Evaluating the Effects of an Emotions Education Training on the Emotion-Related Beliefs of Preservice Preschool Educators

by

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Abstract

Evidence suggests that emotion-related beliefs have important implications for adult interactions with children, which, in turn, influence children's emotional competence. Among early childhood educators, recommendations increasingly are calling for efforts to provide emotion-based training to strengthen teachers' abilities to respond to the emotionally arousing circumstances of caring for and teaching young children. The current study examined whether SELF-AWARE, an emotions education training designed for preservice preschool teachers, was effective at increasing emotional self-efficacy beliefs and positive meta-emotion philosophies among pre-service teachers. Using a pretest vs. posttest, treatment vs. control group design, self-report data from 60 undergraduate students related to their emotional self-efficacy beliefs and meta-emotion philosophies were collected through electronic surveys and analyzed. Although some hypotheses were not supported, results indicated that the SELF-AWARE program was effective in enhancing general emotional self-efficacy and emotion-coaching attitudes. These results warrant additional exploration and should inform future preservice teacher training efforts.

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Introduction

Emotions serve important expressive and communicative purposes and guide adaptive functioning (Campos, Campos, & Barrett, 1989; Thompson, 1990). Emotions are instrumental in identifying one's concerns and goals and for reorienting one's actions accordingly (Frijda, 1986). Obstacles that oppose one's goals may incite negative emotions, whereas actions consistent with expectations may not (Lazarus, 1991). However, it has been posited that the interpretation of emotional experiences, rather than the emotional experiences themselves, influences personal reactions to these events (Bandura, 1997). It is possible, then, that acceptance and management of emotions are necessary precursors to behavior modification because behaviors may be easier to change when emotional arousal is lessened (Havighurst, Wilson, Harley, & Prior, 2009). Two sets of beliefs are associated with the perception and interpretation of emotion-related experiences--emotional self-efficacy beliefs, or the extent to which one feels in control of one's emotions (Dacre Pool & Qualter, 2012b; Kirk, Schutte, & Hine, 2008) and meta-emotion philosophy, that is, the thoughts and feelings one has in response to one's own or another's emotions (Gottman, Katz, & Hooven, 1996).

Emotional self-efficacy has a number of components, including the extent to which individuals feel in control of the causes, outcomes, reactions, frequency, and intensity of their emotional experiences (Bandura, 1997; Bandura, Caprara, Barbaranelli, Gerbino, Pastorelli, 2003; Saarni, 1999). Competence in the domain of emotional self-efficacy has been linked to life satisfaction and successful adaptation, whereas deficits have been linked to negative outcomes,

such as overwhelming fear, anxiety, or depression (Bandura, 1986; Caprara & Steca, 2005; Flett, Blankstein, & Obertinsky, 1996; Lazarus, 1991; Lightstey, McGhee, Ervin, Gharibian Gharghani, Rarey, Daigle, et al., 2013).

Meta-emotion philosophies are underlying beliefs about the acceptability and expression of emotions. Adults who have a more emotion-accepting meta-emotion philosophy assist children in understanding their emotional experiences and developing strategies to regulate their emotional experiences, whereas adults with a more emotion-dismissing meta-emotion philosophy view emotional expressions with concern and possibly even as deserving of punishment (Gottman et al., 1996). These meta-emotion philosophies have been shown to influence subsequent behaviors in the context of adult-child interactions. Indeed, meta-emotion philosophies have been associated with specific parenting strategies (e.g., emotional scaffolding, praising, validation, and self-disclosure) as well as child outcomes (Cleary & Katz, 2008; Gottman et al., 1996). Specifically, emotion coaching has been related to more positive child outcomes, such as higher levels of self-esteem and lower levels of internalizing and externalizing problems (Katz & Hunter, 2007). In contrast, more emotion-dismissing attitudes have been associated with less adaptive outcomes, such as externalizing behaviors in middle childhood (Lunkenheimer, Shields, & Cortina, 2007).

In the context of adults' interactions with children, research has shown that adults' emotion-related beliefs and behaviors have consequences for children's social emotional development (Dix, 1991). For example, if parents express a variety of emotions freely, children learn which emotions and emotional responses are appropriate in different situations. In contrast, parents' negative reinforcement of children's negative emotions may undermine social competence (Denham, Mitchell, Copeland, Strandberg, Auerbach, & Blair, 1997). Aspects of the

family environment, including family positive emotional expressivity, communication about emotions, and acceptance of emotional displays facilitate greater emotional understanding and emotional competence among children (Denham, Blair, DeMulder, Levitas, Sawyer, Auerbach-Major et al., 2003; Dunn & Brown, 1994). Parents' reactions to specific positive and negative emotions of their child shape children's emotion regulation capacities. Sanctions against certain emotions magnify children's emotional arousal and teach children avoidance rather than understanding and appropriate expression of negative emotions; in contrast, supportive parental responses to children's emotions may enhance children's coping abilities and their abilities to manage emotions constructively (Eisenberg, Cumberland, & Spinrad, 1998).

The field of education has acknowledged the importance of adult emotions for the quality of the affective environment in early childhood education, with the National Association for the Education of Young Children (NAEYC) emphasizing the importance of warmth and acceptance of negative emotions in their accreditation standards. An emotionally positive climate in the classroom is identified by NAEYC as an important aspect of developmentally appropriate childhood education (Bredekamp & Copple, 1997). Teachers' expressions of affection and anger toward children in their care are instrumental in shaping the context in which children gain information about and understand emotions (Mill & Roman-White, 1999), as well as for the development of their social and emotional competence. In spite of the importance of discussing emotions with children, evidence suggests that teachers discuss emotions with students infrequently (Hyson, Hirsh-Pasek, & Rescorla, 1990). Development of emotion-related skills is necessary given that teachers identified recognizing and identifying emotions, expressing emotions, and assessing emotional intensity as important skills to be possessed by students (Poulou, 2005).

Socially and emotionally competent teacher behaviors are essential in the development of optimal classroom environments and positive student outcomes. Many teachers understand that acknowledging student emotions is an important aspect of their role (Ahn 2005; McCaughtry & Rovengo, 2003; Sutton, 2004) and that the awareness and ability to identify and manage their own emotions is particularly important, since the classroom is a place where activation of strong emotions occurs and strategies for emotion regulation amid emotionally-provocative situations are limited (Hargreaves, 2000; Jennings & Greenberg, 2009).

Teachers' social and emotional competencies influence the classroom context more broadly in terms of their benefit to the overall classroom emotional climate. Emotionally supportive classrooms are associated with better social skills and fewer behavior problems in preschool and third grade children above selection effects (i.e., family, child, and neighborhood characteristics; Bub, 2009). A beneficial classroom context is further associated with low levels of conflict and disruptive behavior, appropriate emotional expressions, and supportiveness and responsiveness to individual student needs (La Paro & Pianta, 2003). Teacher positive affect is related to the generation of more teaching ideas and strategies and more ambitious goal setting for their students and their own teaching (Frederickson, 2001; Sutton & Wheatley, 2003). In contrast, high intensity negative affect influences teachers' motivation to teach as well as students' ability to learn (Frederickson, 2001; Pekrun, Goetz, Titz, & Perry, 2002; Sutton & Wheatley, 2003) and evokes negative affect in students as well (Sutton & Wheatley, 2003; Thomas & Montgomery, 1998).

Beyond the importance of teacher social emotional competence for children's learning and development, lower levels of emotional competence increase the emotional stress caused by classroom challenges, which, in turn, influences teachers' job performance and motivation.

Teachers with deficits in social and emotional competence may be more inclined to experience burnout (Farber & Miller, 1981), which further undermines teacher-student relationships and classroom management and climate (Hargreaves, 1998). This burnout is related to reduced teacher sympathy toward students, heightened student misbehavior, and reactive or punitive teacher responses that hinder the development of student self-regulation (Jennings & Greenberg, 2009; Osher, Sprague, Weissberg, Axelrod, Keenan, Kendziora et al., 2007). In contrast, teachers who are sensitive to and better understand their students' emotions are less inclined to experience feelings of burnout (Chang, 2009).

Given the importance of adult emotional competence for child development and learning outcomes, the need for training programs and interventions designed to influence adults' understanding of their own and children's emotions increasingly has been recognized. Denham and colleagues (2012) note the importance of expanding on research done on parental socialization of child emotion to consider the influence of teachers on children's emotions. An emphasis on the mechanisms of emotion socialization and maximization of emotional competence among early childhood educators, in turn, may benefit training efforts (Denham et al., 2012). Teacher training should further highlight the value of teachers' supportive roles in children's emotional socialization and provide strategies for responding to children's emotions (Jennings & Greenberg, 2009).

Some interventions have been shown to be effective in changing adults' emotion-related beliefs. For example, *Tuning into Kids*, an intervention for parents that used Gottman and DeClaire's (1997) parental meta-emotion philosophy framework, was effective in improving emotional awareness, emotion-coaching attitudes, and empathy and was effective in reducing emotion-dismissive attitudes. Observed parent-child interactions also demonstrated the use of a

greater number of emotion labels and higher engagement among those parents who completed the intervention compared to a control group. This intervention was related to significantly improved child outcomes, including greater emotion knowledge and reduced problem behaviors among children of those parents who completed the intervention (Havighurst et al., 2010).

Although few studies have examined the effectiveness of social emotional training for teachers, some evidence suggests that social emotional learning training aimed at students may also have benefits for teachers, resulting in greater teacher warmth and supportiveness (Jennings & Greenberg, 2009). Since mindfulness trainings focus on emotion regulation through reflection of one's own internal and external experience (Zelazo & Cunningham, 2007), mindfulness trainings may help reduce teacher stress and promote a mental skillset associated with effective classroom management (Jennings & Greenberg, 2009). Among mindfulness trainings specifically targeting teachers, interventions promoting positivity and emotional awareness reduce teacher stress (Winzelberg & Luskin, 1999). Teachers involved in a training with both emotional awareness and mindfulness components evidenced reduced depression and increased compassion and emotional self-awareness; pilot data demonstrated that these psychological benefits of the intervention also subsequently improved classroom climate (Jennings, 2007; Kemeny et al., 2008). Kremenitzer (2009) suggests training early childhood educators to encourage each other in development of emotion perception, appraisal, and expression; she further encourages journaling and self-assessment in order to increase awareness and emotional skills, given the importance of teachers' own emotional competence in capacities to engage in scaffolding and nurturing behaviors with young children.

The field of education has recognized the importance of these types of emotion-related training. Mill and Romano-White (1999) report that childcare providers with higher levels of

child-related training exhibited more affection and less anger in the presence of at least one risk factor (e.g., low self-esteem, job burnout), suggesting that training may buffer against the negative influences of risk factors. Swartz and McElwain (2012) have further recommended training targeted at preservice teachers that emphasizes enhancement of teachers' emotion regulation strategies, improved awareness of their own emotional arousal, and strengthening of their emotion-related cognition by promoting teachers' perspective-taking skills, socioemotional learning-relevant knowledge, and positive meta-emotion philosophies.

In addition to the development and identification of the essential features of effective trainings, it is important to consider potential barriers to or moderators of such interventions as well. One such barrier is that of depression, which has been shown to attenuate the effects of interventions (Maliken & Katz, 2013). Adult attachment status could also introduce variation in the effectiveness of emotion education interventions, since secure and insecure attachment statuses are influential in building emotional competencies and have differential consequences for the recognition, interpretation, and communication of emotional experiences (Keiley, 2002; Shaver, Collins, & Clark, 1996).

