010). Emotion-related self-regulation and its relation to children's maladjustment. *Annual Review of Clinical Psychology, 6*, 495-525. doi:10.1146/annurev.clinpsy.121208.131208
- Fabes, R. A., Eisenberg, N., & Bernzweig, J. (1990). *The coping with children's negative emotions scale: Procedures and scoring*. Tempe: Arizona State University.
- Fabes, R. A., Poulin, R. E., Eisenberg, N., & Madden-Derdich, D. A. (2002). The coping with children's negative emotions scale (CCNES): Psychometric properties and relations with children's emotional competence. *Marriage & Family Review, 34*, 285-310. doi:10.1300/J002v34n03_05
- Fantuzzo, J., McWayne, C., Perry, M., & Childs, S. (2004). Multiple dimensions of family involvement and their relations to behavioral and learning competencies for urban, low-income children. *School Psychology Review, 33*, 467-480. Retrieved from <https://search.proquest.com/>
- Fettig, A., & Ostrosky, M.M. (2011). Collaborating with parents in reducing children's challenging behaviors: Linking functional assessment to intervention. *Child Development Research*. doi:10.1155/2011/835941

- Flook, L., Goldberg, S. B., Pinger, L., Bonus, K., & Davidson, R. J. (2013). Mindfulness for teachers: A pilot study to assess effects on stress, burnout and teaching efficacy. *Mind, Brain, and Education, 7*, 182-195. doi:10.1111/mbe.12026
- Fox, L., Carta, J., Strain, P. S., Dunlap, G., & Hemmeter, M. L. (2010). Response to Intervention and the Pyramid Model. *Infants & Young Children, 23*(1), 3-13. doi:10.1097/IYC.0b013e3181c816e2
- Friedman-Krauss, A., Cybele Raver, C., Morris, P. A., & Jones, S. M. (2014). The role of classroom-level child behavior problems in predicting preschool teacher stress and classroom emotional climate. *Early Education and Development, 25*, 530-552. doi:10.1080/10409289.2013.817030
- Friedman-Krauss, A., Cybele Raver, C., Neuspiel, J. M., & Kinsel, J. (2014). Child behavior problems, teacher executive functions, and teacher stress in Head Start classrooms. *Early Education and Development, 25*, 681-702. doi:10.1080/10409289.2013.825190
- Garner, P. W., Bender, S. L., & Fedor, M. (2018). Mindfulness-based SEL programming to increase preservice teachers' mindfulness and emotional competence. *Psychology in the Schools, 55*, 377-390. doi:10.1002/pits.22114
- Gartstein, M. A., Putnam, S., & Rothbart, M. K. (2012). Etiology of preschool behavior problems: Contributions of temperament attributes in early childhood. *Infant Mental Health Journal, 33*, 197-211. doi:10.1002/imhj.21312
- Gebbie, D. H., Ceglowski, D., Taylor, L. K., & Miels, J. (2012). The role of teacher efficacy in strengthening classroom support for preschool children with disabilities who exhibit challenging behaviors. *Early Childhood Education Journal, 40*, 35-46. doi:10.1007/s10643-011-0486-5

- Gee, J. P. (2008). A sociocultural perspective on opportunity to learn. In P. A. Moss, D. C. Pullin, J. P. Gee, E. H. Haertel, & L. J. Young (Eds.), *Assessment, equity, and opportunity to learn* (pp. 76-108). New York, NY: Cambridge University Press.
- Gilliam, W. S. (2005). *Prekindergarteners left behind: Expulsion rates in state prekindergarten systems*. New Haven, CT: Yale University Child Study Center. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.582.4536&rep=rep1&type=pdf>
- Graziano, P. A., Reavis, R. D., Keane, S. P., & Calkins, S. D. (2007). The role of emotion regulation and children's early academic success. *Journal of School Psychology, 45*, 3-19. doi:10.1016/j.jsp.2006.09.002
- Gross, J.J., & John, O.P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*, 348-362. doi:10.1037/0022-3514.85.2.348
- Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Technology Research and Development, 29*, 75-91. Retrieved from <https://link.springer.com/article/10.1007/BF02766777>
- Guo, Y., Justice, L. M., Sawyer, B., & Tompkins, V. (2011). Exploring factors related to preschool teachers' self-efficacy. *Teaching and Teacher Education, 27*, 961-968. doi: 10.1016/j.tate.2011.03.008
- Guskey, T. R., & Passaro, P. D. (1994). Teacher efficacy: A study of construct dimensions. *American Educational Research Journal, 31*, 627-643. doi: 10.3102/00028312031003627
- Hair, J., Black, W. C., Babin, B. J. & Anderson, R. E. (2010) *Multivariate data analysis* (7th ed.). Upper Saddle River, New Jersey: Pearson Educational International.

- Hamre, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development, 72*, 625-638. doi:10.1111/1467-8624.00301
- Hargreaves, A. (1996). The emotional practice of teaching. *Teaching and Teacher Education, 14*, 835-854. doi:10.1016/S0742-051X(98)00025-0
- Harwood, M. D., O'Brien, K. A., Carter, C. G., & Eyberg, S. M. (2009). Mental health services for preschool children in primary care: A survey of maternal attitudes and beliefs. *Journal of Pediatric Psychology, 34*, 760-768. doi:10.1093/jpepsy/jsn128
- Hastings, R. P. (2002). Do challenging behaviors affect staff psychological well-being? Issues of causality and mechanism. *American Journal on Mental Retardation, 107*, 455-467. Retrieved from <https://www.aaidjournals.org/>
- Hastings, R. P. & Bham, M. S. (2003). The relationship between student behaviour patterns and teacher burnout. *School Psychology International, 24*(1), 115-127. Doi: 10.1177/0143034303024001905
- Hatton, N., & Smith, D. (1994). Reflection in teacher education: Towards definition and implementation. *Teaching and Teacher Education, 11*, 33-49. doi:10.1016/0742-051X(94)00012-U
- Heber, E., Lehr, D., Ebert, D. D., Berking, M., & Riper, H. (2016). Web-based and mobile stress management intervention for employees: A randomized controlled trial. *Journal of Medical Internet Research, 18*, e21. doi:10.2196/jmir.5112
- Hemmeter, M. L., Ostrosky, M., & Fox, L. (2006). Social and emotional foundations for early learning: A conceptual model for intervention. *School Psychology Review, 35*, 583-601. doi:10.1080/02796015.2006.12087963

- Hemmeter, M. L., Santos, R. M., & Ostrosky, M. M. (2008). Preparing early childhood educators to address young children's social-emotional development and challenging behavior. *Journal of Early Intervention, 30*, 321-340. doi:10.1177/1053815108320900
- Hemmeter, M. L., Snyder, P. A., Fox, L., & Algina, J. (2016). Evaluating the implementation of the Pyramid Model for promoting social-emotional competence in early childhood classrooms. *Topics in Early Childhood Special Education, 36*, 133-146. doi:10.1177/0271121416653386
- Herman, K. C., Hickmon-Rosa, J., & Reinke, W. M. (2018). Empirically derived profiles of teacher stress, burnout, self-efficacy, and coping and associated student outcomes. *Journal of Positive Behavior Interventions, 20*, 90-100. doi:10.1177/1098300717732066
- Herndon, K. J., Bailey, C. S., Shewark, E., Denham, S. A., & Bassett, H. H. (2013). Preschoolers' emotion expression and regulation: Relations with school adjustment. *The Journal of Genetic Psychology, 174*, 642-663. doi:10.1080/00221325.2012.759525
- Hirsh-Pasek, K., Golinkoff, R. M., Berk, L. E., & Singer, D. G. (2009). *A mandate for playful learning in preschool: Applying the scientific evidence*. [Google Books version]. Retrieved July 18, 2019 from <https://books.google.com>
- Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*, 1276-1288. <https://doi.org/10.1177/1049732305276687>
- Hughes, C., & Ensor, R. (2009). Independence and interplay between maternal and child risk factors for preschool problem behaviors? *International Journal of Behavioral Development, 33*, 312-322. doi:10.1177/0165025408101274

- Hurley, J. J., Saini, S., Warren, R. A., & Carberry, A. J. (2013). Use of the Pyramid Model for supporting preschool refugees. *Early Child Development and Care, 183*(1), 75-91. doi: 10.1080/03004430.2012.655242
- Hyson, M., Copple, C., & Jones, J. (2006). Early childhood development and education. In K. A. Renninger & I. E. Sigel (Vol. Eds.), W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology, Vol. 4: Child psychology in practice, 6th ed.* (pp. 3–47). Hoboken, NJ: Wiley.
- Hyson, M., Tomlinson H. B., & Morris, C. A. S. (2009). Quality improvement in early childhood teacher education: Faculty perspectives and recommendations for the future. *Early Childhood Research and Practice, 11*(1). Retrieved from <http://ecrp.uiuc.edu.proxy1.library.jhu.edu/v11n1/hyson.html>
- Institute of Medicine and National Research Council. (2015). *Transforming the workforce for children birth through age 8: A unifying foundation*. Washington, DC: The National Academies Press.
- Jayawardene, W. P., Lohrmann, D. K., Erbe, R. G., & Torabi, M. R. (2017). Effects of preventive online mindfulness interventions on stress and mindfulness: A meta-analysis of randomized controlled trials. *Preventive Medicine Reports, 5*, 150-159. doi:10.1016/j.pmedr.2016.11.013
- Jennings, P. A., Brown, J. L., Frank, J. L., Doyle, S., Oh, Y., Davis, R.,...& Greenberg, M. T. (2017). Impacts of the CARE for Teachers program on teachers' social and emotional competence and classroom interactions. *Journal of Educational Psychology, 109*, 1010-1028. doi:10.1037/edu0000187

- Jennings, P. A., Frank, J. L., Snowberg, K. E., Coccia, M. A., & Greenberg, M. T. (2013). Improving classroom learning environments by Cultivating Awareness and Resilience in Education (CARE): Results of a randomized controlled trial. *School Psychology Quarterly*, 28, 374-390. doi:10.1037/spq0000035
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 79, 491-525. doi:10.3102/0034654308325693
- Jensen, B., Sonnemann, J., Roberts-Hull, K., & Hunter, A. (2016). *Beyond PD: Teacher professional learning in high-performing systems*. Washington, DC: National Center on Education and the Economy. Retrieved from <http://www.ncee.org/wp-content/uploads/2015/08/BeyondPDWeb.pdf>
- Jeon, L., Buettner, C. K., & Hur, E. (2016). Preschool teachers' professional background, process quality, and job attitudes: A person-centered approach. *Early Education and Development*, 27, 551-571. doi:10.1080/10409289.2016.1099354
- Jeon, L., Hur, E., & Buettner, C. K. (2016). Child-care chaos and teachers' responsiveness: The indirect associations through teachers' emotion regulation and coping. *Journal of School Psychology*, 59, 83-96. doi:10.1016/j.jsp.2016.09.006
- Karam, F., Berard, A., Sheehy, O., Huneau, M., Briggs, G., Chambers, C.,... Wolfe, L. (2012). Reliability and validity of the 4-item Perceived Stress Scale among pregnant women: Results from the OTIS antidepressants study. *Research in Nursing & Health*, 35, 363-375. doi:10.1002/nur.21482
- Kinzie, M. B., Whitaker, S. D., Neesen, K., Kelley, M., Matera, M., & Pianta, R. C. (2006). Innovative web-based professional development for teachers of at-risk preschool