Some education professionals argue that social and emotional development should receive more focus in standardized teacher training curricula (Jennings & Greenberg, 2009). Trainings aimed to enhance teachers' emotional competence have important implications, since children spend a significant portion of their day with these educators in educational contexts and child care settings (National Association of Child Care Resource and Referral Agencies, 2010; U.S. Census Bureau, 2005). Preservice teachers receive little training on children's social emotional skills (Brophy, 1998) or management of their own internal emotional experiences and expressions (Meyer, 2009). Thus, targeting preservice teachers may be especially beneficial

because this formal training period is a time in which early childhood teachers shape their professional identity as they incorporate child development knowledge with educational theories and classroom processes (Biber, 1988; Katz & Raths, 1985; Spodek, 1988). Training may enhance teachers' understanding of students' emotions and expand their developmentally appropriate strategies for responding to them (Burchinal Cryer, Clifford, & Howes, 2002; Downer, Kraft-Sayre, & Pianta, 2009).

The SELF-AWARE emotions education training was designed to enhance emotion-related knowledge, awareness, and self-management among preservice early childhood teachers working in a university-operated preschool program. The purpose of this study is to examine whether participation in this training altered participants' perceptions and interpretations of their emotion-related experiences by assessing their emotional self-efficacy beliefs and meta-emotion philosophies in comparison with students who did not participate in the SELF-AWARE training.

This study intends to provide additional support for the malleability of emotion-related beliefs and to demonstrate the effectiveness of an intervention targeting these emotion-related beliefs. This study also intends to provide additional support for the four sources of self-efficacy (i.e., enactive mastery experience, vicarious experience, verbal persuasion, and affective states) as the means by which to alter self-efficacy beliefs (Bandura, 1997). With regard to practical application of these findings, this study attempts to provide support and guidance for efforts to increase emotion-related competencies among preservice teachers in the hope that such training will positively influence their interactions with young children.

Literature Review

I begin this literature review first by summarizing the theoretical underpinnings of emotional self-efficacy and discussing interventions that have demonstrated the malleability of self-efficacy, more specifically, emotional self-efficacy beliefs. Secondly, I discuss meta-emotion philosophy and summarize studies that demonstrate its malleability. I further examine the influence of attachment in relation to these emotion-related beliefs. I conclude this literature review by summarizing the research on emotion-related beliefs, describing the intervention that I will be examining, and outlining my study hypotheses.

Self-Efficacy: Definition and Theoretical Background

Self-efficacy is defined as one's beliefs that one is capable of organizing and executing "the courses of action required to produce given attainments" (Bandura, 1997, p. 3). Efficacy beliefs are a major component of action, guiding individuals' lives and influencing a number of factors, including the actions people elect to pursue, the amount of effort they will exert in certain ventures, and the length of time they will persist when confronted with obstacles. After these beliefs are formed, they are relatively stable (Bandura, 1997). Many studies have established a positive link between self-efficacy beliefs and individual performance (e.g., academic performance, proneness to anxiety, pain tolerance, political participation) on a variety of tasks (Bandura, 1997; Manning & Wright, 1983; McCarthy, Meier, & Rinderer, 1985; Wollman & Stouder, 1991). Indeed, efficacious individuals have a higher likelihood of initiating behaviors, persevering when confronted with difficulty, and succeeding in gaining mastery of a

new behavior (Bandura 1986; 1997; 2000). In contrast, people with low levels of self-efficacy may avoid pursuing tasks they perceive as out of reach (Bandura, 1997). In fact, these self-efficacy beliefs may be a more integral component of success at a task than the individual's capability to complete the task itself (Bandura, 1977). In a meta-analysis examining the effect of self-efficacy on workplace productivity, Stajkovic and Luthans (1998) concluded that self-efficacy beliefs were responsible for a much higher gain in workplace productivity than any other variable examined (i.e., goal setting, performance feedback, and behavior modification).

Sources of Self-Efficacy

According to Bandura (1997), self-efficacy beliefs are influenced by four main sources: mastery experiences, vicarious experiences (modeling), verbal persuasion, and physiological and affective states. The most influential factor in the development of self-efficacy beliefs is mastery experience. The experience of succeeding at a task enhances an individual's beliefs that he or she can bring about a desired outcome in the future. Although successes build self-efficacy beliefs, in order to develop enduring efficacy beliefs, an individual must experience success after persevering through difficulties. Success in the face of difficulty allows individuals to cultivate skills and better exert control over the tasks. Mastery experiences give the most accurate information about whether the individual can produce the desired outcome (Bandura, 1997).

Vicarious experiences help build self-efficacy beliefs through the comparisons individuals make between the abilities of social models and their own abilities. Vicarious experience refers to observation of a model completing a task. When observing a social model, the influence of vicarious experience depends on comparisons individuals make between themselves and the social model. For example, the more similar individuals view themselves to be to the model, the more similar they believe the outcome of their efforts will be to the model's

efforts (Bandura, 1997). If individuals estimate that their abilities are similar to those of a peer who has succeeded at a task, then they will believe they can also execute a similar outcome (Bandura, 1982); in contrast, if they regard their abilities as similar to those of an unsuccessful peer, then they are less likely to believe that they can execute a positive outcome (Brown & Inouye, 1978). Witnessing a successful model overcome difficulties to accomplish a task promotes predictability and controllability of the situation, also enhancing an individual's efficacy beliefs (Bandura, Reese, & Adams, 1982). When outcomes are more subjective, individuals employ social comparison of peers in order to inform the adequacy of their performance (Festinger, 1954; Goethals & Darley, 1977; Suls & Miller, 1977). A superior performance compared to group norms tends to enhance the individual's efficacy beliefs, whereas an inferior performance detracts from them (Litt, 1988).

A third source of self-efficacy beliefs is verbal persuasion, or feedback from others. Receiving performance feedback and positive verbal input that emphasize personal capabilities are more likely to persevere and expend more effort at the task at hand, promoting skill development and, thus, enhancing efficacy beliefs (Bandura, 1997). Disparaging feedback reduces efficacy beliefs, whereas constructive feedback promotes efficacy beliefs (Baron, 1988).

Physiological and affective states (e.g., accelerated heart rate, internal visceral agitation, mood states) contribute to the development of self-efficacy beliefs. Several aspects of these physiological and affective states influence self-efficacy beliefs, including the source of physiological arousal, arousal intensity, the circumstances under which arousal occurs, and construal biases. The interpretation of the arousal, rather than the arousal itself, has implications for self-efficacy beliefs and determines whether it can help or harm the performance of a task. Individuals who interpret physiological activation as related to external circumstances are less

likely to experience debilitated performance compared to those individuals who interpret such arousal as related to personal failings. Although moderate arousal promotes employment of skills, high levels of arousal disrupt functioning and threaten the completion of the task at hand. Inefficacious individuals selectively attend to threatening cues, which makes them more likely to misinterpret arousal related to external circumstances as indicative of personal ineptitude. Affective states provide information that is integrated into self-efficacy beliefs as well (Bandura, 1997). One theory posits that past positive and negative outcomes are stored in an individual's memory along with the emotion he or she experienced (Bower, 1983). Negative moods prompt recall of past failings, whereas positive moods prime memories of past successes. Self-efficacy beliefs are enhanced, then, by selective recall of past successes and failures, emphasizing successes and diminishing failures (Bandura, 1997). Thus, by giving individuals strategies to manage their emotions, they may be better able to generate positive emotion and cope with negative emotions and thus may have greater perceived emotional self-efficacy.

Malleability of Self-Efficacy

Self-efficacy beliefs are malleable; the extent of this malleability is determined by initial self-efficacy beliefs, variability, locus, and controllability of the sources of self-efficacy (Gist & Mitchell, 1992). Over time, new information and experience are integrated into an individual's estimation of his or her efficacy (Bandura, 1988; Bandura & Wood, 1989; Wood & Bandura, 1989). Efficacy beliefs can be enhanced by any of the four sources of influence. Opportunities to practice skills can enhance an individual's efficacy beliefs (Bandura, 1997). Modeling experiences that demonstrate effective coping skills can enhance self-efficacy beliefs even among individuals that have experienced many personal failures that have confirmed their inefficacy, and feedback can facilitate this process by correcting inaccurate attributions

(Bandura, 1977; Fosterling, 1985). Observing the skills needed to attain a desired outcome and having the opportunity to practice those skills enhance self-efficacy beliefs as well (Fecteau & Stoppard, 1983). Improvements to self-efficacy beliefs are also sustainable; after efficacy beliefs have been established, occasional setbacks are not likely to undermine the belief (Bandura, 1997).

Self-efficacy beliefs are related to specific spheres of functioning (Bandura, 1997). High levels of self-efficacy in one domain do not necessarily predict high levels of self-efficacy in other domains (DiClemente, 1986; Hofstetter, Sallis, & Hovell, 1990). For instance, an individual might master a risky activity in the physical domain, enhancing perceived efficacy, yet these gains will likely not transfer to challenges in the social or cognitive domains (Brody, Hatfield, & Spalding, 1988). A domain of particular relevance to the current study is emotional self-efficacy, or the extent to which an individual is confident in his or her abilities to manage emotions (Kirk et al., 2008; Dacre Pool & Qualter, 2012b). Emotional self-efficacy beliefs encompass an individual's perceived control over his or her emotional experiences, causes, reactions, and expected outcomes of his or her emotions (Bandura, 1997; Bandura, Caprara, Barbaranelli, Gerbino, Pastorelli, 2003). Saarni (1999) asserts that this construct encompasses the capacity to manage the intensity, frequency, and duration of emotional experiences. Perceived control over emotions may also be related to regulatory strategies and is further related to positive outcomes, including life satisfaction and successful adaptation (Bandura, 1986; Caprara & Steca, 2005; Lazarus, 1991; Lightstey, McGhee, Ervin, Gharibian Gharghani, Rarey, Daigle et al., 2012). In contrast, possible adverse consequences associated with an individual's inability to manage his or her emotions include overwhelming fear, anxiety, or depression (Flett, Blankstein, & Obertinsky, 1996) and inappropriate externalization of irritation and anger (Olson,

Schilling, & Bates, 1999). Caprara and colleagues (2013) found that self-efficacy regarding negative emotions was related to maladjustment beyond emotional stability, indicating that emotional self-efficacy beliefs can potentially influence stable traits. Thus, understanding how emotional self-efficacy beliefs may allow individuals to better manage their emotions is important (Bandura, 1986; Lazarus, 1991).

Interventions for Self-Efficacy

Interventions have had some success in altering self-efficacy beliefs. Perez-Blasco, Viguer, and Rodrigo (2012) examined whether a mindfulness-based intervention improved maternal self-efficacy and mindfulness practices among 26 Spanish, breast-feeding mothers (13 experimental group; 13 control group) randomly assigned either to an intervention group or to a no-treatment control group. This eight-week program employed techniques from programs such as the Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1990), Mindfulness-based Cognitive Therapy (MBCT; Segal, Williams, & Teasdale, 2002), and Mindfulness Self-Compassion (MSC; Germer, 2009; Neff, 2011), which were adapted for a population of breastfeeding mothers. During each session, participants discussed the previous week (e.g., any difficulties that arose), completed guided meditations, discussed the application of mindfulness strategies to parenting practices, and assigned tasks for the following week (e.g., formal meditation, informal practice). Measures included the Parental Evaluation Scale (Farkas-Klein, 2008), which assessed maternal self-efficacy, and the Five Facet Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006; Baer, Smith, Lykins, Button, Krietemeyer, Sauer et al., 2008), which assessed observing, describing, acting with awareness, nonjudging of inner experience, and nonreactivity to inner experience. Results indicated that mothers in the intervention group evidenced significantly higher levels of maternal self-efficacy

compared to those mothers in the control group. On the mindfulness assessment (FFMQ), the intervention group scored significantly higher on observing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience than the control group (Perez-Blasco, Viguer, and Rodrigo, 2012).

Few interventions have examined increasing emotional self-efficacy. Kirk and colleagues (2011) examined the effectiveness of a writing intervention designed to improve emotional self-efficacy and reduce workplace incivility among a group of 46 Australian employees. Participants ranged from 19-62 years of age (M = 35.1; SD = 11.6). Forty-six percent had earned a bachelor's degree or higher, and 15% of participants were employed in a psychology unit. Participants were alternately assigned to the emotional self-efficacy intervention group or to the control group. All participants were instructed to write for 20 minutes a day for three days. Those participants in the emotional self-efficacy intervention group were instructed to write about events from their previous workday or from a particularly significant workday in the past and to specifically focus on their emotional processing (e.g., understanding and regulation of their emotions toward other employees, physiological and affective states that influenced processing of emotions). Participants in the control condition were asked to write about events that were unrelated to their workday and were not prompted to focus on matters relating to emotional processing. Measures included the Emotional Self-Efficacy Scale (Kirk et al., 2008), the Assessing Emotions Scale (Schutte, Malouff, Hall, Haggerty, Cooper, Golden, et al., 1998), the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), and the Uncivil Workplace Behavior Scale (UWBQ; Martin & Hine, 2005). Findings indicated that the intervention significantly enhanced the emotional self-efficacy only of those participants who had low to moderate levels of self-efficacy prior to the study when compared to those

participants in the control condition. Thus, this evidence demonstrates that minimal intervention efforts can improve levels of emotional self-efficacy (Kirk et al., 2011).

Similarly, Dacre Pool and Qualter (2012a) examined whether an emotional intelligence intervention would improve levels of emotional self-efficacy among 134 British university students (66 intervention; 60 male). The 11-week class emphasized the Mayer and Salovey (1997) four branch model of emotional intelligence, with sessions focusing on the perception of emotion, employing emotion, understanding emotion, and managing emotion. Classes incorporated a variety of teaching methods (e.g., video clips, mini-lectures, case studies, role plays), and the module was evaluated using a reflective journal, an essay, and a case study report. The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, & Caruso, 2002) and ESES (ESES; Kirk et al., 2008) were completed in the first and final class periods; participants were then provided a report and a one-to-one feedback on their results. Participants were also instructed to reflect on their results and record them in their first journal entry. Control group participants completed the pretest and posttest measures within the same week as the intervention group and were also given one-to-one feedback about their results.

Significant group x time interactions were found for all dimensions of emotional self-efficacy measured (i.e., using and managing own emotions, identifying and understanding own emotions, dealing with emotions in others, and perceiving emotion through facial expressions and body language). Among the using and managing own emotions and identifying and understanding own emotions subscales of the ESES, Dacre Pool and Qualter (2012a) found that there were no significant differences between the two groups at pretest, but there was a significant difference between the intervention and control groups at posttest, with both groups demonstrating significant improvements over time. Although there were no differences at

pretest, the intervention group scored significantly higher at posttest for the using and managing own emotions and identifying and understanding own emotions subscales of the ESES. At Time 1, the intervention group had significantly lower scores than the control group on the dealing with emotions in others subscale of the ESES. However, upon completion of the intervention, there was no significant difference between the two groups. Thus, the intervention overcame the original deficit of the intervention group. There were no significant differences between the two groups at Time 1 for the perceiving emotions through facial expressions and body language subscale of the ESES. However, at posttest, the intervention evidenced significant improvement, whereas the control group did not change (Dacre Pool & Qualter, 2012a).

Meta-Emotion Philosophy

Meta-emotion is defined as the emotions and cognitions individuals have about their own and others' emotional experiences (Gottman et al., 1996). Gottman and colleagues (1996) consider parents' beliefs about their own and their children's expression of emotions as influential for their subsequent responses and parenting behaviors and identify four categories of such beliefs. Emotion-disapproving parents do not tolerate emotions such as anger, believing that emotions, especially negative ones, are "toxic" or unacceptable. They prohibit their children from expressing such emotions and may even view the mere expression of them as worthy of punishment. Laissez-faire parents believe that children's negative emotional experiences (e.g., anger, sadness) are acceptable, but do not attempt to assist children to understand or handle emotional experiences. Emotion-dismissing parents consider children's emotions as irrelevant or unworthy and invalidate children's emotional experiences by ignoring or denying them. These three negative meta-emotion philosophies are collectively deemed "emotion-dismissing" philosophies. Emotion-coaching parents accept and empathize with children's emotional

experiences and offer children assistance to understand their feelings and move forward in a positive manner (Gottman et al., 1996). Thus, the beliefs that parents have about their own and their child's behavior influence their parenting, specifically whether the parents engage in emotion-coaching or emotion-dismissing behavior. Gottman and colleagues (1996) theorize that emotion-coaching meta-philosophies serve to enhance child psychosocial adjustment and peer relations by improving their emotional awareness, expression, and regulation.

Gottman and colleagues (1996) conducted a study with 56 families (95% Caucasian) with 4-to 5-year-old children who completed laboratory assessments and home interviews. These families demonstrated a wide range of marital satisfaction scores. Parents completed a meta-emotion interview (Katz & Gottman, 1986) during which they recounted their own experiences of negative emotions and discussed their feelings, attitudes, and behavior toward their children's negative emotionality. The interview was coded on awareness, which consisted of 12 subscales (e.g., being able to distinguish one emotion from others, being descriptive of the cognitive processes connected with this emotion) and coaching, which consisted of 11 subscales (e.g., showing respect for the child's experience of the emotion, teaching the child strategies to soothe the child's own emotion). Parents who engaged in emotion-coaching strategies exhibited heightened awareness of low intensity emotions in themselves as well as their children, considered the child's expression of negative emotions as teaching opportunities, validated their child's expression of emotion, aided the child in verbal identification of their emotions, and helped the child generate problem-solving strategies and behavioral limits in order to better manage the circumstances that preceded the negative emotion. In contrast, parents with more dismissing-oriented meta-emotion philosophies employed strategies such as denying and ignoring emotion, considered their role as helping to change negative affect or make it end

quickly, and communicated to their children that emotions are not important (Gottman et al., 1996).

Empirical studies have offered support for the importance of emotion coaching. Parental meta-emotion philosophies have been associated with specific parenting strategies, including emotional scaffolding, praising, validation, and self-disclosure (Cleary & Katz, 2008; Gottman et al., 1996). More coaching-oriented parenting strategies promote children's emotional competence in the domains of emotional awareness, expression, and regulation (Katz, Maliken, & Stettler, 2012). Evidence further demonstrates that these philosophies are related to child inhibitory control, behavior problems, academic achievement, and physical health (Gottman et al., 1996). Among adolescents with different levels of depressive symptoms, adolescents with mothers who were more accepting and expressive of their own emotions exhibited lower depressive symptoms, higher levels of self-esteem, and lower levels of internalizing, externalizing, and total problems (Katz & Hunter, 2007). More emotion-dismissing attitudes observed during coded emotion discussion during a family interaction were related to more externalizing behaviors in middle childhood (Lunkenheimer, Shields, & Cortina, 2007).

Parental meta-emotion philosophy also has important implications for children's peer relations. Parents who provided higher levels of scaffolding, guidance, and positive reinforcement of their children's emotionality had more socially competent young children compared to those parents who did not engage in these behaviors (Denham et al., 1997). Katz and Windecker-Nelson (2004) further demonstrated that among a group of preschool children with conduct problems, children whose mothers engaged in more emotion-coaching evidenced more peer play, less disconnected peer interaction, negative conversation, and negative emotions compared to children of mothers with less emotion coaching. These meta-emotion philosophies

may be particularly relevant among parents of young children who are still learning and developing emotion regulation and understanding capacities (Katz et al., 2012). Extant literature has examined the relation between parenting behaviors and responses to child emotion; however, Katz and colleagues (2012) commented that the examination of parent meta-emotion philosophy and its influence on parent responses to child behavior represents a gap in the literature.

Interventions for Meta-Emotion Philosophy

Havighurst and colleagues (2010) examined the effectiveness of an intervention designed to improve parental emotional socialization practices for their children among parents of 46- to 68-month-old preschool children. Preschools were randomly assigned to the intervention condition (30 preschools) or to a waitlist control group (31 preschools). The six-week program targeted improvement in the parent-child emotional connection as well as changes in parenting beliefs and behaviors. Facilitators taught parents the five steps of emotion coaching (Gottman & DeClaire, 1997), which include awareness of children's low-intensity emotions, thinking of children's emotional experiences as opportunities for teaching and intimacy, communicating acceptance and understanding of children's emotions, using words to help the children describe how they feel, and aiding children with problem-solving. The intervention emphasized parental awareness and accompanying physiological indicators of their own emotions and further encouraged parents to reflect on emotional experiences in their family of origin to determine precursors of their responses to emotional experiences. Activities, role plays, instructional materials, and psychoeducation were used through the course of the intervention. Slow breathing and relaxation techniques were further developed as strategies for coping with more intense negative emotions (Havighurst et al., 2010).

Questionnaires were administered at three time points: at pretest (Time 1), at posttest (Time 2), and 6 months after posttest (Time 3). Researchers completed in-home observations of parent-child emotion talk and parent emotion-coaching with a subsample (n = 161; 76 intervention) at Times 1 and 3. For parents, the *Difficulties in Emotional Regulation Scale* (DERS; Gratz & Roemer, 2004) assessed aspects of emotional awareness, expression, and regulation, including acceptance of emotions, capacity to employ goal-directed strategies when distressed, awareness and clarity of emotions, impulse control, and techniques for emotion regulation. A questionnaire adapted from the 14-item Maternal Emotional Style Questionnaire (MESQ; Lagacé-Séguin, & Coplan, 2005), which the researchers refer to as the *Parental Emotional Style Questionnaire* (PESQ), assessed parental coping with their child's emotions of sadness and anger as well as emotion-dismissing and emotion-coaching strategies. A new subscale of the PESQ was included in order to assess parental connection and empathy with their child. A parent-child story-telling task was coded to measure parent emotion socialization language and behavior (Havighurst et al., 2010).

Results indicated that parents who completed the intervention demonstrated a small but nonsignificant decline in self-reported emotional awareness and regulation at Time 2, with significant improvement at Time 3 for both of these dimensions. The waitlist control group did not show any significant differences across time points. Compared to the waitlist control group, parents in the intervention group reported less dismissive attitudes, more emotion coaching, and more empathy at Times 2 and 3. During the observation of the parent-child storytelling task, the parents in the intervention group used a greater number of emotion labels and exhibited a higher level of engagement in emotion exploration at Time 3. The efficacy of the *Tuning into Kids* intervention demonstrates the malleability of parental meta-emotion philosophy of a relatively

brief intervention that is designed to develop a parental meta-emotion philosophy that is more accepting of child emotions (Havighurst et al., 2010).

After establishing the efficacy of the *Tuning into Kids* intervention (Havighurst et al., 2010), Wilson and colleagues (2012) examined its effectiveness when implemented under real-world conditions. Community organization practitioners delivered the intervention during their daily activities. The study hypothesized that the parents participating in *Tuning into Kids* would exhibit higher levels of emotion coaching and lower levels of emotion dismissing compared to a control group. Participating preschools were randomly assigned to an intervention group (n = 15) or a waitlist control group (n = 10), and parents were assigned to the same condition of their child's preschool (intervention group = 62 parents).

Self-report measures included the Maternal Emotional Style Questionnaire (MESQ; Lagacé-Séguin & Coplan, 2005) to assess beliefs regarding children's anger and sadness and the Coping with Children's Negative Emotions Scale (CCNES; Fabes, Eisenberg, & Bernzweig, 1990) to assess emotion socialization practices using vignettes. Parents reported more general parenting practices (e.g., involvement, positive parenting, discipline) by completing the Alabama Parenting Questionnaire (APQ; Shelton, Frick, & Wootton, 1996).

Time x condition interactions were observed on a number of parent outcomes. Parents in the intervention group had significantly lower levels of emotion dismissing beliefs and practices and higher levels of emotion-coaching practices and positive parenting involvement compared to those parents in the waitlist control group. However, no significant differences were found between the groups with regard to emotion-coaching beliefs. Wilson and colleagues (2012) note that although the facilitators reported that parents experienced noticeable shifts in their attitudes toward emotion coaching, this difference was not reflected in the emotion-coaching belief scale.