- children. *Educational Technology & Society*, 9(4), 194-204. Retrieved from <https://www.j-ets.net/>
- Kochanska, G., Murray, K. T., & Harlan, E. T. (2000). Effortful control in early childhood: Continuity and change, antecedents, and implications for social development. *Developmental Psychology*, 36, 220-232. doi:10.1037/0012-1649.36.2.220
- Koivunen, J., Van Alst, D., Ocasio, K., & Allegra, C. (2017). Understanding engagement in mental health services for preschool children: An analysis of teacher, clinician, and parent perspectives. *Early Childhood Education Journal*, 45, 313-320. doi:10.1007/s10643-016-0799-5
- Kokkinos, C. M., Panayioutou, G., & Davazoglou, A. M. (2005). Correlates of teacher appraisals of student behaviors. *Psychology in the Schools*, 42, 79-89. doi:10.1002/pits.20031
- Kozma, R. (1994). Will media influence learning? Reframing the debate. *Educational Technology Research and Development*, 42(2), 7-19. doi:10.1007/BF02299087
- Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *The American Journal of Occupational Therapy*, 45, 214-222. doi:10.5014/ajot.45.3.214
- Kuhn, M., Marvin, C. A., & Knoche, L. L. (2017). In it for the long haul: Parent-teacher partnerships for addressing preschool children's challenging behaviors. *Topics in Early Childhood Special Education*, 37, 81-93. doi:10.1177/0271121416659053
- Ladd, G. W., Birch, S. H., & Buhs, E. S. (1999). Children's social and scholastic lives in kindergarten: Related spheres of influence? *Child Development*, 70, 1373-1400. doi:10.1111/1467-8624.00101
- Lam, L. T., & Wong, E. M. Y. (2017). Enhancing social-emotional well-being in young children through improving teachers' social-emotional competence and curriculum design in

- Hong Kong. *International Journal of Child Care and Education Policy*, 11(5).
doi:10.1186/s40723-017-0031-0
- Lang, S. N., Jeon, L., & Buettner, C. K. (2018, June). *Social emotional learning for teachers (SELF-T): A short-term online intervention to increase early childhood educators' resilience*. Poster presentation at National Research Conference on Early Childhood, Arlington, VA.
- Lang, S. N., Jeon, L., Sproat, E. B., Brothers, B. E., & Buettner, C. K. (2020). Social Emotional Learning for Teachers (SELF-T): A short-term, online intervention to increase early childhood educators' resilience. *Early Education and Development*, 31, 1112-1132. doi: 10.1080/10409289.2020.1749820
- Lang, S. N., Mouzourou, C., Jeon, L., Buettner, C. K., & Hur, E. (2017). Preschool teachers' professional training, observational feedback, child-centered beliefs and motivation: Direct and indirect associations with social and emotional responsiveness. *Child Youth Care Forum*, 46, 69-90. doi:10.1007/s10566-016-9369-7
- Lang, S. N., Odean, R., Tebben, E., & Buettner, C. K. (2021, April). *VLS Momentum: Pairing Online PD with Coaching to Prepare Teachers for their CDA*. Presented at the Virtual Biennial Meeting of the Society for Research in Child Development. Hosted Online, Covid19.
- Lara-Cinisomo, S., Fuligni, A. S., Ritchie, S., Howes, C., & Karoly, L. (2008). Getting ready for school: An examination of early childhood educators' belief systems. *Early Childhood Education Journal*, 35, 343-349. doi:10.1007/s10643-007-0215-2
- Lazarus, R.S. (1966). *Psychological stress and the coping process*. New York: McGraw-Hill.
- Learning Forward. (2011). *Standards for professional learning*. Oxford, OH: Author.

- Leroux, M. & Théorêt, M. (2014). Intriguing empirical relations between teachers' resilience and reflection on practice. *Reflective Practice: International and Multidisciplinary Perspectives*, 15, 289-303. doi:10.1080/14623943.2014.900009
- Lochmiller, C.R., & Lester, J.N. (2017). *An introduction to educational research: Connecting methods to practice*. Los Angeles, CA: SAGE.
- Longstreth, S., Brady, S., & Kay, A. (2013). Discipline policies in early childhood care and education programs: Building an infrastructure for social and academic success. *Early Education and Development*, 24, 253-271. doi:10.1080/10409289.2011.647608
- Malik, R. (2017, November 6). New data reveal 250 preschoolers are suspended or expelled every day. Retrieved from <https://www.americanprogress.org/issues/early-childhood/news/2017/11/06/442280/new-data-reveal-250-preschoolers-suspended-expelled-every-day/>
- Manning, J., & Jeon, L. (2020). *Teacher stress and second-hand trauma: Supporting teachers during re-entry*. John Hopkins School of Education: Institute for Education Policy.
Retrieved from <https://jscholarship.library.jhu.edu/bitstream/handle/1774.2/63228/SupportingTeachers-During-Re-Entry.pdf?sequence=1&isAllowed=y>
- Mansfield, C. F., Beltman, S., Broadley, T., & Weatherby-Fell, N. (2016). Building resilience in teacher education: An evidenced informed framework. *Teaching and Teacher Education*, 54, 77-87. doi:10.1016/j.tate.2015.11.016
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). *Job burnout*. Annual Review of Psychology, 52(1), 397. doi:10.1146/annurev.psych.52.1.397

- McClelland, M. M., Tominey, S. L., Schmitt, S. A., & Duncan, R. (2017). SEL interventions in early childhood. *The Future of Children, 27*, 33-47. Retrieved from <https://www.jstor.org/>
- McFarland, L., Saunders, R., & Allen, S. (2009). Reflective practice and self-evaluation in learning positive guidance: Experiences of early childhood practicum students. *Early Childhood Education Journal, 36*, 505-511. doi:10.1007/s10643-009-0315-2
- Mezirow, J. (1998). On critical reflection. *Adult Education Quarterly, 48*, 185–198. doi:10.1177/074171369804800305
- Mezirow, J. (1998). On critical reflection. *Adult Education Quarterly, 48*, 185–198. doi:10.1177/074171369804800305
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A Methods Sourcebook*. Thousand Oaks, CA: Sage Publications.
- Mitchell, A. M., Crane, P. A., & Kim, Y. (2008). Perceived stress in survivors of suicide: Psychometric properties of the Perceived Stress Scale. *Research in Nursing & Health, 31*, 576–585. doi:10.1002/nur.20284
- Montes, G., & Lotyewski, B. S. (2012). School readiness among children with behavior problems at entrance into kindergarten: Results from a US national study. *European Journal of Pediatrics, 171*, 541-548. doi:10.1007/s00431-011-1605-4
- Morris, C. A. S., Denham, S. A., Bassett, H. H., & Curby, T. W. (2013). Relations among teachers' emotion socialization beliefs and practices and preschoolers' emotional competence. *Early Education and Development, 24*, 979-999. doi:10.1080/10409289.2013.825186

- Morrison, F., Ponitz, C., & McClelland, M. (2010). Self-regulation and academic achievement in the transition to school. In Calkins, S. & Bell, M. (Eds.), *Child Development at the Intersection of Emotion and Cognition* (pp. 203-224). Retrieved from <https://www.researchgate.net>
- Moutsiana, C., Fearon P., Murray, L., Cooper, P., Goodyer, I., Johnstone, T., & Halligan, S. (2014). Making an effort to feel positive: Insecure attachment in infancy predicts the neural underpinnings of emotion regulation in adulthood. *Journal of Child Psychology and Psychiatry*, 55, 999-1008. doi:10.1111/jcpp.12198
- Murray, D. W., Rosanbalm, K. D., Christopoulos, C., & Hamoudi, A. (2015). *Self-regulation and toxic stress: Foundations for understanding self-regulation from an applied developmental perspective*. (OPRE Report 2015-21). Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
- Nagasawa, M., & Tarrant, K. (2020). *Who Will Care for the Early Care and Education Workforce? COVID-19 and the Need to Support Early Childhood Educators' Emotional Well-being*. New York Early Childhood Professional Development Institute, CUNY. Retrieved from <https://educate.bankstreet.edu/sc/1>
- National Survey of Early Care and Education Project Team. (2013). *Number and characteristics of early care and education (ECE) teachers and caregivers: Initial findings from the National Survey of Early Care and Education (NSECE)*. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation.

- Neilsen Gatti, S., Watson, C., & Siegel, C. (2011). Step back and consider: Learning from reflective practice in infant mental health. *Young Exceptional Children, 14*, 32–45. doi:10.1177/1096250611402290
- Nelson III, C. A., & Sheridan, M.A. (2011). Lessons from neuroscience research for understanding causal links between family and neighborhood characteristics and educational outcomes. In Duncan, G. J., & Murnane, R. J. (Eds.), *Whither Opportunity?: Rising Inequality, Schools, and Children's Life Chances* (pp. 27-46). Retrieved May 1, 2019 from <https://books.google.com>
- O'Connor, A., & Diggins, C. (2002). *On reflection: Reflective practice for early childhood educators*. Lower Hutt: Open Mind Publishing.
- Ojala, M. & Venninen, T. (2011). Developing reflective practices for day-care centres in the Helsinki metropolitan area. *Reflective Practice, 12*, 335-346. doi:10.1080/14623943.2011.571865
- Olson, S. L., Lopez-Duran, N., Lunkenheimer, E. S., Chang, H., & Sameroff, A. J. (2011). Individual differences in the development of early peer aggression: Integrating contributions of self-regulation, theory of mind, and parenting. *Development and Psychopathology, 23*, 253–266. doi:10.1017/S0954579410000775
- Onwuegbuzie, A. J., & Collins, K. M. (2007). A typology of mixed methods sampling designs in social science research. *The Qualitative Report, 12*(2), 281-316.
- Onwuegbuzie, A. J., & Leech, N. (2006). Linking research questions to mixed methods data analysis procedures. *The Qualitative Report, 11*(3), 474–498. Retrieved from <https://nsuworks.nova.edu/tqr/vol11/iss3/3>

- Onwuegbuzie, A. J., & Leech, N. (2007). Sampling designs in qualitative research: Making the sampling process more public. *The Qualitative Report*, *12*(2), 238-254.
doi:10.46743/2160-3715-2007.1636
- Pahl, K., & Barrett, P. (2007). The development of social-emotional competence in preschool-aged children: An introduction to the Fun FRIENDS program. *Australian Journal of Guidance & Counseling*, *17*(1), 81 – 90. doi:10.1375/ajgc.17.1.81
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, *66*, 543-578. doi:10.3102/00346543066004543
- Patton, M. Q. (2002). *Qualitative evaluation and research methods* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Perry, D., Holland, C., Darling-Kuria, N., & Nadiv, S. (2011). Challenging behavior and expulsion from childcare: The role of mental health consultation. *Zero to Three Journal*, *32*(2), 4–11. Retrieved from <https://eric.ed.gov/>
- Perry, D.F., & Kaufmann, R.K. (2009, November). *Integrating early childhood mental health consultation with the pyramid model* (Issue Brief). Technical assistance center on social emotional intervention for young children. Retrieved February 28, 2020, from https://challengingbehavior.cbcs.usf.edu/docs/IssueBrief_integrating-ECMHC.pdf
- Pianta, R. (2001). *Student–Teacher Relationship Scale–Short Form*. Lutz, FL: Psychological Assessment Resources, Inc.
- Pianta, R. C., Barnett, W. S., Burchinal, M., & Thornburg, K. R. (2009). The effects of pre-school education: What we know, how public policy is or is not aligned with the evidence base, and what we need to know. *Psychological Science in the Public Interest*, *10*, 49–88.
doi:10.1177/1529100610381908