Wilson and colleagues (2012) mentioned that they used an abbreviated version of the MESQ, excluding those items assessing worry. Another possible reason for the difference could be that the MESQ did not fit theoretically with the *Tuning into Kids* intervention, because some of the items focus on problem solving with children when they are emotional. Additionally, the *Tuning into Kids* intervention considers problem solving as emotion-dismissing if the children's emotions are not acknowledged first. The intervention teaches that problem solving is the final step and is not always necessary. Thus, the step in which parents problem solve is crucial in determining whether a response is emotion-dismissing, and the MESQ does not measure this, which may further explain the contrasting findings. In sum, these studies demonstrate the malleability of meta-emotion beliefs; however, these studies further show that an intervention that is effective at changing meta-emotion beliefs may or may not be successful at changing emotion-coaching behaviors (Havighurst et al., 2010; Wilson et al., 2012).

Attachment and Meta-Emotion Philosophy

Attachment classification is related to an individual's capacity to relate to others and cope with emotional or stressful events (Kobak & Sceery, 1988). According to Shaver and colleagues (1996), secure, anxious/ambivalent, and avoidant individuals use different affect regulation and emotion processing strategies. Kim (2005) found that securely attached individuals had higher scores on a global measure of emotional intelligence, whereas individuals with an anxious-ambivalent attachment scored lower on emotional intelligence. Kafetsios (2004) demonstrated that, specifically, secure attachment was positively related to three out of four dimensions of emotional intelligence, including facilitation, understanding, and management of emotion but not perception of emotion. Employing the meta-emotion interview, DeOliveira and colleagues (2005) demonstrated that secure mothers evidenced higher responsiveness to their children's fear

and sadness compared to dismissing mothers. Compared to secure mothers, unresolved mothers demonstrated significantly lower scores on responsiveness to their children's anger and sadness but not to fear (DeOliveira, Moran, & Pederson, 2005). In contrast to insecure adults, adults with a secure attachment demonstrated more constructive goals, adaptive responses, and positive affect in the context of an episode of anger (Mikulincer, 1998). Thus, an individual's attachment status has important implications for his or her emotional competencies.

SELF-AWARE Emotions Education Training

Previous work has focused on enhancing beneficial emotion-related beliefs among populations of parents, university students, and employees (Dacre Pool & Qualter, 2012a; Havighurst et al., 2010; Kirk et al., 2011). One population especially of interest may be teachers of young children because of the activation of strong emotions inherent in the teaching profession and the influence of teacher socioemotional competence on child development (Birch & Ladd, 1998; Hargreaves, 2000). Only two studies have examined the influence of an intervention on emotional self-efficacy beliefs (Dacre Pool & Qualter, 2012a; Kirk et al., 2011), and none have examined this construct among preservice teachers. Meta-emotion philosophies have been examined extensively in the parenting literature (Gottman et al., 1996); however, in spite of a call for examination of meta-emotions among teachers (Sutton & Wheatley, 2003), minimal attention has been given to meta-emotion philosophies among teachers and especially preservice teachers. This study examined the effects of an emotions education training on preservice teachers. Building upon previous evidence for the malleability of emotional self-efficacy and meta-emotion beliefs (Havighurst et al., 2010; Kirk et al., 2011; Wilson et al., 2012), this study examined whether the SELF-AWARE emotions education training was effective in influencing emotion-related beliefs among preservice teachers.

One purpose of the SELF-AWARE program was to promote emotional awareness and knowledge among preservice teachers with regard to the emotional events they will experience in the preschool classroom environment. This intervention was designed to improve the development of emotional literacy and awareness of physiological responses that accompany emotions and to improve teachers' awareness of strategies for managing their own emotional arousal effectively in the classroom. Enhanced emotional awareness and control are instrumental in developing self-efficacy beliefs and have been identified as antecedents of meta-emotion philosophies that are more oriented to emotion-coaching behavior (Bandura, 1997; Gottman et al., 1996). Therefore, we hypothesize that providing guidance on interpreting physiological responses in benign, constructive ways that support positive self-talk will enhance participants' perceptions of their own emotional self-efficacy and will be associated with more emotion-coaching-oriented beliefs.

SELF-AWARE was designed to enhance the effectiveness of teachers' behavioral responses (i.e., that positively support children's social-emotional learning) in response to preschool children's challenging or emotional behaviors. This objective was targeted in the training through discussion of the connections between children's behaviors, differences in teachers' possible emotional reactions, and differences in teachers' abilities to be aware of their own reactions and to regulate their own behavioral responses; and through activities that fostered students' knowledge of their emotional hot buttons. Real-time instruction of preservice teachers working four or more hours per week in the Early Learning Center (ELC) was provided by experienced head teachers who supervised them. Head teachers discussed and encouraged preservice teachers' capabilities to effectively respond to children and modeled appropriate responses to children's behaviors. We hypothesize that the preservice teachers' opportunities to

apply strategies from the SELF-AWARE program to their interactions with children, to receive positive feedback, and to observe modeled appropriate responses will all contribute to enhanced emotional self-efficacy beliefs among participants, since these experiences align with the sources of self-efficacy (Bandura, 1997). Through focus on self and social awareness skills and the benign interpretation of their own emotions in response to children's behavior and emotions, we hypothesize that this intervention will influence participants' meta-emotion beliefs.

Another key focus of the emotions education training is on emotional self-management. Training content included discussion of a variety of emotional self-regulation strategies for use in the immediate moment as well as strategies for strengthening one's abilities over time to tolerate and regulate increasing levels of emotional discomfort. Participants in the SELF-AWARE program observed head teachers in the ELC employ strategies to manage their own emotions in the context of emotional interactions with young children, these vicarious experiences would likely enhance their perceived efficacy in their own capabilities to manage emotions. By presenting strategies for emotion management and affirming participants' responsibility and capability to do so, the SELF-AWARE program further provided participants instances of verbal persuasion, another source of self-efficacy (Bandura, 1997), which, in turn, may enhance emotional self-efficacy. Certain emotional states are more amenable to positive estimations of one's own self-efficacy. The SELF-AWARE program promotes strategies for managing emotions and further for generating emotions to complete a goal. Thus, by emphasizing one's own control over emotional experiences, the SELF-AWARE program may further enhance participants' estimations of emotional self-efficacy.

Control variables. Because attachment has been shown to influence the development of emotion-related competencies (e.g., Shaver et al., 1996), it was used as a control variable.

Attachment status may influence individuals' interpretations of emotional experiences; for instance, avoidant individuals may negate the subjective experience of anger while experiencing the physiological indicators of anger (Mikulincer, 1998). Conversely, securely attached individuals are more aware of and comfortable with their emotional experiences (Keiley, 2002). Since acknowledgement and understanding of emotional experiences are important aspects of this emotions education training, an individuals' attachment status may influence the extent to which aspects of the intervention may be effective.

Depressive symptomatology (e.g., negative mood, low energy, withdrawal) seems inconsistent with positive and responsive behavior in the context of adult-child interactions (Dix & Meunier, 2009). Depressed mothers have been shown to be negative, unresponsive, intrusive, and harsh (Lovejoy, Graczyk, O'Hare, & Neuman, 2000). Depressive symptomology is associated with biased encoding and negative appraisals of the self and others (Beck, 1967; Beck, 1976; Bieling & Segal, 2004) and enhanced negative causal attributions (Abramson, Seligman, & Teasdale, 1978; Alloy, 1988). Depression is also related to lower estimations of self-efficacy (Dix & Meunier, 2009). Because depression has the tendency to undermine social problem solving, which is an important component of emotion-coaching beliefs and behaviors, it may be the case that depression negatively influences the effectiveness of emotions education training. Furthermore, because depression has been shown to impede the effectiveness of child management training interventions for parents (Maliken & Katz, 2013), it may attenuate the effects of the SELF-AWARE intervention. Thus, depression was statistically controlled in analyses.

A final control variable, dosage (i.e., number of sessions attended), was used because of differing training attendance rates by treatment group participants.

Research Questions and Hypotheses

The following research questions and hypotheses will be examined:

RQ: Does SELF-AWARE influence emotion-related beliefs?

H1: Greater positive differences in emotional self-efficacy will be observed among a treatment group that completed the SELF-AWARE training compared to controls.

H2: Greater positive differences in meta-emotion philosophies will be observed among a treatment group that completed the SELF-AWARE training compared to controls.

H3: Greater positive differences in emotion-coaching behaviors will be observed among a treatment group that completed the SELF-AWARE coaching behaviors compared to controls.

H4: No significant differences over time on emotional self-efficacy or meta-emotion philosophy will be observed for controls.

H5: No significant differences over time on emotion-coaching behaviors will be observed for controls.

Method

Participants

Participants were recruited from classes in the Human Development and Family Studies Department (HDFS) and the Early Learning Center (ELC) at a large Southeastern university. The Treatment Group consisted of those students who participated in the emotions education training and who were working at the ELC under the supervision of a head teacher. Two control groups were recruited consisting of either (1) HDFS students in a human sexuality course who were not working in the ELC in the current semester (HDFS Control Group) or (2) students working in the ELC who did not participate in the emotions education training (ELC Control Group). The HDFS Control Group served as the comparison group on self-report measures; the ELC Control Group served as the comparison group on the observational measure.

Three participants originally categorized in the HDFS Control Group and 1 participant originally categorized in the ELC Control Group reported previous enrollment in HDFS 3460, the course in which the emotions education training was administered. Given the similarities in the HDFS 3460 across semesters, these participants who had previously been enrolled in the HDFS 3460 course were classified in and subsequently analyzed with the Treatment Group. Additionally, a subset of the ELC Control Group completed matching pretest-posttest self-report questionnaires (n = 2). Due to the small number of participants with completed questionnaires, these participants were classified and analyzed as part of the ELC Control Group. There were no significant differences on emotion-coaching behaviors at pretest and posttest between those

participants with completed self-report questionnaires and the participants in the ELC Control Group with just observational data.

For self-report assessments, 28 participants in the Treatment Group completed the pretest assessment, and 26 completed a matching self-report posttest assessment. Forty-four participants in the HDFS Control condition completed a pretest assessment; 34 had matching pretest and posttest assessments. In total, 60 participants (98% female; 92% Caucasian) completed matching pretest-posttest, self-report assessments; participants were on average 22 years of age (*SD* = 3.39) and had an average GPA of 3.15 (*SD* = .45; see Table 1). Fifty-eight percent were majoring in HDFS, and 12% reported having previous experience working in the Early Learning Center.

Participants (100% female; 96% Caucasian) in the Treatment Group ranged in age from 20 to 44 years (*M* = 22.44; *SD* = 4.71; see Table 2). Participants' grade point average ranged from 2.25 to 3.92, with an average participant grade point average of 3.06 (*SD* = .46). Eighty-nine percent were majoring in Human Development and Family Studies, and approximately one-third (31%) had previous experience working in the Early Learning Center. Participants in the HDFS Control Group (97% female; 88% Caucasian) ranged in age from 19 to 25 years (*M* = 20.77; *SD* = 1.31; see Table 2). Participant GPA ranged from 2.35 to 3.98 (*M* = 3.23; *SD* = .43). Thirty-five percent were majoring in Human Development and Family Studies, and 65% were majoring in another degree program.

Behavioral measures were available for a subsample of the Treatment Group and the ELC Control Group. Eighteen participants in the Treatment Group had matching pretest and posttest behavioral assessments; 18 participants in the ELC control group had matching pretest and posttest assessments. No data on demographic or key study variables were available for the ELC Control Group.