- Pianta, R. C., Mashburn, A. J., Downer, J. T., Hamre, B. K., & Justice, L. (2008). Effects of web-mediated professional development resources on teacher-child interactions in pre-kindergarten classrooms. *Early Childhood Research Quarterly, 23*, 431-451. doi: 10.1016/j.ecresq.2008.02.001
- Pianta, R. C., & Nimetz, S L. (1991). Relationships between children and teachers: Associations with classroom and home behavior. *Journal of Applied Developmental Psychology, 12*, 379-393. doi:10.1016/0193-3973(91)90007-Q
- Poulin, P. A., Mackenzie, C. S., Soloway, G., & Karayolas, E. (2008). Mindfulness training as an evidence-based approach to reducing stress and promoting well-being among human services professionals. *International Journal of Health Promotion and Education, 46*(2), 72-80. doi:10.1080/14635240.2008.10708132
- Powell, D. R., Son, S., File, N., & San Juan, R. R. (2010). Parent-school relationships and children's academic and social outcomes in public school pre-kindergarten. *Journal of School Psychology, 48*, 269-292. doi:10.1016/j.jsp.2010.03.002
- Pretsch, J., Flunger, B., & Schmitt, M. (2012). Resilience predicts well-being in teachers, but not in non-teaching employees. *Social Psychology of Education, 15*, 321-336. doi:10.1007/s11218-012-9180-8
- Reinke, W. M., Stormont, M., Webster-Stratton, C., Newcomer, L. L., & Herman, K. C. (2012). The Incredible Years Teacher Classroom Management Program: Using coaching to support generalization to real-world classroom settings. *Psychology in the Schools, 49*, 416-428. doi: 10.1002/pits.21608

- Reiss, F. (2013). Socioeconomic inequalities and mental health problems in children and adolescents: A systematic review. *Social Science and Medicine*, *90*, 24-31.
doi:10.1016/j.socscimed.2013.04.026
- Rimm-Kaufman, S. E., & Pianta, R. C. (2000). An ecological perspective on the transition to kindergarten: A theoretical framework to guide empirical research. *Journal of Applied Developmental Psychology*, *21*, 491-511. doi:10.1016/S0193-3973(00)00051-4
- Robst, J., & Weinberg, C. (2010). Childhood behavioral problems and dropping out of school. *Eastern Economic Journal*, *36*, 523-538. doi:10.1057/ej.2009.40
- Roeser, R. W., Schonert-Reichl, K. A., Jha, A., Cullen, M., Wallace, L., Wilensky, R.,...& Harrison, J. (2013). Mindfulness training and reductions in teacher stress and burnout: Results from two randomized, waitlist-control field trials. *Journal of Educational Psychology*, *105*, 787-804. doi:10.1037/a0032093
- Rohlwing, R. L., & Spelman, M. (2014). Characteristics of adult learning: Implications for the design and implementation of professional development programs. In L. E. Martin, S. Kragler, D. J. Quatroche, & K. L. Basuerman (Eds.), *Handbook of professional development in education: Successful models and practices, PreK-12* (pp. 231-245). New York, NY: Guilford Press.
- Roskam, I., Stievenart, M., & de Mol, J. (2016). The transactional process between the relationships with caregivers and children's externalizing behavior. *Journal of Applied Developmental Psychology*, *42*, 31-39. doi:10.1016/j.appdev.2015.11.003
- Rothbart, M. K., Sheese, B. E., Rosario Rueda, M., & Posner, M. I. (2011). Developing mechanisms of self-regulation in early life. *Emotion Review*, *3*, 207-213.
doi:10.1177/1754073910387943

- Royer, N, & Moreau, C. (2015). A survey of Canadian early childhood educators' psychological wellbeing at work. *Early Childhood Education Journal*, *44*, 135–146.
doi:10.1007/s10643-015-0696-3
- Sasser, T. R., Bierman, K. L., & Heinrichs, B. (2015). Executive functioning and school adjustment: The mediational role of pre-kindergarten learning-related behaviors. *Early Childhood Research Quarterly*, *30*, 70-79. doi:10.1016/j.ecresq.2014.09.001
- Schachter, R. E. (2015). An analytic study of the professional development research in early childhood education. *Early Education and Development*, *26*, 1057-1085.
doi:10.1080/10409289.2015.1009335
- Scott-Little, C., Kagan, S. L., & Frelow, V. S. (2006). Conceptualization of readiness and the content of early learning standards: The intersection of policy and research? *Early Childhood Research Quarterly*, *21*, 153-173. doi:10.1016/j.ecresq.2006.04.003
- Shenton, A. (2005). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, *22*, 63-75. doi:10.3233/EFI-2004-22201
- Sheridan, S. M., Knoche, L. L., Edwards, C. P., Bovaird, J. A., & Kupzyk, K. A. (2010). Parent engagement and school readiness: Effects of the Getting Ready intervention on preschool children's social-emotional competencies. *Early Education and Development*, *21*, 125-156. doi:10.1080/10409280902783517
- Silver, R. B., Measelle, J. R., Armstrong, J. M., & Essex, M. J. (2010). The impact of parents, child care providers, teachers, and peers on early externalizing trajectories. *Journal of School Psychology*, *48*, 555-583. doi:10.1016/j.jsp.2010.08.003

- Singh, N. N., Lancioni, G. E., Winton, A. S. W., Karazsia, B. T., & Singh, J. (2013). Mindfulness training for teachers changes the behavior of their preschool students. *Research in Human Development, 10*, 211-233. doi:10.1080/15427609.2013.818484
- Snyder, P. A., Hemmeter, M. L., & Fox, L. (2015). Supporting implementation of evidence-based practices through practice-based coaching. *Topics in Early Childhood Special Education, 35*, 133-143. doi:10.1177/0271121415594925
- Social Science Research Center. (2017). *Experiences caring for children with behavioral challenges or possible mental health conditions: The results of a telephone survey of Orange County early childcare providers*. Fullerton, CA: California State University, Fullerton.
- Spillane, J. P., Reiser, B. J., & Reimer, T. (2002). Policy implementation and cognition: Reframing and refocusing implementation research. *Review of Educational Research, 72*, 387–431. doi:10.3102/00346543072003387
- Ștefan, C. A., Rebeaga, O. L., & Cosma, A. (2015). Romanian preschool teachers' understanding of emotional and behavioral difficulties: Implications for designing teacher trainings. *Journal of Early Childhood Teacher Education, 36*, 61-83. doi:10.1080/10901027.2014.996926
- Stegelin, D. A. (2018). *Preschool Suspension and Expulsion: Defining the Issues*. Retrieved from Institute for Child Success Website: <https://www.instituteforchildsuccess.org/publication/preschool-suspension-and-expulsion-defining-the-issues/>

- Stufflebeam, D. L. (2003). The CIPP model for evaluation. In D. L. Stufflebeam & T. Kellaghan (Eds.), *The international handbook of evaluation* (pp. 31–61). Boston, MA: Kluwer Academic Publishers.
- Sugai, G., & Horner, R. R. (2006). A promising approach for expanding and sustaining school-wide positive behavior support. *School Psychology Review, 35*, 245-259.
doi:10.1080/02796015.2006.12087989
- Sutton, R. E., & Wheatley, K. F. (2003). Teachers' emotions and teaching: A review of the literature and directions for future research. *Educational Psychology Review, 15*, 327-358. doi:10.1023/A:1026131715856
- Swartz, R. A., & Mcelwain, N. (2012). Preservice teachers' emotion-related regulation and cognition: Associations with teachers' responses to children's emotions in early childhood classrooms. *Early Education and Development, 23*, 202-226.
doi:10.1080/10409289.2012.619392
- Swigonski, N. L., James, B., Wynns, W., & Casavan, K. (2021). Physical, mental, and financial stress impacts of COVID-19 on early childhood educators. *Early Childhood Education Journal, 49*, 799-806. doi:10.1007/s10643-021-01223-z
- Taylor, C., Harrison, J., Haimovitz, K., Oberle, E., Thomson, K., Schonert-Reichl, K., & Roeser, R. W. (2016). Examining ways that a mindfulness-based intervention reduces stress in public school teachers: A mixed-methods study. *Mindfulness, 7*, 115–129.
doi:10.1007/s12671-015-0425-4
- Tebben, E., Lang, S. N., Sproat, E., Tyree Owens, J., & Helms, S. (2021). Identifying primary and secondary stressors, buffers, and supports that impact ECE teacher wellbeing:

- Implications for teacher education. *Journal of Early Childhood Teacher Education*, 42, 143-161. doi:10.1080/10901027.2021.1918294
- Teddlie, C., & Tashakkori, A. (2003). Major issues and controversies in the use of mixed methods in the social and behavioral sciences. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 3-50). Thousand Oaks, CA: Sage.
- Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, 68, 202-248. doi: 10.3102/00346543068002202
- Tsouloupas, C. N., Carson, R. L., Matthews, R., Grawitch, M. J., & Barber, L. K. (2010). Exploring the association between teachers' perceived student misbehaviour and emotional exhaustion: the importance of teacher efficacy beliefs and emotion regulation. *Educational Psychology*, 30, 173-189. doi:10.1080/01443410903494460
- Tudge, J. R. H., & Winterhoff, P. A. (1993). Vygotsky, Piaget, and Bandura: Perspectives on the relations between social world and cognitive development. *Human Development*, 36, 61-81. doi:10.1159/000277297
- U.S. Census Bureau. (2018). *School enrollment in the United States: October 2017*. [Data file]. Retrieved April 26, 2019 from <https://www.census.gov/data/tables/2017/demo/school-enrollment/2017-cps.html>
- U.S. Department of Health and Human Services, & U.S. Department of Education. (2015). *Policy Statement on Expulsion and Suspension Policies in Early Childhood Settings*. Retrieved from https://www.acf.hhs.gov/sites/default/files/eecd/expulsion_suspension_final.pdf

- Vahratian, A., & Johnson, T. R. (2009). Maternity leave benefits in the United States: Today's economic climate underlines deficiencies. *Birth, 36*, 177-179. doi:10.1111/j.1523-536X.2009.00330.x
- Vinh, M., Strain, P., Davidon, S., & Smith, B. J. (2016). One state's systems change efforts to reduce child care expulsion: Taking the Pyramid Model to scale. *Topics in Early Childhood Special Education, 36*, 159-164. doi:10.1177/0271121415626130
- Virmani, E. A., & Ontai, L. L. (2010). Supervision and training in child care: Does reflective supervision foster caregiver insightfulness? *Infant Mental Health Journal, 31*, 16-32. doi:10.1002/imhj.20240
- Westley, P. W., & Buysse, V. (2003). Making meaning of school readiness in schools and communities. *Early Childhood Research Quarterly, 18*, 351-375. doi: 10.1016/S0885-2006(03)00044-9
- Whitaker, R. C., Dearth-Wesley, T., & Gooze, R. A. (2015). Workplace stress and the quality of teacher–children relationships in Head Start. *Early Childhood Research Quarterly, 30*, 57-69. doi:10.1016/j.ecresq.2014.08.008
- Whitebook, M., King, E., Philip, G., & Sakai, L. (2016). *Teachers' voices: Work environment conditions that impact teacher practice and program quality*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley.
- Williams, R., & Grudnoff, L. (2011). Making sense of reflection: A comparison of beginning and experienced teachers' perceptions of reflection for practice. *Reflective Practice, 12*, 281-291. doi:10.1080/14623943.2011.571861

- Williford, A. P., Vick Whittaker, J. E., Vitiello, V. E., & Downer, J. T. (2013). Children's engagement within the preschool classroom and their development of self-regulation. *Early Education and Development, 24*, 162-187. doi:10.1080/10409289.2011.628270
- Yoder, N. (2013). Teaching the whole child: Instructional practices that support social-emotional learning. American Institutes for Research. Retrieved from <https://www.scusd.edu/sites/main/files/file-attachments/teachingthewholechild.pdf>
- Zhang, G., Zeller, N., Griffith, R., Metcalf, D., Williams, J., Shea, C., & Misulis, K. (2011). Using the context, input, process, and product evaluation model (CIPP) as a comprehensive framework to guide the planning, implementation, and assessment of service-learning programs. *Journal of Higher Education Outreach and Engagement, 15*(4), 57–83. Retrieved from <http://openjournals.libs.uga.edu/index.php/jheoe/article/view/628>
- Zinsser, K. M., Christensen, C. G., & Torres, L. (2016). She's supporting them; Who's supporting her? Preschool center-level social-emotional supports and teacher well-being. *Journal of School Psychology, 59*, 55-66. doi:10.1016/j.jsp.2016.09.001
- Zinsser, K. M., Zulauf, C. A., Das, V. N., & Silver, H. C. (2019). Utilizing social-emotional learning supports to address teacher stress and preschool expulsion. *Journal of Applied Developmental Psychology, 61*, 33-42. doi:10.1016/j.appdev.2017.11.006

Appendix A
Needs Assessment – Recruitment Email

Hello,

My name is Nancy Ha and I am a school psychologist in [REDACTED]. I am also currently a doctoral student with the School of Education at Johns Hopkins University. As part of my dissertation study, I invite you to participate in the following survey that aims to understand the professional and emotional experiences of early childhood educators, in supporting children's emotion and behavior regulation. The survey will take approximately 5-10 minutes to complete. A reminder email will be sent three days before the survey closing date (5/31/2019). Please note that your participation is **voluntary**, and your responses will be **confidential** and **anonymous**. No identifiable data or information will be automatically collected.

<https://forms.gle/jBawTpb9Yn5HvG2f7>

If you have any questions or concerns now or at any time during the research study, please contact me via email at nha5@jhu.edu.

Thank you in advance for your time! I wish you a wonderful rest of the school year, and thank you for all that you do for the youngest learners in [REDACTED]!

Sincerely,

Nancy Ha

Appendix B Needs Assessment – Questionnaire

Introduction

This survey is part of a dissertation research study conducted by Nancy Ha, a doctoral student with the School of Education at Johns Hopkins University. You are invited to participate in this survey which aims at understanding the emotional experiences of early childhood educators in the classroom. The survey will take approximately 5-10 minutes to complete, and will be made available until May 31, 2019. A reminder email will also be sent two days prior to the ending date to invite your participation.

***Please note that your responses are CONFIDENTIAL and ANONYMOUS. Your emails will NOT be recorded simply by completing and submitting this survey (unless you volunteer to provide it in the last question of this survey on p. 10).

By completing this survey, you are consenting to be in this research study. Your participation is VOLUNTARY and you can stop at any time. If you have any questions or concerns now or at any time during the research study, please contact Nancy Ha via email at nha5@jhu.edu.

Thank you in advance for your participation and for all you do to provide high quality experiences for the children you teach and serve!

Overview

Questions #1-11 (p. 2-4) - Demographics & Professional Background and Training

Questions #12 (p. 5) – Classroom characteristics

Question #13-17 (p. 6-7) - Emotions Scenarios

Question #18 (p. 8) - Teacher-Children Relationships

Questions #19-20 (p. 9) - Personal Emotions and Experiences

Thank you and submission of survey (p. 10)

Demographics

1. What is your gender? (mark only one)

- Female Male Prefer not to say

2. Which category below BEST describes your ethnicity? (mark only one)

- American Indian or Alaskan Native Asian, Native Hawaiian, or Pacific Islander Black / African-American Hispanic, Hispanic-American, Latino
- White / European-American Multi-racial

3. How many years have you worked in the field of early childhood education? (mark only one)

- less than 1 year 1-5 years 6-10 years 11-15 years
 16-20 years more than 20 years

4. What is the highest level of education you have COMPLETED? (Mark only one)

- High school diploma or GED Associate of Arts Degree (A.A.) Bachelors Degree (B.A./B.S.) Graduate Degree (M.A./M.S.)
- Graduate or professional degree beyond a Masters (Ph.D., Ed.D., M.D., J.D., etc.)

5. If you have a college or graduate degree (e.g., Associate, Bachelor's, Master's, Ed.D., Ph.D.), which area or specialization is your degree in? (mark only one)

- early childhood education early childhood special education education other: _____

6. Have you taken any child development or early childhood education course(s) at a college or university? (mark only one)

- Yes No

7. Have you participated in professional development during the current school year (including the summer)? (mark only one)

- Yes No

8. Have you ever received training in working with students with emotional or behavioral difficulties? (mark only one)

- Yes No (skip to question 11)

9a. Where did your training in working with children with emotional and behavioral challenges take place? (check ALL that apply)

- during coursework during professional development (e.g., workshop, conference, webinar) during on-the-job supervision or consultation other: _____

9b. Do you feel the training you've received has helped prepare you to work with students with emotional or behavioral difficulties? (mark only one)

- Yes Somewhat No

9c. If you answered "no" to having previous training, please indicate the following reasons (check all that apply)

- Topic was not covered in any of the coursework taken
 Have not come across any professional training or development opportunities (e.g., workshop, webinars)
 Time conflicts with training opportunities (e.g., during work hours, on weeknights or weekends when there are family responsibilities)
 Not a topic of interest
 other: _____

10. How many children are currently enrolled in your classroom? _____

11. Please indicate the age group(s) of the children currently enrolled in your classroom (check all that apply)

- 2 year old (24-35 months)
 3 years old (36-47 months)
 4 years old (48-59 months)
 5 years old (60-71 months)
- 6 years old or older

12. In your experience, how many children in your CURRENT class has the following challenges? Please select the number that best represents children in your classroom.

	None	A few	About ¼ of the class	About ½ of the class	More than ½ of the class
a. Lack of academic skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Difficulty following directions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Difficulty working as part of a group	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Problems with social skills, getting along with other children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Difficulty working independently	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Difficulty communicating / language problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Chaotic home environments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Emotions Scenarios (Fabes et al., 1990; Lang et al., 2017) - For the following items, please indicate the likelihood that you would respond in the ways listed. Please read each item carefully and respond as honestly as you can as there are no right or wrong answers. For each response, please circle a number from 1 – 7 (where 1 = “Very Unlikely” and 7 = “Very Likely”).

13. If a child in my class becomes angry because he/she is unable to participate in a classroom social activity (such as a field trip), I would:

	1 = Very UNLIKELY	2	3	4	5	6	7 = Very LIKELY
a. Send the child to a different area to cool down.	1	2	3	4	5	6	7
b. Help the child think about other ways that he/she can participate (e.g., participate in a different activity)	1	2	3	4	5	6	7
c. Tell the child not to make a big deal about missing the activity.	1	2	3	4	5	6	7
d. Encourage the child to express his/her feelings of anger and frustration.	1	2	3	4	5	6	7
e. Soothe the child and do something fun with him/her to make him/her feel better about missing the activity.	1	2	3	4	5	6	7

14. If a child in my class accidentally breaks a favorite toy, and then gets upset and cries, I would:

	1 = Very UNLIKELY	2	3	4	5	6	7 = Very LIKELY
a. Comfort the child and try to get him/her to forget about the accident.	1	2	3	4	5	6	7
b. Tell the child that he/she is overreacting.	1	2	3	4	5	6	7
c. Help the child figure out how to fix the toy.	1	2	3	4	5	6	7
d. Tell the child it's OK to cry.	1	2	3	4	5	6	7
e. Tell the child to stop crying or he/she won't be allowed to play with the toy anytime soon.	1	2	3	4	5	6	7

15. If a child in my class is participating in a group activity and makes a mistake and then gets upset and is on the verge of tears, I would:

	1 = Very UNLIKELY	2	3	4	5	6	7 = Very LIKELY
a. Comfort the child and try to make him/her feel better.	1	2	3	4	5	6	7
b. Tell the child that he/she is overreacting.	1	2	3	4	5	6	7
c. Tell the child to straighten up or he/she will have to sit out for a while.	1	2	3	4	5	6	7
d. Encourage the child to talk about his/her feelings.	1	2	3	4	5	6	7
e. Tell the child that I'll help him/her practice so that he/she can do better next time.	1	2	3	4	5	6	7

16. If a child in my class is upset and appears to be on the verge of tears because other children are mean and won't play with him/her, I would:

	1 = Very UNLIKELY	2	3	4	5	6	7 = Very LIKELY
a. Tell the child that if he/she starts crying then he/she will have to sit out for a while.	1	2	3	4	5	6	7
b. Tell the child it's OK to cry when he/she feels bad.	1	2	3	4	5	6	7
c. Comfort the child and suggest an activity to change his/her focus.	1	2	3	4	5	6	7
d. Help the child think of constructive things to do when other children are hurtful.	1	2	3	4	5	6	7
e. Tell the child that he/she will feel better soon.	1	2	3	4	5	6	7

17. If a child is shy and scared around strangers and consistently becomes quiet and withdrawn when visitors come to the classroom, I would:

	1 = Very UNLIKELY	2	3	4	5	6	7 = Very LIKELY
a. Help the child think of things to do that would make meeting new people less intimidating.	1	2	3	4	5	6	7
b. Tell the child that it is OK to feel nervous.	1	2	3	4	5	6	7

c. Try to make the child feel better by talking about fun things we can do with new people.	1	2	3	4	5	6	7
d. Tell the child that he/she must stay nearby and interact with visitors appropriately.	1	2	3	4	5	6	7
e. Tell the child that he/she is acting like a baby.	1	2	3	4	5	6	7

Teacher-Children Relationships (Whitaker et al., 2015)