Procedures

This study was a non-randomized, quasiexperimental, treatment versus control, pre-post design. Treatment Group participants were recruited from three HDFS classes. Students in these classes worked in the ELC and were given the opportunity to participate in the emotions education training taught as part of HDFS 3460 (Effective Guidance of Young Children). HDFS Control Group participants were recruited from a fourth HDFS course (HDFS 3040: Human Sexuality over the Life Span), selected because its subject matter was unlikely to attract students whose area of specialization was early childhood.

Prior to completion of the study, the principal investigator verbally reviewed the consenting process, informing participants of the potential benefits and the potential risks of the study. Participants were informed that their participation was voluntary at all times, that they could leave any questions that made them feel uncomfortable blank, and that they could choose to end their participation at any time and for any reason without penalty. Participants were assured that their responses would be kept confidential by using their University student IDs rather than their names. Graduate students handled the informed consents and survey responses in order to ensure that the participants' professor and their ELC head teachers would be blind to which students were participating in the study. Participants provided their University ID numbers in order to match self-report with observational data; however, upon entering the data, all IDs were removed, and the data were analyzed anonymously. In order to ensure that the participants would remain anonymous, those students who chose to participate as well as those who declined to participate were asked to place the informed consent into an envelope (either signed or designated "Not participating"). Participants were further assured that their decision to participate in the study would in no way adversely affect their grades nor their ability to access

resources associated with the College of Human Sciences. During the course of the study, email messages were sent through Qualtrics in such a way that participant names were not visible.

Before beginning the emotions education curriculum, participants in the Treatment Group received an email link to a survey to complete baseline measures. Participants worked in the ELC lab 4 hours/week; from their time in the lab, ELC head teachers rated participants' emotion-coaching behaviors. ELC head teachers who supervised the participants working in the ELC lab completed an assessment of the participants' emotion-coaching behaviors prior to the beginning of the emotions education training. Approximately six weeks after the completion of the emotions education training, participants were sent another email link to a survey of posttest questionnaires, and ELC head teachers completed a posttest assessment of participants' emotion-related behaviors in the lab. Upon completion of the study, participants in the Treatment Group were compensated with extra credit points, determined by each instructor, worth up to 2% of the course's total number of points and a $20 iTunes gift card.

HDFS Control Group participants received an email link to the survey to complete the pretest measures the same week as those in the Treatment Group. HDFS Control Group participants received a second survey link to posttest measures six weeks later, the same week as the Treatment Group. Upon completion of the study, participants in the HDFS Control Group were compensated with extra credit points, determined by each instructor, worth up to 2% of the course's total number of points and a $20 iTunes gift card.

The emotions education training, entitled SELF-AWARE, consisted of 6 50-minute sessions, containing instructional material—supplemented by small and large group discussions and reflective exercises—aimed at enhancing emotion recognition, understanding, awareness, and management. The activities of the SELF-AWARE program enable participants to practice

and build these competencies. For instance, one activity emphasized identification of high-intensity emotions and ways in which to manage them. Participants completed an emotional literacy activity in which they listed words they knew to identify emotional states. The training encouraged further development of their emotional vocabulary with an eye toward increasing awareness of emotions at lower intensity, a time when they are more easily adjusted or transformed. The SELF-AWARE program contained an activity that helped participants identify their own meta-emotion philosophy, especially in the context of interactions with young children. Participants further viewed an instructional video on emotion-coaching, and the facilitator discussed the five steps of emotion coaching (Gottman & DeClaire, 1997), with the expectation that an enhanced awareness of one's own meta-emotion philosophies and the explicit use of emotion-coaching behaviors may lead to more emotion-coaching attitudes and fewer emotion-dismissing attitudes. In addition to exposure to training content and activities, participants received feedback from head teachers in the ELC.

Measures

Treatment Condition. Treatment condition was a dichotomous variable, with "0" indicating the control group and "1" denoting the treatment group. Treatment was used as a predictor variable in analyses.

Emotional Self-Efficacy. The Emotional Self-Efficacy Scale (ESE; Kirk, Schutte, & Hine, 2008) is a 32-item, self-report questionnaire that measures the extent to which participants are confident about their emotional capabilities and their capabilities to recognize, identify, and understand others' emotional states. Participants rated their confidence on a 5-point Likert scale from 1 (*not at all confident*) to 5 (*very confident*). The scale included eight items about understanding one's own and others' emotions (e.g., "Understand what causes your emotions to

change"), seven items about perceiving one's own and others' emotions (e.g., "Correctly identify when another person is feeling a negative emotion"), eight items about facilitating emotions (e.g., "Create a positive emotion when feeling a negative emotion"), and nine items about regulating one's own emotions and helping to regulate others' emotions (e.g., "Calm down when feeling angry"). The items were averaged to create a total score, with higher scores indicating higher levels of emotional self-efficacy. In this study, this measure demonstrated good alpha reliability (α = .93, .94 at pretest and posttest respectively). Pretest scores were used as predictors; posttest scores were used as outcomes.

Regulatory Emotional Self-Efficacy. The Regulatory Emotional Self-Efficacy Scale (RESE; Caprara, Di Gunta, Eisenberg, Gerbino, Pastorelli, & Tramontano, 2008) is a 12-item, self-report questionnaire that measures perceived self-efficacy in one's own ability to manage negative emotions and express positive emotions. Participants rated these items on a 5-point, Likert-type scale from 1 (*not well*) to 5 (*very well*). Four items measured emotional self-efficacy regarding positive emotions (e.g., "How well can you express joy when good things happen to you?"), and eight items assessed emotional self-efficacy regarding negative emotions. Two subscales made up the negative emotion scale; four items assessed one's emotional self-efficacy related to managing despondency and distress (e.g., "How well can you keep from getting dejected when you are lonely?"), and four items assessed perceived emotional self-efficacy related to managing anger and irritation (e.g., "How well can you avoid flying off the handle when you get angry?"). The items for each subscale were averaged to create separate scores for efficacy in managing positive emotions, anger, and distress, with higher scores indicating higher levels of emotional self-efficacy. In this study, reliability ranged from moderate to good (α = .60, .84, .80, for despondency/distress, positive, and anger/irritation) at pretest and was

acceptable at posttest (α = .79, .83, .74 for despondency/distress, positive, and anger/irritation respectively). Pretest scores for each subscale were used as predictors; posttest scores for each subscale were used as outcomes.

Meta-Emotion Philosophy. The Maternal Emotional Style questionnaire (MESQ; Lagacé-Séguin & Coplan, 2005) assessed participant meta-emotion philosophy. The 14-item, self-report questionnaire measures emotional style, or whether an individual takes an emotion-coaching or emotion-dismissing approach to children's emotions. Participants rated the extent with which they agree with each statement on a 5-point, Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Seven items measured emotion-dismissing philosophy (e.g., "Sadness is something that one has to get over, to ride out, not to dwell on"), and seven items assessed emotion-coaching philosophy (e.g., "When a child is sad, it is time to get close"). Items for each subscale were averaged separately, higher scores indicating higher levels of emotion-coaching meta-emotion philosophy or emotion-dismissing meta-emotion philosophy respectively. In this study, reliability was moderate at pretest (α = .68 and .60 for the emotion-coaching and emotion-dismissing subscales respectively) and acceptable (α = .74, .70) at posttest. Pretest scores for each subscale were used as predictors; posttest scores for each subscale were used as outcomes.

Emotion-Coaching Behaviors. Four items from the 15-item Assessment of Emotion-Related Social Behaviors, adapted from questions posed by Kremenitzer (2009), assessed participants' emotion-coaching behaviors in their interactions with young children at the ELC. Each head teacher rated the preservice teachers they worked with on a 6-point, Likert-type scale from 0 (*cannot assess*) to 5 (*very well developed).* Items included "In response to a child's emotions, uses a calm, positive, warm tone of voice," "In response to a child's emotions, uses

appropriate words that reflect the child's feelings," "In response to a child's emotions, avoids using power (e.g., greater strength, size, psychological control) to pressure the child to feel or display feelings differently," and "In response to a child's emotions, shows empathy and attunement to the child's needs." If head teachers did not think they had adequate information to assess the preservice teacher's behavior, they rated that item as a "0." The mean of all non-zero items were calculated with higher means indicating more emotion-coaching behaviors. This measure demonstrated good reliability at both pretest ($\alpha = .84$) and posttest ($\alpha = .85$). Pretest scores were used as predictors; posttest scores were used as outcomes.

Demographic and Control Variables. Information was gathered about participants' age, sex, race, major, grade point average (GPA), previous exposure to emotions education, and previous experience working with young children in order to characterize participants in the Treatment and HDFS Control Groups and examine any potential relationships with outcome variables. Participants reported their age as a continuous variable. Participants indicated their race by choosing one of the following six options: (a) White or Caucasian, (b) Black or African-American, (c) Hispanic or Latino, (d) Asian or Pacific Islander, (e) American Indian or Pacific Islander, or (f) Other.

Attachment Security. The parent subscale of the Inventory of Parent and Peer Attachment (IPPA; Armsden and Greenberg, 1987) is a 28-item, self-report questionnaire that was used to assess attachment security. Participants rated the extent to which they agreed with each statement (e.g., "My parents respect my feelings") on a scale from 1 (*never true*) to 5 (*always true*). The measure is comprised of three subscales: trust (e.g., "I feel my parents are successful as parents"), communication (e.g., "I like to get my parents' point of view on things I'm concerned about"), and alienation (e.g., "Talking over my problems with my parents makes

me feel ashamed or foolish"). In accordance with Armsden and Greenberg's (1987) instructions, negatively-worded items were reverse-coded; in total, 5 out of 28 items were reverse-coded. Scores for each subscale were calculated by averaging the completed items from that subscale. The total score was calculated by summing the means of the trust and communication subscales and subtracting the mean alienation subscale score, with higher scores indicating a more secure attachment. The calculated total score had a possible minimum of -3 and maximum of 9. In this study, this measure demonstrated good reliability (α = .93, .94, and .91 for the trust, communication, and alienation subscales respectively).

Depressive Symptoms. The Major Depression Inventory (Olsen, Jensen, Noerholm, Martiny, & Bech, 2003) is a 10-item scale used to measure depressive symptomatology. One item, "How much of the time have you felt that life was not worth living?" was excluded upon request of the Internal Review Board. Participants rated items such as "How much of the time have you felt in low spirits or sad?" on a 6-point, Likert-type scale from 0 (*at no time*) to 5 (*all of the time*). In accordance with the instructions, for two sets of items, the higher score was used and the lower score excluded. For instance, two items assessed activity (e.g., "Have you felt very restless?" "Have you felt subdued?"); the higher score of these items was used in analyses. Two items assessed appetite (e.g., "Have you suffered from reduced appetite?" "Have you suffered from increased appetite?"); the item with the higher score was used in analyses. Item scores were averaged to calculate a total score, with higher scores representing higher levels of depressive symptoms. In this study, this measure demonstrated good reliability (α = .90, .89 at pretest and posttest respectively).

Plan of Analysis

The purpose of this study was to determine whether an emotions education training was effective in improving participants' emotional self-efficacy, meta-emotion philosophy, and emotion-coaching behaviors compared to a control group. First, univariate analyses were conducted, including descriptive statistics (e.g., means, standard deviations) in order to characterize the sample and examine the variability and normality of variable distributions. Bivariate correlations were conducted and scatterplots were plotted in order to examine preliminary associations among variables of interest.

Differences in the key study variables across time were examined by conducting paired-sample t-tests for Time 1 and Time 2 in order to determine whether there were significant differences across time for the treatment and control groups respectively. Independent sample t-tests were run to determine if there were significant differences on each key study variable between the treatment and control group at Time 1. Independent sample t-tests were completed to examine whether there were significant differences on each key study variable between the treatment and control groups at Time 2.