18. Please reflect on how much each of the statements below currently applies to your relationship with the children in your classroom. All relationships are individual, but in responding, please think about your relationships with the children in your classroom in general. Use the scale below to choose the appropriate response for each item (where 1 = "definitely does NOT apply" and 5 = "definitely applies")

	1 = definitely does NOT apply	2 = not really	3 = neutral, not sure	4 = applies somewhat	5 = definitely APPLIES
a. I share an affectionate, warm relationship with the children.	1	2	3	4	5
b. The children and I always seem to be struggling with each other.	1	2	3	4	5
c. If upset, the children will seek comfort from me.	1	2	3	4	5
d. The children are uncomfortable with physical affection or touch from me.	1	2	3	4	5
e. The children value their relationship with me.	1	2	3	4	5
f. When I praise the children, they beam with pride.	1	2	3	4	5
g. The children share information with me about themselves even if I don't ask.	1	2	3	4	5
h. The children easily become angry with me.	1	2	3	4	5
i. It is easy to be in tune with what the children are feeling.	1	2	3	4	5
j. The children remain angry or are resistant after being disciplined.	1	2	3	4	5
k. Dealing with the children drains my energy.	1	2	3	4	5
l. When the children are in a bad mood, I know we're in for a long and difficult day.	1	2	3	4	5
m. The children's feelings toward me can be hard to predict or can change suddenly.	1	2	3	4	5
n. The children are sneaky or manipulative with me.	1	2	3	4	5
o. The children openly share their feelings and experiences with me.	1	2	3	4	5

Personal Emotions and Experiences (Friedman-Krauss et al., 2014; Gross & John, 2003)

19. The following questions ask about two distinct aspects of your emotional life – 1) your emotional experience (what you feel like inside), and 2) your emotional expression (how you show your emotions in the way you talk, gesture, or behave). Although some of the following questions may seem similar to one another, they

1 = Strongly DISAGREE	2	3	4 = Neutral	5	6	7 = Strongly AGREE
-----------------------	---	---	-------------	---	---	--------------------

differ in important ways. Please select the number that BEST represents your emotional life (where 1 = "Strongly Disagree" and 7 = "Strongly Agree"):

a. When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.	1	2	3	4	5	6	7
b. I keep my emotions to myself.	1	2	3	4	5	6	7
c. When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.	1	2	3	4	5	6	7
d. When I am feeling positive emotions, I am careful not to express them.	1	2	3	4	5	6	7
e. When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.	1	2	3	4	5	6	7
f. I control my emotions by not expressing them.	1	2	3	4	5	6	7
g. When I want to feel more positive emotion, I change the way I'm thinking about the situation.	1	2	3	4	5	6	7
h. I control my emotions by changing the way I think about the situation I'm in.	1	2	3	4	5	6	7
i. When I am feeling negative emotions, I make sure not to express them.	1	2	3	4	5	6	7
j. When I want to feel less negative emotion, I change the way I'm thinking about the situation.	1	2	3	4	5	6	7

20. The next set of questions ask about feelings and thoughts that early childhood educators may experience. Please select how often you felt or thought a certain way as honestly as you can as there are no right or wrong answers.

	1 = Rarely	2	3 = Sometimes	4	5 = Most of the time
a. Children with behavior problems are hard to deal with.	1	2	3	4	5
b. There are major sources of stress in the children's lives that I can't do anything about.	1	2	3	4	5
c. All the children need attention at the same time.	1	2	3	4	5
d. My classroom becomes so noisy that I feel very irritated.	1	2	3	4	5
e. How much control you have over getting children to do what you want.	1	2	3	4	5

Thank you very much for your time!

Please include your email address below, ONLY IF you are interested to participate in a 30-minute interview that explores the topic of emotional experiences for early childhood educators. You will be contacted upon being selected for participation. Otherwise, please leave this blank and click "SUBMIT."

Appendix C Needs Assessment – Interview Protocol

Introduction:

Thank you for accepting the invitation to meet with me today. My name is Nancy Ha and I am a doctoral student with the School of Education at Johns Hopkins University. The purpose of the interview is for me to understand the role of emotions, as well as students and early childhood educators' emotional experiences in the classroom. The interview will last approximately 30-45 minutes. Just like the online survey you have completed, your participation in this interview is entirely voluntary. There are no penalties, should you decide not to participate at this point, or stop your participation at any time during the interview. In front of you is a copy of the informed consent form, as well as a copy of the questions we will be covering today.

Before we begin, do I have your permission to audio record our conversation today? I will also be taking notes on some of the highlights from our conversation, if that's okay with you. Please know that your name and identity will not be disclosed, and I will be using pseudonyms when I analyze the data later on.

Interview questions:

1. You likely see many emotional situations during your work day. Can you tell me about some emotions that regularly come up in your classroom? (Zinsler et al., 2015)

2. Think of a recent situation in which a child had a difficult time controlling his/her emotions. On a scale of 1-10 (1 being very mild and 10 being very intensive), how would you rate the intensity of the child's emotional response?
 - On a scale of 1-10 (1 being not at all stressful and 10 being extremely stressful), how stressful was the situation for you?
 - What kind of thoughts or emotions did you experience in response to the child's difficulties?

3. What do you do for times when you feel stressed in the classroom?

4. What supports or resources are available at work for when you feel stressed in the classroom?
 - What resources would you consider using or find valuable or beneficial?

5. What do you believe is the role of teachers in fostering children's emotional development?
(Ahn, 2005)

6. What are your thoughts on teachers expressing their own emotions in the classroom?

7. How do you think emotions contribute to the relationship between a student and teacher?

Ending question:

Is there anything else you would like to say about your thoughts on students and educators' emotional experiences in the classroom?

Closing remark: Thank you very much for your time and participation today.

Appendix D Needs Assessment - Participant Consent Form

Approved February 27, 2018 Protocol Number: HIRB00006571



Johns Hopkins University
Homewood Institutional Review Board (HIRB)

Informed Consent Form

Title:	Doctor of Education Needs Assessment for Research Methods and Systematic Inquiry I Course and Dissertation Research
Principal Investigator:	Dr. Camille Bryant, Associate Professor, JHU, SOE
Date:	February 27, 2018

PURPOSE OF RESEARCH STUDY:

The purpose of this research study is to examine an educational problem within an educational context to determine the salient factors contributing to this problem. The ultimate use of the data gathered will or may become part of the student researchers' dissertation research study.

PROCEDURES:

The student researcher will ask adult participants to complete educational surveys (10-15 minutes), participate in observations (45 minutes to 1 hour), interviews (45 minutes to 1 hour), and/or focus groups (45 minutes to 1 hour) to examine an educational problem within an educational context.

The student researcher will also collect pre-existing de-identified student educational data.

RISKS/DISCOMFORTS:

The risks associated with participation in this study are no greater than those encountered in daily life.

BENEFITS:

The research projects will help the student researcher to better understand the salient factors that are contributing to a problem within their educational organizations. This knowledge will help to develop informed interventions that will address these contributing factors.

VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW:

Your participation in this study is entirely voluntary: You choose whether to participate. If you decide not to participate, there are no penalties, and you will not lose any benefits to which you would otherwise be entitled. If you choose to participate in the study, you can stop your participation at any time, without any penalty or loss of benefits. If you want to withdraw from



the study, please email (student investigator name and JHU e-mail), Dr. Camille Bryant, at cbryan16@jhu.edu or Dr. Stephen Pape at stephen.pape@jhu.edu explicitly stating your intention.

If we learn any new information during the study that could affect whether you want to continue participating, we will discuss this information with you.

CIRCUMSTANCES THAT COULD LEAD US TO END YOUR PARTICIPATION:

There are circumstances for which the researcher may decide to end your participation before completing the study. If a you are no longer an employee within the organization, your participation within the study will be terminated.

CONFIDENTIALITY:

Any study records that identify you will be kept confidential to the extent possible by law. The records from your participation may be reviewed by people responsible for making sure that research is done properly, including members of the Johns Hopkins University Homewood Institutional Review Board and officials from government agencies such as the National Institutes of Health and the Office for Human Research Protections. All of these people are required to keep your identity confidential. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

Surveys collected in electronic format will be stored on a password protected computer. All paper documents will be kept in a locked file that is only accessible to the student researcher. Finally, all files will be erased and paper documents shredded seven years after collection.

COMPENSATION:

You will not receive any payment or other compensation for participating in this study.

IF YOU HAVE QUESTIONS OR CONCERNS:

You can ask questions about this research study now or at any time during the study, by talking to the JHU faculty member working with you or by contacting (name and JHU email of student), Dr. Camille Bryant via e-mail at cbryan16@jhu.edu or Dr. Stephen Pape at stephen.pape@jhu.edu.

If you have questions about your rights as a research participant or feel that you have not been treated fairly, please call the Homewood Institutional Review Board at Johns Hopkins University at (410) 516-6580.



SIGNATURES

WHAT YOUR SIGNATURE MEANS:

Your signature below means that you understand the information in this consent form. Your signature also means that you agree to participate in the study.

By signing this consent form, you have not waived any legal rights you otherwise would have as a participant in a research study.

Participant's Signature

Date

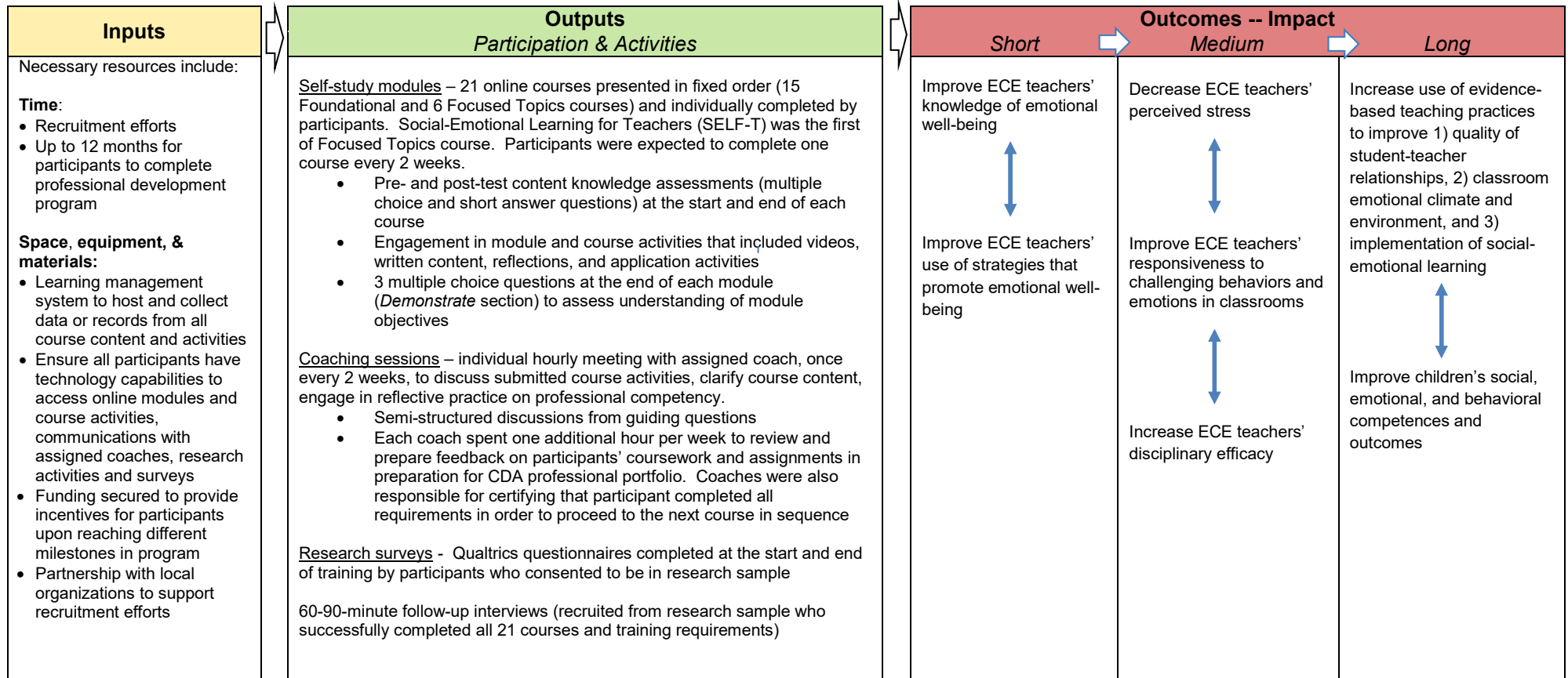
Signature of Person Obtaining Consent

Date

(Investigator or HIRB Approved Designee)