Regression analyses were used to examine the hypotheses. Transformations were conducted among those variables with high kurtosis values (i.e., RESE positive score at pretest, MDI); both of these variables were squared for all analyses. Residuals were examined to ensure that no assumptions of linear regression are violated. Variable transformations were performed for those variables for which residuals were nonnormally distributed. Pretest scores for the key study variables were used as predictors for the regression analyses, including emotional self-efficacy (i.e., ESE; positive, anger/irritation, and despondency/distress subscales of the RESE), meta-emotion philosophy (i.e., emotion-dismissing and emotion-coaching subscales of the

MESQ), and Emotion-Coaching Behavior Scale. In Model 1, the key study variable's Time 1 score was entered, and in Model II, treatment condition was added. In Model III, the control variables were added, and the interaction term for time by condition was entered in Model IV.

Results

Missing Data

In order to reduce missing data, the mean of each scale or subscale was calculated for the number of items that participants had completed. Means of key study variables were subsequently used in the analyses. Person mean substitution was also used in order to calculate alpha reliabilities.

Only those participants with matching pretest-posttest assessments were included in the analyses. A series of independent t-tests were conducted in order to examine differences between those participants who completed both assessments and those who had incomplete data. For the Treatment Group, those with incomplete data reported significantly lower levels of emotion-coaching attitudes at pretest (p = .05). Examination of differences between participants in the HDFS Control Group with complete and incomplete data indicated that there were no significant differences between those who had completed both assessments and those participants who had not. There were no significant differences for those participants with and without complete data on the observational assessment among either the Treatment or ELC Control Groups.

Descriptives

After completing person mean substitution for key study variables, descriptive statistics, including the mean, standard deviation, median, minimum, maximum, and skewness statistics were examined (see Table 3). On average, participants in the full sample reported that they were

"fairly confident" at both pretest and posttest ($M_{pretest}$ = 3.68; $M_{posttest}$ = 3.85) in their general emotional self-efficacy, as assessed by the ESES. When asked to rate their emotional self-efficacy with regard to positive emotions, as assessed by the RESE, participants responded they were able to manage these experiences "fairly well" on average at both pretest and posttest ($M_{pretest}$ = 4.43; $M_{posttest}$ = 4.26). Participants rated their capabilities to manage anger/irritation ($M_{pretest}$ = 3.31; $M_{posttest}$ = 3.43) and despondency/distress ($M_{pretest}$ = 3.26; $M_{posttest}$ = 3.38) as "neutral" on average at both time points. At both time points, participants on average responded that they "agreed" with emotion-coaching attitudes ($M_{pretest}$ = 3.75; $M_{posttest}$ = 3.63), and they rated their level of agreement with emotion-dismissing attitudes as "neutral" ($M_{pretest}$ = 3.36; $M_{posttest}$ = 3.11). Participants on average reported that they experienced depressive symptoms "some of the time" ($M_{pretest}$ = 2.36; $M_{posttest}$ =2.38) at both pretest and posttest. Participants responded that they were relatively securely attached (M = 5.81). For the full sample, age was positively skewed; all other skewness statistics were within an acceptable range between 2 and -2.

On average, participants in the Treatment Group with matching pretest-posttest self-report assessments rated that they were "fairly confident" ($M_{pretest}$ = 3.59; $M_{posttest}$ = 3.99) in their general emotional self-efficacy at both pretest and posttest (see Table 4). The Treatment Group reported that they managed their positive emotional experiences ($M_{pretest}$ = 4.45; $M_{posttest}$ = 4.38) and anger/irritation ($M_{pretest}$ = 3.69; $M_{posttest}$ = 3.71) "fairly well" at both pretest and posttest. With regard to managing despondency/distress, participants reported that they were "neutral" at pretest (M = 3.49) and that they managed despondency/distress "fairly well" at posttest (M = 3.60). At both time points, participants rated that they "agreed" with emotion-coaching attitudes ($M_{pretest}$ = 3.82; $M_{posttest}$ = 3.82) and reported that they were "neutral" with regard to emotion-

dismissing attitudes ($M_{pretest}$ = 3.33; $M_{posttest}$ = 2.97) on average. Participants in the Treatment Group reported that they experienced depressive symptoms "some of the time" on average at both time points ($M_{pretest}$ = 2.30; $M_{posttest}$ = 2.14). Participants in this group were midrange with regard to attachment (M = 5.34). Participants in the Treatment Group attended an average of 4 out of 6 sessions of the emotions education training (M = 4.46); attendance ranged from 0 to 6 sessions. For the Treatment Group, age was positively skewed; skewness statistics for all other key study variables were within the acceptable range between -2 and 2.

On average, participants in the HDFS Control Group reported that they were "fairly confident" with regard to their general emotional self-efficacy at both pretest and posttest ($M_{pretest}$ = 3.75; $M_{posttest}$ = 3.74; see Table 4). At both time points, participants reported that they rated their perceived capabilities of managing positive emotions as "fairly well" ($M_{pretest}$ = 4.41; $M_{posttest}$ = 4.18) and their capabilities to manage anger/irritation ($M_{pretest}$ = 3.02; $M_{posttest}$ = 3.21) and despondency/distress ($M_{pretest}$ = 3.08; $M_{posttest}$ = 3.21) as "neutral" at both time points. On average, participants "agreed" with emotion-coaching attitudes at pretest ($M_{pretest}$ = 3.70) and were "neutral" with regard to emotion-coaching attitudes at posttest (M = 3.49). Participants reported that they were "neutral" with regard to emotion-dismissing attitudes at both time points ($M_{pretest}$ = 3.38; $M_{posttest}$ = 3.21). Participants reported that they experienced depressive symptoms "some of the time" at pretest (M = 2.41) and "slightly less than half the time" at posttest (M = 2.57). On average, participants were relatively securely attached (M = 6.17). All demographic and key study variables had skewness statistics between -2 and 2, which is considered an acceptable range.

Means Comparison

Separate paired-sample means t-tests were conducted for the Treatment and HDFS Control Groups in order to examine differences across time (see Table 5). Paired-sample means t-tests indicated that participants in the Treatment Group reported significantly higher levels of general emotional self-efficacy at posttest compared to pretest (t = -3.10; $p < .01$). Participants in the Treatment Group further reported significantly lower levels of emotion-dismissing attitudes at posttest compared to pretest (t = 3.43; $p < .01$). No significant differences were found for emotional self-efficacy with regard to positive emotions, anger/irritation, or despondency/distress, emotion-coaching attitudes, or depressive symptoms. The HDFS Control Group reported significantly lower levels of emotional self-efficacy with regard to positive emotions (t = 2.49; $p < .01$), significantly lower levels of emotion-coaching attitudes (t = 2.24; p < .05), and significantly lower emotion-dismissing attitudes (t = 1.91; p < .05) at posttest compared to pretest.

Independent sample t-tests were conducted to examine differences between the Treatment Group and HDFS Control Group on demographic and key study variables (see Table 6). The Treatment Group was significantly older than the HDFS Control Group at pretest (t = -1.87; $p < .05$). The Treatment Group reported significantly higher levels of emotional self-efficacy with regard to anger/irritation (t = -3.06; $p < .01$) and despondency/distress (t = -2.27; $p < .05$) at pretest. At posttest, the Treatment Group reported significantly higher levels of general emotional self-efficacy (t = -2.02; $p < .05$) and emotional self-efficacy with regard to anger/irritation (t = -2.60; $p < .01$) and despondency/distress (t = -1.96; $p < .05$). The Treatment Group further reported significantly higher emotion-coaching attitudes (t = -2.48; $p < .01$) compared to the HDFS Control Group. The Treatment Group reported significantly lower levels

of emotion-dismissing attitudes ($t = 1.66$; $p = .05$). These differences were in the expected directions.

For the Treatment Group, independent sample t-tests were conducted in order to examine whether there were differences between those participants who had attended 0-3 sessions of the emotions education training and those participants who attended 4-6 sessions. Independent t-tests were conducted for those participants who completed 0-3 sessions versus those who completed 4-6, including those who had taken HDFS 3460 in a previous semester delineated as "0 sessions" (n = 26). Those who completed 4-6 sessions had significantly lower levels of emotion-dismissing attitudes at posttest ($t = 2.79$; $p < .01$) compared to those who completed 0-3 sessions. This difference was in the expected direction.

Because of the large percentage of participants in the HDFS Control Group majoring in HDFS, independent sample t-tests were conducted to examine differences between HDFS and non-HDFS majors. There were no significant differences between HDFS majors and non-HDFS majors on any demographic or key study variables.

Bivariate Analyses

Correlations were examined among the key study variables (see Table 7). Several variables were correlated with treatment condition. Treatment condition was weakly, positively, and significantly correlated with emotional self-efficacy regarding anger/irritation ($r = .37$; $p < .01$) and despondency/distress at pretest ($r = .29$; $p < .05$), such that being in the Treatment Group was associated with higher scores on these measures. At posttest, treatment was weakly, positively, and significantly correlated with general emotional self-efficacy (ESES) ($r = .26$; $p < .05$). Treatment condition was weakly, positively, and significantly associated with

anger/irritation emotional self-efficacy ($r = .32$; $p < .01$) and despondency/distress emotional self-efficacy ($r = .25$; $p < .05$) at posttest. Treatment condition was significantly, positively, and weakly associated with emotion-coaching ($r = .31$; $p < .01$) at posttest. At posttest, treatment was negatively, weakly, and significantly associated with emotion-dismissing attitudes ($r = -.21$; $p = .05$) and depressive symptoms ($r = -.26$; $p < .05$). These associations were in the expected directions.

In the full sample, dosage was associated with a number of key study variables. Dosage was positively, weakly, and significantly correlated with general emotional self-efficacy at posttest ($r = .21$; $p = .05$). At posttest, dosage was weakly, positively, and significantly associated with emotional self-efficacy for anger/irritation ($r = .27$; $p < .05$) and despondency/distress ($r = .26$; $p < .05$) and with emotion-coaching attitudes ($r = .31$; $p < .01$), such that attendance at more sessions was associated with higher scores. Dosage was weakly, negatively, and significantly associated with emotion-dismissing attitudes ($r = -.39$; $p < .01$) and depressive symptoms ($r = -.31$; $p < .01$) at posttest. For the Treatment Group, dosage was associated with key study variables. Dosage was moderately, negatively, and significantly associated with emotion-dismissing attitudes at posttest ($r = -.52$; $p < .01$). Dosage was weakly, negatively, and significantly associated with depressive symptoms at posttest ($r = -.33$; $p < .05$). These associations were in the expected directions.

Examination of Study Hypotheses

The first hypothesis stated that those participants in the Treatment Group would have higher general emotional self-efficacy (ESES) compared to the HDFS Control Group. In order to examine this hypothesis, a multiple regression analysis was performed (see Table 8). In Model I,

pretest score for general emotional self-efficacy was entered, and in step 2, treatment condition was entered. In Model III, the control variables (i.e., depression, attachment, dosage) were entered, and in Model IV, the interaction term for time by condition was entered. In Model I, pretest score significantly predicted score at posttest (β = .28; *SE* = .12; $p < .05$). In Model II, pretest scores were significantly associated with posttest scores (β = .33; *SE* = .12; $p < .01$) and receiving treatment was significantly associated with higher posttest scores (β = .31; *SE* = .12; $p < .05$). In Model III, only pretest scores were significantly associated with posttest scores (β = .31; *SE* = .12; $p < .05$). In Model IV, pretest scores were significantly associated with posttest scores (β = .64; *SE* = .20; $p < .01$) and receiving treatment was significantly associated with higher posttest scores (β = 2.10; *SE* = .96; $p < .05$). The interaction term of time by condition approached significance (β = -1.78; *SE* = .25; $p = .06$). Model II best predicted ESES scores at posttest ($R^2 = .173$; $\Delta R^2 = .093$; $p < .05$). The hypothesis that the emotions education training would be significantly associated with higher estimations of general emotional self-efficacy (ESES) at posttest was supported.