Appendix E – Study Logic Model

Situation: Develop ECE teachers’ professional and emotional capacity in response to classroom demands and stressors (e.g., children’s challenging behaviors)



Assumptions
ECE teachers are committed and able to complete all self-study online courses independently. ECE teachers provide accurate self-reporting on their use and experiences with application or reflection activities and in response to guiding questions during coaching sessions and research surveys. 2 weeks is adequate (time expected to complete one course) to increase teachers’ knowledge and practices on emotional wellness.

External Factors
Current COVID-19 pandemic may have short and long-term impacts on availability and quality of early care and education. Time commitment required may lead to participant attrition. Unstable or loss of access to technology for participants during the course of intervention.

Appendix F

VLS Momentum - Pre- and Post-test Research Surveys

This is a shortened version of the original research surveys to include only items and variables examined within this manuscript.

Knowledge of emotional well-being (Lang et al., 2020)

Please select how true or untrue the following statements are of you.	1 = Very UNTRUE of me	2	3	4	5 = Very TRUE of me
a. I understand what resilience is.	1	2	3	4	5
b. I feel resilient in most of my daily life (or challenges).	1	2	3	4	5
c. I am able to recognize when I am stressed.	1	2	3	4	5
d. Stress affects me physically.	1	2	3	4	5
e. I am able to define the emotions I feel when I am stressed.	1	2	3	4	5
f. Stress affects my thoughts.	1	2	3	4	5
g. I work to change my thoughts in response to my stress.	1	2	3	4	5
h. I know how to use muscle relaxation to reduce my stress.	1	2	3	4	5
i. I know how to use breathing techniques to reduce my stress.	1	2	3	4	5
j. I know how to use imagery to reduce my stress.	1	2	3	4	5
k. I know how to use stress reduction techniques with my coworkers.	1	2	3	4	5
l. I know how to use stress reduction techniques with children.	1	2	3	4	5

Perceived Stress Scale (Cohen et al., 1983)

The following questions ask you about your feelings and thoughts during the last month. Please select the response that best fits **how often** you felt or thought a certain way.

	1 = Never	2	3 = Sometimes	4	5 = Very Often
a. In the last month, how often have you felt that you were unable to control the important things in your life?	1	2	3	4	5
b. In the last month, how often have you felt confident about your ability to handle your personal problems?	1	2	3	4	5
c. In the last month, how often have you felt that things were going your way?	1	2	3	4	5
d. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	1	2	3	4	5

Teaching Disciplinary Efficacy (adapted from Bandura, 1997)

The following statements ask your opinions about teaching children. Please circle how much you agree with each of the following statements.

	1 = Strongly agree	2	3 = Neither agree or disagree	4	5 = Strongly disagree
a. I can get children to follow classroom rules.	1	2	3	4	5
b. I can control disruptive behavior in my classroom.	1	2	3	4	5
c. I can prevent problem behavior on the playground.	1	2	3	4	5

Teachers' responsiveness (Fabes et al., 1990; Lang et al., 2017)

For the following items, please indicate the likelihood that you would respond in the ways listed **when caring for 3- or 4-year-old children**. Please read each item carefully and respond as honestly as you can.

If a child in my class becomes angry because he/she is unable to participate in a classroom social activity (such as a field trip), I would:

	1 = Very UNLIKELY	2	3	4	5	6	7 = Very LIKELY
a. Send the child to a different area to cool down.	1	2	3	4	5	6	7
b. Help the child think about other ways that he/she can participate (e.g., participate in a different activity)	1	2	3	4	5	6	7
c. Tell the child not to make a big deal about missing the activity.	1	2	3	4	5	6	7
d. Encourage the child to express his/her feelings of anger and frustration.	1	2	3	4	5	6	7
e. Soothe the child and do something fun with him/her to make him/her feel better about missing the activity.	1	2	3	4	5	6	7

If a child in my class accidentally breaks a favorite toy, and then gets upset and cries, I would:

	1 = Very UNLIKELY	2	3	4	5	6	7 = Very LIKELY
a. Comfort the child and try to get him/her to forget about the accident.	1	2	3	4	5	6	7
b. Tell the child that he/she is overreacting.	1	2	3	4	5	6	7
c. Help the child figure out how to fix the toy.	1	2	3	4	5	6	7
d. Tell the child it's OK to cry.	1	2	3	4	5	6	7
e. Tell the child to stop crying or he/she won't be allowed to play with the toy anytime soon.	1	2	3	4	5	6	7

If a child in my class is participating in a group activity and makes a mistake and then gets upset and is on the verge of tears, I would:

	1 = Very UNLIKELY	2	3	4	5	6	7 = Very LIKELY
a. Comfort the child and try to make him/her feel better.	1	2	3	4	5	6	7

b. Tell the child that he/she is overreacting.	1	2	3	4	5	6	7
c. Tell the child to straighten up or he/she will have to sit out for a while.	1	2	3	4	5	6	7
d. Encourage the child to talk about his/her feelings.	1	2	3	4	5	6	7
e. Tell the child that I'll help him/her practice so that he/she can do better next time.	1	2	3	4	5	6	7

If a child in my class is upset and appears to be on the verge of tears because other children are mean and won't play with him/her, I would:

	1 = Very UNLIKELY	2	3	4	5	6	7 = Very LIKELY
a. Tell the child that if he/she starts crying then he/she will have to sit out for a while.	1	2	3	4	5	6	7
b. Tell the child it's OK to cry when he/she feels bad.	1	2	3	4	5	6	7
c. Comfort the child and suggest an activity to change his/her focus.	1	2	3	4	5	6	7
d. Help the child think of constructive things to do when other children are hurtful.	1	2	3	4	5	6	7
e. Tell the child that he/she will feel better soon.	1	2	3	4	5	6	7

If a child is shy and scared around strangers and consistently becomes quiet and withdrawn when visitors come to the classroom, I would:

	1 = Very UNLIKELY	2	3	4	5	6	7 = Very LIKELY
a. Help the child think of things to do that would make meeting new people less intimidating.	1	2	3	4	5	6	7
b. Tell the child that it is OK to feel nervous.	1	2	3	4	5	6	7
c. Try to make the child feel better by talking about fun things we can do with new people.	1	2	3	4	5	6	7
d. Tell the child that he/she must stay nearby and interact with visitors appropriately.	1	2	3	4	5	6	7
e. Tell the child that he/she is acting like a baby.	1	2	3	4	5	6	7

If two children in my care want to use the same toy (e.g., a new fire truck) and become distressed and/or aggressive, I would:

	1 = Very UNLIKELY	2	3	4	5	6	7 = Very LIKELY
a. Tell the children that fighting is unacceptable and ask them both to walk away and choose a different activity.	1	2	3	4	5	6	7
b. Ask the children to share their own ideas and feelings with one another.	1	2	3	4	5	6	7
c. Ask the children to think about how the other child feels and what they want.	1	2	3	4	5	6	7
d. Tell the children that one can use the toy now and the other child in 5 minutes.	1	2	3	4	5	6	7
e. Help the children develop a plan to share the toy.	1	2	3	4	5	6	7

If a child in my care hits another child for the first time, I would:

	1 = Very UNLIKELY	2	3	4	5	6	7 = Very LIKELY
a. Send the child who hit to a space to be alone until I determine they can play again.	1	2	3	4	5	6	7
b. Tell the child who hit to say "I'm sorry."	1	2	3	4	5	6	7
c. Ask the child who is hurt to tell the other how they feel.	1	2	3	4	5	6	7
d. Ask the child who hit how they can make the other child feel better.	1	2	3	4	5	6	7
e. Ask the child who hit why they hit and discuss what they could do next time.	1	2	3	4	5	6	7
f. Discuss with the child who hit how they can handle their negative emotions next time.	1	2	3	4	5	6	7

Appendix G
SELF-T End-of-Module Demonstrate Questions

Module	Demonstrate Questions	Response Options
#1 – Social Emotional Learning for Teachers: An Introduction	Q1. True or false? Stress is a normal part of human life and is accompanied by changes in our physiology and our behavior.	<ul style="list-style-type: none"> <input type="radio"/> True <input type="radio"/> False
	Q2. Select the sentence which is <i>not true</i> : Adopting a resilient reaction to stress...	<ul style="list-style-type: none"> <input type="radio"/> Changes how people around you respond to their own stress <input type="radio"/> Changes your biochemistry, your physical and emotional feelings, and possibly your behavior <input type="radio"/> Changes how you will respond to stress in the future <input type="radio"/> Changes your chance of experiencing stress again because stress will disappear from your life
	Q3. When teaching and caregiving, building and maintaining resilience to manage uncertainties and maintain social-emotional balance involves which principle?	<ul style="list-style-type: none"> <input type="radio"/> Resilience can be learned <input type="radio"/> Resilience strategies that work can be uniquely personal <input type="radio"/> Resilience strategies support social-emotional learning in teachers, caregivers, and students <input type="radio"/> All of the above
#2 – How We Feel	Q1. True or false? Emotional reactions can be managed and modified.	<ul style="list-style-type: none"> <input type="radio"/> True <input type="radio"/> False
	Q2. Complete the sentence. “Emotional regulation is...”	<ul style="list-style-type: none"> <input type="radio"/> When you suppress your emotions so you can get on with your day <input type="radio"/> An elusive method that only 2 percent of the population can achieve <input type="radio"/> Is something you should try only once. If it doesn’t work, it means you’re not good at it <input type="radio"/> How we change a current emotion into one that is more appropriate, given the current context and the emotional goal
	Q3. Which of the following is not a positive strategy for regulation emotions?	<ul style="list-style-type: none"> <input type="radio"/> Distraction <input type="radio"/> Labeling <input type="radio"/> Reappraisal