For examination of the hypothesis that an emotions education training would be significantly related to higher scores on emotional self-efficacy regarding positive emotional experiences, a series of multiple regression analyses were performed (see Table 9). Upon examination of the residuals, the Shapiro-Wilk test indicated that the residuals were not normally distributed for the predictors; thus, variable transformations were performed. After variable transformations were performed, the residuals still violated the assumption of normality. Data were examined without the presence of an outlier, which was 4 standard deviations below the mean; the residuals still did not have a normal distribution, even after transformations were performed without the presence of this outlier. Transformations were performed on the outcome

and predictors, but the issue of normality was not solved. The results presented are for the full sample (n = 60) with RESE positive pretest score and MDI transformed (i.e., squared); it should be noted that these models violate the assumption of normality and thus these results should be interpreted with caution.

For emotional self-efficacy regarding positive emotional experiences (i.e., positive subscale of the RESE), the pretest score was entered in Model I, and condition was entered in Model II. In Models III and IV, control variables and the time by condition interaction term were entered respectively. In Model I, pretest score was significantly associated with posttest score (β = .54; SE = .00; p < .05). Pretest score was the only significant predictor in Model II (β = .55; SE = .00; p < .05) and Model III (β = .54; SE = .00; p < .05). No other variables in these models were significant, and the variables entered in Models II and III did not account for a significant amount of variance in posttest score. No variables were significant in Model IV. Thus, the hypothesis that attending the emotions education training would be significantly associated with higher estimations of emotional self-efficacy with regard to positive emotional experiences was not supported.

In order to examine the hypothesis of whether emotions education training significantly predicted emotional self-efficacy for anger/irritation, multiple regression analyses were performed (see Table 10). In Model I, pretest score was entered, and in Model II, treatment condition was added. In Model III, control variables were entered, and in Model IV, the time by condition interaction term was added. Model I was significant, with pretest score significantly predicting posttest score (β = .66; SE = .09; p < .001). Pretest score remained the only significant predictor in Model II (β = .63; SE = .09; p < .001), Model III (β = .64; SE = .10; p < .001), and

Model IV (β = .65; *SE* = .12; $p < .001$). The variables entered in Models II, III, and IV did not account for a significant amount of variance in posttest score. Thus, the hypothesis that emotions education training would be significantly associated with higher levels of emotional self-efficacy for anger/irritation was not supported.

The hypothesis that receiving an emotions education training would be associated with higher posttest scores on emotional self-efficacy for despondency/distress was examined by performing multiple regression analyses (see Table 11). In Model I, pretest score was entered, and in Model II, treatment condition was added. Control variables were added in Model III, and the interaction term for time by condition was entered in Model IV. Pretest score was significantly associated with posttest score in Model I (β = .46; *SE* =.13; $p < .001$), Model II (β = .43; *SE* = .13; $p < .001$), Model III (β = .43; *SE* = .14; $p < .001$), and Model IV (β = .56; *SE* = .18; $p < .01$). No other variables in these models were significant. The variables entered in Models II, III, and IV did not account for a significant amount of variance in posttest score. Thus, the hypothesis that an emotions education training would be related to higher estimations of emotional self-efficacy regarding despondency/distress was not supported.

The hypothesis that emotions education training would be significantly associated with higher levels of emotion-coaching attitudes at posttest was examined by entering the pretest score in Model I and treatment condition in Model II. In Model III, control variables were added, and in Model IV, the interaction term for time by condition was entered (see Table 12). In Model I, pretest score was significantly associated with posttest score (β = .47; *SE* = .13; $p < .001$). In Model II, pretest score was significant (β = .43; *SE* = .13; $p < .001$) and treatment condition was significant (β = .25; *SE* =.12; $p < .05$), such that receiving treatment was significantly associated

with higher posttest scores for emotion-coaching attitudes. In Model III, pretest score was significant (β = .45; *SE* = .14; p < .001), and in Model IV, pretest score (β = .46; *SE* = .18; *p* < .01) was significant. The variables in Models III and IV did not account for a significant amount of variance in posttest score. The variables entered in Model II did account for a significant amount of variance in posttest score (R^2 = .280; ΔR^2 =.061; *p* < .05). Thus, controlling for pretest scores, there was a significant treatment effect such that the emotions education training was significantly associated with higher levels of emotion-coaching attitudes at posttest. The hypothesis was supported.

The hypothesis that emotions education training would be significantly associated with lower levels of emotion-dismissing attitudes was examined by performing multiple regression analyses (see Table 13). In Model I, pretest score was entered, and treatment condition was added in Model II. Control variables were added in Model III, and the interaction term for time by condition was entered in Model IV. In Model I, pretest score was significantly associated with posttest score (β = .49; *SE* = .14; *p* < .001). Pretest score was also the only variable that was significant in Model II (β = .48; *SE* = .14; *p* < .001). In Model III, pretest score was significantly associated with posttest score (β = .41; *SE* = .14; *p* < .001), and dosage was significantly associated with posttest score, such that higher levels of dosage were significantly associated with lower levels of emotion-dismissing attitudes at posttest (β = -.58; *SE* = .05; *p* < .01). In Model IV, pretest scores approached significance (β = .30; SE = .19; p < .10) and dosage (β = -.52; *SE* = .05; *p* < .05) was significant. A significant amount of the variance in posttest score was not accounted for by Model III (R^2 = .361; ΔR^2 = .088; *p* < .10) or Model IV (R^2 = .375; ΔR^2 = .014; *ns*). Only Model I did significantly accounted for variance in the posttest score (R^2 = .238; ΔR^2 = .238; *p* < .001); thus, the hypothesis was not supported.

Observational Measure

On average, for the full sample of participants with matching pretest-posttest observational assessments, head teachers rated emotion-coaching behaviors as "beginning to develop" (2.48) at pretest and "developing" (3.32) at posttest. Skewness statistics were between -2 and 2 and were considered acceptable. Head teachers reported that the Treatment Group was "beginning to develop" (M = 2.30) and "developing" (M = 3.07) at posttest. For the ELC Control Group, head teachers rated participants as "developing" (M = 2.66) at pretest and "fairly well developed" (M = 3.57) at posttest.

Paired sample means tests indicated that participants in the Treatment subsample were rated significantly higher on their emotion-coaching behaviors at posttest compared to pretest (t = -5.05; $p < .001$; see Table 14). Participants in the ELC Control Group were also rated significantly higher on their emotion-coaching behaviors at posttest compared to pretest (t = -6.34; $p < .001$). Independent sample means tests indicated that there were no significant differences between the two groups at pretest (see Table 15). At posttest, the ELC Control Group was rated significantly higher on emotion-coaching behaviors compared to the Treatment subsample (t = 2.14; $p < .05$).

Observation

In order to examine whether the emotions education training was effective in enhancing emotion-coaching behaviors, multiple regression analyses were used (see Table 16). The pretest score was entered in Model I, and treatment condition was added in Model II. In Model III, dosage was entered as a control variable, and in Model IV, the time by condition interaction term was added. In Model I, pretest score was significantly associated with posttest score (β = .61; *SE*

= .15; $p < .001$). Pretest score was the only variable that was significant in Model II (β = .55; *SE* = .15; $p < .001$). In Model III, pretest score was reached marginal significance (β = .55; *SE* = .15; $p < .001$). In Model IV, no variables entered were significant, although pretest score approached significance (β = .88; *SE* = .56; $p < .10$). The hypothesis that an emotions education training would be related to significantly more emotion-coaching behaviors was not supported.

Discussion

The purpose of this study was to evaluate whether the SELF-AWARE program was effective in improving general emotional self-efficacy and emotion-specific emotional self-efficacy (i.e., positive emotions, anger/irritation, despondency/distress). This study also examined whether the SELF-AWARE program was effective in enhancing emotion-coaching attitudes and emotion-coaching behaviors and reducing emotion-dismissing attitudes. Results indicated that participants who attended the SELF-AWARE program reported greater general emotional self-efficacy and approved more of emotion coaching at posttest. This study did not support the hypotheses that the SELF-AWARE program would influence emotional self-efficacy for specific emotions (i.e., positive emotions, anger/irritation, despondency/distress). The SELF-AWARE program was not effective in enhancing emotion-coaching behaviors or in reducing emotion-dismissing attitudes.

In addition, the hypotheses that the control groups would not be significantly different across time were not supported. The HDFS Control Group demonstrated significantly lower levels of emotional self-efficacy regarding positive emotional experiences at posttest compared to pretest. One reason for this difference might have been the timing of the assessments. The pretest assessment was conducted during the beginning of a new semester when students may have been eager to start new coursework. The posttest assessment was completed toward the end of the semester when coursework may have been heavier and more stressful. Since the Treatment Group did not exhibit significant differences over time and the HDFS Control Group

significantly declined, it is possible that the SELF-AWARE program buffered against a decline in emotional self-efficacy regarding positive experiences. Additionally, the HDFS Control Group demonstrated significantly lower levels of emotion-coaching attitudes and emotion-dismissing attitudes at posttest compared to pretest. Participants in the HDFS Control Group were recruited from a human sexuality course. The course content could have discussed emotions in some capacity, which may have accounted for the significant differences observed on meta-emotion philosophies. The ELC Control Group demonstrated significantly higher levels of teacher-reported emotion-coaching behaviors at posttest compared to pretest. It is possible that the participants in the ELC Control Group demonstrated this improvement across time because of the feedback and guidance they received from head teachers in the ELC.

Implications for Theory and Prior Research

This study makes a unique contribution to the existing literature on social emotional competence among teachers. Theoretically, this study provides additional support for the enhancement of self-efficacy through the four sources of self-efficacy (i.e., enactive mastery experience, vicarious experience, verbal persuasion, physiological and affective states; Bandura, 1997). Previous work has demonstrated that emotional self-efficacy can be improved by an intervention (Dacre Pool & Qualter, 2012a; Kirk et al., 2011); however, this is the first study to include specific activities related to the four sources of self-efficacy in an intervention designed to influence emotional self-efficacy.

In addition, this study extended the examination of emotional self-efficacy to include assessment of specific aspects of emotional self-efficacy (i.e., positive affect, anger/irritation, despondency/distress) as well as a global measure of emotional self-efficacy. These findings demonstrated that SELF-AWARE was effective at enhancing general emotional self-efficacy,

but it did not evidence enhanced emotional self-efficacy with regard to these specific emotions. It is possible that components of the intervention would need to be designed to target these aspects of emotional self-efficacy in order to see improvements. A revised training might link training content and activities to one specific aspect of emotional self-efficacy. For instance, a training targeting emotional self-efficacy for anger might teach skills specific to physiological identification of and constructive coping for anger (e.g., relaxation techniques). This training might include a task to elicit anger so that participants could practice skills related to managing anger when they are experiencing the emotion.

Previous interventions have targeted the emotional self-efficacy of employees and students (Dacre Pool & Qualter, 2012a; Kirk et al., 2011). However, no previous research has examined an intervention designed to influence emotional self-efficacy among preservice teachers. Although previous work has examined the effectiveness of mindfulness training among experienced teachers (e.g., Winzelberg & Luskin, 1999), this is the first study to evaluate an emotions education training among preservice teachers. This is important because preservice teachers traditionally have received little training on management of their own emotional experiences (Meyer, 2009), and training among preservice teachers increasingly has been acknowledged as important (Swartz & McElwain, 2012). Development of teachers' social emotional competence is important because they must manage social and emotional challenges in the classroom (Hargreaves, 1998) and without social emotional competence to handle these situations, teachers can experience stress and burnout, which, in turn, undermine student relationships, classroom management, and classroom climate (Jennings & Greenberg, 2009).