		<ul style="list-style-type: none"> ○ Suppression
#3 – How We Think	Q1. True or false? Because of the need of humans across time to focus on experiences that have potential effects on survival, the brain focuses more on negative experiences than positive ones.	<ul style="list-style-type: none"> ○ True ○ False
	Q2. Select which of the following self-statements do not illustrate a pessimistic tendency:	<ul style="list-style-type: none"> ○ Permanence – “I can never win” ○ Pervasiveness – “My co-teacher is making me miserable” ○ Personalization – “I can’t handle this job” ○ Positivity – “I will work on calm breathing, and then find a solution”
	Q3. To identify your own thinking traps, which question might you ask yourself?	<ul style="list-style-type: none"> ○ Is there sufficient evidence that this thought is true? ○ Is this thought fact or opinion? ○ Is this thought possible to happen? ○ All of the above
#4 – What We Can Do on Our Own	Q1. True or false? When we don’t make a conscious effort to lower our stress responses, the body can reset its baseline to be in a state of stress (“fired up and ready to fight”) most of the time, which can lead to chronic illness.	<ul style="list-style-type: none"> ○ True ○ False
	Q2. Finish the sentence. Mindfulness and meditation...	<ul style="list-style-type: none"> ○ Are skills that help you draw on your mind and body’s ability to attain a relaxed or peaceful state ○ Require that you focus on the present moment ○ Require practice ○ All of the above
	Q3. Your friend wants to try progressive muscle relaxation but comments, “I don’t have any place in my house that’s quiet or comfortable!” What positive respond might you give her?	<ul style="list-style-type: none"> ○ I know what you mean! My house is a zoo too! ○ Well, it’s pretty hard to do, so maybe you should wait ○ I felt that way too when I started out, but you can do it – even when it’s noisy around you – if you target your focus. I bet you can find the right place if you put your mind to it. ○ Why are you so full of excuses? Just try it already!

#5 – What We Can Do Together	Q1. True or false? Research conducted on mindfulness indicates it can increase children’s cognitive capacity of attending and learning.	<input type="radio"/> True <input type="radio"/> False
	Q2. Finish the sentence: Gratitude has been shown to...	<input type="radio"/> Have benefits related to psychological and physical functioning <input type="radio"/> Boost not only the well-being of the person receiving gratitude, but also the well-being of the person giving gratitude <input type="radio"/> Strengthen relationships <input type="radio"/> All of the above
	Q3. Which of the following is not a good way to extend strategies for improving social-emotional well-being in your classroom or program?	<input type="radio"/> Share this course with teachers and caregivers in your center <input type="radio"/> Brainstorm with fellow teachers and caregivers ways you can offer support to each other when feeling stress <input type="radio"/> Lead the children in your care in a breathing exercise that is short, positive, and adapted for their age <input type="radio"/> Write a gratitude note to someone you interact with in your program including specific information about how their help has impacted you <input type="radio"/> None of the above

SELF-T End-of-Module Demonstrate Questions. Adapted from “Focused Topics Social Emotional Learning for Teachers,” by Virtual Lab School, n.d., Retrieved from <https://www.virtuallabschool.org/focused-topics/self-t>.

Appendix H
Study – Qualtrics Informed Consent

The Ohio State University Consent to Participate in Research

Study Title: VLS Momentum Early Childhood Educator Interview

Protocol Number:

Researcher: Sarah N. Lang, Ph.D.

This is a consent form for research participation. It contains important information about this study and what to expect if you decide to participate.

Your participation is voluntary.

Please consider the information carefully. Feel free to ask questions before making your decision whether or not to participate.

Purpose:

This study aims to understand the perspective of early childhood educators on the VLS Momentum pilot project. We hope to better understand the experiences and challenges early childhood educator faced during the pilot project, areas we could improve on, and your perceptions on the overall VLS content and one of the coursework topics that was covered in the program, Social-Emotional Learning for Teachers (SELF-T). This study is conducted in collaboration with Johns Hopkins University.

Procedures/Tasks:

We are asking you to participate in a single semi-structured interview. One interviewer from The Ohio State University and one interviewer from Johns Hopkins University will conduct the interview. This interview will be conducted on Zoom and will be recorded for the data analysis purpose. You will be asked a series of predetermined questions, and may be asked follow-up questions. You may skip any questions you do not want to answer.

Duration:

The interview will take between 60-90 minutes.

You may leave the study at any time. If you decide to stop participating in the study, there will be no penalty to you, and you will not lose any benefits to which you are otherwise entitled. Your decision will not affect your future relationship with The Ohio State University.

Risks and Benefits:

Risks: The greatest risk to your participation is a loss of privacy. To protect your privacy, all data will be de-identified during the transcribing process. The interview will also be conducted by research staff who did not directly work on the VLS Momentum pilot project.

We recognize that despite these measures, your responses may be identifiable by the nature of what you may say. If there are any questions you would prefer not to respond, please simply tell the interviewer. You will be able to skip any questions.

Benefits:

- A) Personal:** There will be no direct benefits to you.
- B) Benefits to Society:** We hope that this study will help the field better understand the experiences of early childhood educators who participate in professional development. Professional development is widely used in the field of early childhood education to promote practitioners' knowledge and skills, but little is known about the experiences and challenges faced by the participants.

Confidentiality:

All digital data will be saved on password protected computers or cloud storage systems. Personally identifying information will only be accessible to members of the research team. We will work to make sure that no one sees your survey responses without approval. But, because we are using the Internet, there is a chance that someone could access your online responses without permission. In some cases, this information could be used to identify you. Transcripts of interviews will be de-identified by removing your name, the names of any other coaches you might mention, names of colleagues you worked with, names of children, names of child care centers, and other identifying information you may mention. Names may be replaced by ID numbers or pseudonyms in the transcripts.

Also, there may be circumstances where this information must be released. For example, personal information regarding your participation in this study may be disclosed if required by state law. Also, your records may be reviewed by the following groups (as applicable to the research):

- Office for Human Research Protections or other federal, state, or international regulatory agencies;
- The Ohio State University Institutional Review Board or Office of Responsible Research Practices;
- Authorized Ohio State University staff not involved in the study may be aware that you are participating in a research study and have access to your information; and
- The sponsor, if any, or agency (including the Food and Drug Administration for FDA-regulated research) supporting the study.

Future Research:

Your de-identified information may be used or shared with other researchers without your additional informed consent.

Incentives:

By law, payments to participants are considered taxable income.

You will receive gift cards (physical and electronic) with a total value of \$50 for participating in this study.

Participant Rights:

You may refuse to participate in this study without penalty or loss of benefits to which you are otherwise entitled. If you are a student or employee at Ohio State, your decision will not affect your grades or employment status.

If you choose to participate in the study, you may discontinue participation at any time without penalty or loss of benefits. By agreeing to participate, you do not give up any personal legal rights you may have as a participant in this study.

This study has been determined Exempt from IRB review.

Contacts and Questions:

For questions, concerns, or complaints about the study you may contact Dr. Sarah N. Lang at (614) 688-1353 or by email at lang.279@osu.edu or Erin Tebben by email at tebben.18@osu.edu.

For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact the Office of Responsible Research Practices at 1-800-678-6251 or hsconcerns@osu.edu.

Providing consent

I have read (or someone has read to me) this page and I am aware that I am being asked to participate in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to participate in this study. I am not giving up any legal rights by agreeing to participate.

To print or save a copy of this page, select the print button on your web browser.

Please click the button below to proceed and participate in this study. If you do not wish to participate, please close out your browser window.

Have you earned your CDA credential?

- Yes

- Not Yet
- Prefer not to answer

If you would like to receive a gift card for participating, please click next to complete the gift card address form. If you are not interested in receiving a gift card you may close your browser now.

Appendix I
Study – Recruitment Email and Phone Scripts

Recruitment Email Script

Protocol Title: VLS Momentum Early Childhood Educator Interview

SUBJECT LINE: Research Opportunity – Follow-up on Virtual Lab School Momentum project

Hello [name of recipient]:

You're receiving this email because you were an early childhood educator who participated in the Virtual Lab School Momentum (Momo) pilot project. Now that the project is over, we want to make sure that we are doing all that we can to improve the training experiences for future participants.

To do this, we would like to invite you to participate in an interview session about your experience as an early childhood educator in the VLS-Momo project. Your participation is completely voluntary and will have no impact on your current or future interactions with the VLS or the Ohio State University. The interview is projected to last approximately 60-90 minutes. In exchange for your participation, you will receive a total value of \$50 in the form of physical or electronic gift cards. At no point will your identity be shared with people outside of the research team, regardless of whether you choose to participate or decline.

While we will do our best to protect your privacy, it may still be possible to identify who you are based on what information you share in your responses. All of your responses will be de-identified with your name and other potentially identifying information removed.

If you're interested to participate in this study, please visit the link below for more information regarding the details of this study and your rights as a participant. Should you decide to proceed with the study, you will then be asked to complete a demographic survey and provide informed consent to participate.

[insert link to approved informed consent form and Qualtrics survey]

Please do not hesitate to reach out to me, ([Study personnel]) with any questions or concerns you have regarding your potential participation. You can do so by replying to this email, sending an email to me at [email], or calling me at ([phone number]). You may also contact our principal investigator, Dr. Sarah Lang, at lang.279@osu.edu or 614-688-1353. I look forward to hearing back from you regardless of your ultimate decision.

Warmly,
[Study personnel]

Protocol Title: VLS Momentum Early Childhood Educator Interview

Hello, my name is [Research Staff Name] from the Virtual Lab School.

I am contacting you because you participated as an early childhood educator on the Virtual Lab School's Momentum Project.

We are working on an Ohio State-approved research study to help improve the training experiences of early childhood educators and would like to share with you some information about the study and how you could help. We sent you an email regarding this research opportunity several days ago. Have you had a chance to review the information?

[if yes] Great, would you be interested to participate in an interview session, or do you have any questions about this study that I can help answer?

[if respondent states no interest or decline to participate] Thank you for your time. Please don't hesitate to contact me in the future at this number if you have any other questions or change your mind about participating. Have a great rest of your day!

[if no] Do you have a few minutes for me to explain about this opportunity with you? *[if not, ask for another time to call back or offer to re-send email with additional information]*

First, please know that your decision to participate or not in this study is completely voluntary. As a part of this study, we will be conducting interviews with early childhood educators who were a part of the VLS-Momentum project to learn from their experiences. This interview will be conducted over Zoom. The interview itself should take between 60-90 minutes and involve around 15 questions.

We will do our best to protect your privacy as a participant in this research. All of your responses will be de-identified with your name and other potentially-identifying information removed during our transcript process. If you choose to participate, we would like to thank you for your time in the form of gift cards with a total value of \$50.

Do you have any questions about this research?

Does this sound like something you would be interested in participating in?

[If no: Thank you for your time. Please don't hesitate to contact me in the future at this number if you have any other questions or change your mind about participating]

If you are interested in participating, I would like to send you an electronic copy of the consent form for you to sign and a demographic survey link to complete. After you have a chance to look that over, we will set up a time to do a Zoom interview.

What's the best email address to send it to?

If you have any more questions, please don't hesitate to call me, [Research Staff Name] at (XXX)XXX-XXXX [calling staff phone number]. I'm looking forward to speaking with you further and will get you the consent form in the next day or two.

Thank you for your time and have a great rest of your day.

Appendix J
Study – Qualtrics Demographic Survey

Thank you again for your participation in this follow-up to the VLS Momentum. This survey contains demographic questions which will help us understand who participated in our program.

1. What is your gender? (mark only one)

- Female Male Non-binary / third gender Prefer not to say gender

2. Which of the categories below best describe your race or ethnicity? Mark all that apply

- White Black or African American American Indian or Alaska Native Asian
 Native Hawaiian or Pacific Islander Hispanic, Hispanic-American, or Latino Decline to state Other _____

3. What languages do you speak? Mark all that apply

- English Somali Arabic Spanish
 French Nepali Other _____

4. How many years have you worked in the field of early care and education? _____

5. Have you obtained your Child Development Associate (CDA) credential? Yes No

6. Are you currently working in the field of early childhood education? Yes No

If yes, please indicate your position / title:

- Lead teacher Assistant teacher Floating teacher Other: _____

7. How many hours per week do you currently work as a teacher / childcare provider? _____

7a) In comparison to prior to the COVID-19 pandemic, are your work hours:

- Higher (currently working more hours) About the same Lower (currently working fewer hours)

8. How many children do you have in your classroom on a typical day? _____

8a) How does the number of children in your classroom compare to the number prior to the COVID-19 pandemic?

- Higher (more children now) About the same Lower (fewer children now)

9. What is your total annual salary (before taxes) from teaching for the current year?

- N/A (not currently working as a teacher / childcare provider) Less than \$10,000 \$10,000-\$19,999 \$20,000-\$29,999
 \$30,000-\$39,999 \$40,000-\$49,999 \$50,000-\$59,999 \$60,000-\$69,999
 \$70,000-\$79,999 More than \$80,000

9a) How does your salary compare to before the COVID-19 pandemic?

- Higher (more income now) About the same Lower (less income now)

Appendix K

Study – Semi-Structured Interview Protocol

Interviewer 1: Thank you again for meeting with us today and sharing about your experiences with VLS-Momentum. We have a few questions specific to your experience with the VLS as a whole as well as a few questions about one specific part of the VLS, the Social-Emotional Learning for Teachers (SELF-T) course. As you can see, there are two of us here today: [*Name* from Ohio State University], who will ask questions about the VLS more generally, and [*Name* from Johns Hopkins University], who will ask questions more specifically on the SELF-T course. Do you have any questions for us before we get started? Do we have your consent to begin recording now?

I. General question about the VLS Momentum Project

- a. What made you decide to participate in the VLS Momentum project? (*What were you hoping to get out of your participation?*)
- b. From your perspective, what kinds of supports and resources helped you do your best work as you participated? (*As needed, ask specifically about center/administrative support*)
- c. From your perspective, what kinds of supports or systems were missing or do you wish you had? (*As needed, ask specifically about center/administrative support*)

II. Experiences with coaches

- a. Thinking specifically about your coach (or coaches), please describe your relationship with them. (*Probe for satisfaction/dissatisfaction if not offered. How does this relationship compare with what you would have liked?*)
- b. What, from your perspective, was essential that your coach did to support your success?
- c. What, from your perspective, could your coach have done differently to better support you and your success with the VLS?

III. COVID-19

- a. During the project, we switched from in-person to virtual coaching due to COVID-19. If we offer the VLS again, what format or combination of coaching formats (in-person and virtual) would you consider ideal, if there wasn't a pandemic complicating things? Why?

IV. Practice change

- a. What is one thing that you are doing differently now than you were prior to engaging with the VLS? Q re: skills that they learned, both specific to ECE and more general.

V. Social-Emotional Learning for Teachers (SELF-T)

Interview 2 (Transition statement): The next portion of the interview will ask more specific questions about your learning and experiences with Social-Emotional Learning for Teachers (or SELF-T), which focuses on teachers' own social-emotional health and well-being. This was one

of the latter coursework you completed as part of VLS training program. I understand it has been some time, so here is a brief outline of the content and exercises that were covered in the course to help jog your memory.

[share SELF-T course guide on screen]

- a. Can you tell me about your overall experience with the information covered in SELF-T, which focuses on your own well-being? *(potential follow up questions: What did you enjoy or find useful about the SELF-T course? What barriers did you face as you tried to put the skills you learned into practice? What were some of your thoughts as you engaged in this coursework, as part of your overall professional development experience?)*
- b. **(Knowledge of emotional well-being)** What have you learned in the SELF-T course, which focuses on your own emotional well-being and the role it may play in the classroom (or childcare) environment?
- c. **(Perceived stress)** How has the SELF-T coursework make a difference, or not, in how you perceived stress at work or in your personal life? *(potential follow-up if participant does not refer to COVID-19: Considering the stresses brought on by the pandemic, do you find yourself drawing on your learning from SELF-T in any specific way?)*
- d. **(Use of emotional well-being strategies)** What strategies have you used to prevent or manage stressful experiences in your work, such as when you're addressing or responding to a challenging behavior? Have there been any barriers that might have prevented you from trying or continuing to use some of the strategies you've learned at your work? *(ask about use of strategies in personal life or situations if participant states no applicable examples from professional context)*
- e. **(Responsiveness)** What differences have you noticed in how you emotionally respond to children's behaviors that may be challenging? Can you give me an example of how you had responded to difficult behaviors in the classroom, that you might have responded differently prior to your coursework in SELF-T? *(potential follow up questions: Are there any strategies you are using in the classroom that you learned from SELF-T?)*
- f. **(Teacher self-efficacy in behavior support and management)** How has the SELF-T coursework make a difference, or not, in the confidence of your ability to support children engaging in challenging behaviors in the classroom (or childcare setting)? *(potential follow up question: What specific tips or strategies from SELF-T have improved your confidence in the classroom?)*

VI. Future plans

Interviewer 1: Finally, we have some questions about your achievements and plans for growth as an early childhood professional.

- a. How did the VLS prepare you for the CDA application and exam process?
(What about the preparation process was particularly helpful or not?)
- b. Were you able to access the [...] and TEACH scholarships? If no, why not?
- c. If you haven't yet applied for your CDA, what has gotten in your way?

Ending question:

Is there anything else you would like to add or share with us about SELF-T or the VLS overall before we end our interview?

Appendix L
Qualitative Data Analysis - Frequencies of Categories in Pre-Test and Post-Test SELF-T
Short Answers – Stress on Nurturing Care

Categories	Pre-Test		Post-Test	
	Frequency	Examples	Frequency	Examples
Emotional state	4	“crying or yelling, can feel like you have no control” “may not be able to feel as patient”	8	“puts you in a bad mood” “overwhelmed” “irritable”
Cognitive state	16	“become fixated on it, and practically ignore everything else” “wouldn’t have a present mind” “zone out from time to time” “too tired to stay on task” “shut off from the real world in your negative stressful thoughts”	17	“clouds your thinking in ways that make it difficult to make successful decisions” “not be willing to solve and understand problems” “poor concentration” “lack of motivation to teach, solve problems, and provide care”
Physiological state	4	“headaches, fatigue, irritability” “having a panic attack” “not wanting to eat or sleep”	3	“headaches, sleep disturbances” “not enjoy doing things I used to”
Behavioral reactions				
Interactions with children	7	“say or do something irrational that could be hurtful to the child” “project on to the children” “not show love to the children or have patience”	11	“more likely to be mean to the children or overly critical to them” “not being able to show affection and care for the children” “affect my relationship with children” “not communicate with the children properly”

Interactions with others	4	<p>“how we interact with families”</p> <p>“snap at someone”</p> <p>“how we treat our colleagues”</p>	1	<p>“prevent me to treat nicely my colleagues and families for children”</p>
Responsiveness	6	<p>“not fully be focused on their needs and actively supervising”</p> <p>“less caring”</p> <p>“not being able to give your best to the children”</p>	8	<p>“not paying attention to the children”</p> <p>“not caring what they have to say or their learning”</p>
Professional commitments	5	<p>“not pay attention to what I am doing and make a mistake”</p> <p>“how much satisfaction and commitment we feel when it comes to our work”</p> <p>“makes you nervous to the point that you cannot collaborate in work with your colleagues”</p>	5	<p>“not be competent in my role, in which I could not do daily tasks”</p> <p>“won’t be able to manage your classroom nor implement your curriculum effectively”</p> <p>“not wanna do your job or being at work”</p>
Environments	4	<p>“create an unhealthy environment for children”</p> <p>“kids feel the tension”</p>	8	<p>“children also feed off that energy and can cause a stressful class altogether”</p> <p>“make them feel unsafe or uncomfortable”</p>

Appendix M
Qualitative Data Analysis - Frequencies of Categories in Pre-Test and Post-Test SELF-T
Short Answers – Positive Strategies for Negative Emotions

Categories	Pre-Test		Post-Test	
	Frequency	Examples	Frequency	Examples
Cognitive				
Reframing / reappraising	1	“reappraisal”	6	“reappraisal” “think differently about a situation” “turn the situation into a positive”
Distraction	7	“thinking of something that makes you happy or that your grateful for” “imagine a peaceful place” “focus on the positive”	6	“think in a positive way and try to ignore negative thoughts” “think of happy thoughts or a happy place” “using imagery”
Positive affirmations	1	“saying positive affirmations to help you turn the negative emotions and thoughts into positive ones”	3	“saying positive affirmations to yourself” “counter the emotion or thought with a positive or uplifting statement”
Thought review / journal	2	“don’t blow things out of proportion by going over them time and again in your mind” “writing in a journal”	2	“ask yourself it is fact or opinion” “writing down feelings”
Compartmentalization	0	---	1	“compartmentalization – try and leave personal matters and issues at home”
Emotional				

Identifying triggers	1	“recognize what triggers the emotions”	0	---
Embracing the negatives	2	“accept that bad feelings are occasionally unavoidable” “embrace that having negative emotions sometimes is a part of life”	0	---
Labeling	6	“talking it out” “labeling” “label the emotions” “speak about my feelings”	5	“give voice to the negative feelings... then say it out loud” “label the emotion”
Avoiding negative influences	0	---	1	“avoid angry, grumpy, and pessimistic people”
Physiological Physical activity or relaxation	13	“stretching your body or exercising” “working out” “walking”	14	“get lots of rest” “muscle relaxation – slowly tense and untense muscle groups” “yoga” “go for a walk”
Breathing exercises	16	“taking deep breaths”	11	“breathe and relax” “focus on breathing”
Taking a break	3	“take a 5 min breather / potty break”	3	“take a pause before replying” “find a place to relax that is private”
Meditation	0	---	4	“meditation”
Behavioral Problem solving	2	“replay the situation (see	0	---

		what went wrong and how to fix it)” “confront it, try to find a solution”		
Leisure activities	7	“listen to music” “coloring” “doing something you enjoy and are good at” “reading a book”	4	“use pleasant activities like reading”
Social supports	10	“sharing feelings” “speak with a friend or therapist” “talk to the director” “ask for help” “use the children as a distractions from stress”	10	“talking with friends” “ask for help from a coworker”