In the current study, the SELF-AWARE program was associated with more emotion-coaching attitudes. These results confirm previous findings that emotion-coaching is malleable

and can be influenced by a brief intervention (Havighurst et al., 2010; Wilson et al., 2012). Unlike previous work (Havighurst et al., 2010; Wilson et al., 2012), the current study did not find reduced emotion-dismissing beliefs as a result of the intervention. Although there was a significant dosage effect such that those participants who attended more sessions of the SELF-AWARE program demonstrated lower emotion-dismissing attitudes, the model itself was not significant; rather, the model approached significance. It is possible that with a larger sample size, this model would have been significant. Additionally, measurement of emotion-dismissing attitudes may have contributed to these discrepant findings. At pretest, alpha reliability was relatively low (.60) for the emotion-dismissing subscale of the Maternal Emotional Styles Questionnaire, which calls into question whether this measure adequately tapped into the construct of emotion-dismissing beliefs. Gottman and colleagues (1996) outlined three types of emotion-dismissing parenting (e.g., laissez faire, disapproving, dismissing). It could be that in order to change emotion-dismissing beliefs, it is necessary to target these different types of emotion-dismissing beliefs. More nuanced measurement of this construct may have offered different results.

Previous work also has demonstrated the effectiveness of an intervention on parents' emotion-coaching behavior (Havighurst et al., 2010; Wilson et al., 2012); however, findings in the current study failed to replicate a treatment effect for preservice teachers' emotion-coaching behavior. The SELF-AWARE program emphasized interpretation of emotion states in benign, constructive ways and provided strategies for handling emotions, since it may be easier to change behavior when emotional arousal is lower (Havighurst et al., 2009; Hayes, Follette, & Linehan, 2004). One reason that the current study failed to replicate previous findings might have been that underlying emotional competencies and attitudes and positive emotional beliefs

take time and practice to develop and subsequently influence behavior. Previous work completed longer-term follow-up assessments (Havighurst et al., 2010; Wilson et al., 2012), whereas the current study had two time points. Thus, it is possible that the number of time points assessing emotion-coaching behavior is contributing to these discrepant findings, and it is possible that the SELF-AWARE program may have been shown to be effective if subsequent assessments were completed.

Another possible reason for the discrepant findings is that parents have more experience with children and are likely more invested in developing emotion-coaching beliefs and behaviors compared to preservice teachers, most of whom are not parents. Additionally, a 4-item measure was used to assess emotion-coaching behavior in this study. It is possible that these 4 items did not adequately capture emotion-coaching behavior. Inclusion of a measure assessing more nuanced emotion-coaching behaviors (e.g., problem solving with the child, teaching the child strategies to cope with the emotion constructively) may have demonstrated different results.

Although previous work has examined interventions targeting parents (Havighurst et al., 2010; Wilson et al., 2012), there is a dearth in the literature on meta-emotion philosophies among teachers and, specifically, examination of the effectiveness of interventions designed to influence meta-emotion philosophy and its related behaviors among teachers. Meta-emotion philosophies have been shown to influence parenting behavior and child outcomes (Cleary & Katz, 2008; Gottman et al., 1996). It is likely, then, that teacher meta-emotion philosophies also influence teacher behaviors. It is important to examine teacher meta-emotion philosophies since teachers are influential in child emotion socialization (Denham et al., 2012; Jennings & Greenberg, 2009). These results indicate that emotions education training can influence the attitudes teachers have

about their own emotions and toward children's emotions of a population that is understudied in the limited research on emotions education, that of preservice teachers. Examination of preservice teachers is becoming increasingly important as efforts to provide education to children under the age of five expand (Bryant et al., 2002) and acknowledgement of the influence of teachers' social emotional competence on child outcomes grows (Denham et al., 2012; Jennings & Greenberg, 2009).

Strengths

Although this study is not an experimental design, its stringent, quasiexperimental design with two control groups and pretest/posttest assessments allows for confidence in conclusions. Additionally, multiple modes of measurement, including self-report and observational measures, were employed. Inclusion of both a global and emotion-specific measures of emotional self-efficacy demonstrated that improved global estimations of one's own emotional self-efficacy was decoupled from improvements in domain-specific emotional self-efficacy. Thus, future work should examine the antecedents of emotional self-efficacy for specific relevant emotions and further develop and examine interventions that target those emotions.

Limitations and Future Directions

Although this study uniquely contributes to the literature, some limitations should be noted. One limitation of this sample is its size. It is possible that this small sample size contributed to the inability to transform variables successfully and ensure that no assumptions were violated for examination of emotional self-efficacy regarding positive emotional experiences. Thus, the results for emotional self-efficacy for positive emotions should be interpreted with caution. Preliminary analyses demonstrated that there were no significant

differences across time for the Treatment Group; however, the HDFS Control Group significantly declined from pretest to posttest. It is possible that if the assumptions of linear regression had not been violated, results would have indicated that the SELF-AWARE program buffered against a decline in emotional self-efficacy for positive emotions.

Additionally, this sample is comprised mostly of Caucasian participants between the ages of 19 and 25. This sample is not representative of all preschool teachers and thus, results have limited generalizability to Caucasian preservice teachers. Future studies would benefit from a more diverse sample with regard to race. This study had limited demographic data and future work would benefit from assessment of other demographics (e.g., income) to further characterize the sample and the extent to which the findings could be generalized. Future work would also benefit from additional time points in order to determine whether the intervention effects were consistent over time and whether the emotions education training was effective on previously nonsignificant assessments at later time points. An experimental design in which participants were randomly assigned to treatment and control conditions would be an important future direction. An experimental design would allow causal conclusions about whether the SELF-AWARE program was responsible for observed positive outcomes.

With regard to the emotion-coaching behaviors, observer bias may have been an issue. Participants spent on average four hours per week working in the ELC with head teachers. Head teachers also were taking care of young children and may not have been attuned to participants' emotion-coaching behaviors. Future work would benefit from independent raters to reduce observer bias. In one study, observers assessed teacher verbalizations, vocal quality, facial expressions, body language, and movement (e.g., moving toward or away from the child,

providing physical comfort, guidance, or support for the child; Swartz & McElwain, 2012). The current study used a global measure of emotion-coaching behavior; however, future research would benefit from a more nuanced measure, as employed by Swartz and McElwain (2012), which included verbal and behavioral responses to children's emotionality.

No self-report data were available for those participants who did not receive the emotions education training and were working in the ELC. The Treatment and ELC Control groups both worked in the ELC lab and received feedback from the head teachers. Future work would benefit from assessing attitudes of those working in the ELC in order to parse apart the influence of the emotions education training and the influence of working in the ELC and receiving feedback from head teachers. It would also be helpful to know the content of feedback from head teachers and whether that feedback might have overlapped with some of the components of the intervention (e.g., head teachers may assure preservice teachers of their capability to handle a situation, potentially providing verbal persuasion and contributing to preservice teachers' emotional self-efficacy) and whether these aspects of the feedback contributed to nonsignificant findings for emotion-coaching behaviors. Although a treatment effect was observed with regard to emotion-coaching attitudes, no such effect was observed for emotion-coaching behaviors. Inclusion of a measure on emotion-dismissing behaviors would be beneficial in future research. It is possible that inhibition of emotion-dismissing behaviors may be more easily mastered than intentional emotion-coaching behaviors. Future examination will be needed to examine this possibility.

Interventions reducing teacher stress have been shown to subsequently improve classroom climate (Winzelberg & Luskin, 1999). Although interventions targeting parents have

demonstrated more positive outcomes among children (Havighurst et al., 2010), this study did not examine children's outcomes. An important next step is to examine directly whether an intervention designed to improve emotional self-efficacy and positive meta-emotion philosophies is related to improved classroom climate and child outcomes. Mill and Romano-White (1999) concluded that caregiver training helped buffer against the negative influences of risk factors. The effectiveness of the SELF-AWARE program should further be examined in the context of risk factors in order to assess whether this emotions education training might help buffer against the influence of risk factors.

Conclusion

There is a need for the development of teacher trainings targeting teachers' emotion regulation capacities (Swartz & McElwain, 2012). This study examined the effectiveness of an emotions education training among preservice teachers. Understanding the components of successful interventions have potential implications for teacher trainings, which, in turn, influence teacher well-being, the classroom climate, and positive student outcomes (La Paro & Pianta, 2003; Winzelberg & Luskin, 1999). These findings demonstrate the effectiveness of an emotions education training targeting teachers and should inform future teacher training efforts.

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Appendices

Appendix 1: Tables

Table 1. Demographic for full sample (n = 60).

Variable	*n*	Mean (SD)	Minimum	Maximum	%
Age	55	21.53 (3.39)	19	44	
GPA	58	3.15 (.45)	2.25	3.98	
Sex	60				
Female					98
Male					2
Race	60				
Caucasian					92
African-American					6
Hispanic/ Latino					2
Major	60				
HDFS					58
Other					42

AUELC	60	
Experience		
Yes		12
No		88

Table 2. Descriptives for treatment and HDFS control groups.

Variable	Treatment Group					Control Group				
	n	Mean (*SD*)	Min	Max	%	*n*	Mean (*SD*)	Min	Max	%
Age	25	22.44 (4.71)	20	44		30	20.77(1.31)	19	25	
GPA	26	3.06 (.46)	2.25	3.92		32	3.23(.43)	2.35	3.98	
Sex	26					34				
Female					100					97
Male										3
Race/Ethnicity	26					34				
Caucasian					96					88
African-American					4					9
Hispanic/Latino										3
Major	26					34				
HDFS					89					35

Other		11		65
AUELC Experience	26		34	
Yes		31		3
No		69		97

Table 3. Descriptives for full sample (n = 60).

Variable	Mean (SD)	Minimum	Maximum
Pretest			
ESES[a]	3.68 (.50)	2.38	4.59
RESE-POS[b]	4.43 (.59)	2.00	5.00
RESE-ANG[c]	3.31 (.90)	1.00	5.00
RESE-DES[d]	3.26 (.71)	1.50	5.00
MESQ-EC[e]	3.75 (.46)	2.71	4.71
MESQ-ED[f]	3.36 (.47)	2.29	4.14
MDI[g]	2.36 (.85)	1.00	5.44
IPAA[h]	5.81 (2.39)	-.65	9.00
Posttest			
ESES[a]	3.85 (.49)	2.50	4.88
RESE-POS[b]	4.26 (.66)	2.00	5.00
RESE-ANG[c]	3.43 (.78)	1.75	5.00
RESE-DES[d]	3.38 (.77)	1.50	5.00
MESQ-EC[e]	3.63 (.53)	2.29	4.86

MESQ-ED[f]	3.11 (.56)	2.00	4.29
MDI[g]	2.38 (.84)	1.00	5.00

[a]Emotional Self-Efficacy Scale. [b]Positive subscale of the RESE. [c]Anger/Irritation subscale of the RESE. [d]Despondency/Distress subscale of the RESE. [e]Emotion-Coaching subscale of the MESQ. [f]Emotion-Dismissing subscale of the MESQ. [g]Major Depression Inventory. [h]Parent Attachment.

Table 4. Descriptives for treatment (n = 26) and HDFS control (n = 34) groups.

Variable	Treatment Group			HDFS Control Group		
	Mean (SD)	Minimum	Maximum	Mean (SD)	Minimum	Maximum
Pretest						
ESES[a]	3.59 (.63)	2.38	4.53	3.75 (.38)	2.91	4.59
RESE- POS[b]	4.45 (.73)	2.00	5.00	4.41 (.47)	3.00	5.00
RESE-ANG[c]	3.69 (.71)	2.00	5.00	3.02 (.93)	1.00	4.75
RESE-DES[d]	3.49 (.66)	2.00	5.00	3.08 (.71)	1.50	4.50
MESQ- EC[e]	3.82 (.44)	2.86	4.71	3.70 (.48)	2.71	4.57
MESQ-ED[f]	3.33 (.48)	2.43	4.14	3.38 (.47)	2.29	4.14
MDI[g]	2.30 (.86)	1.00	4.67	2.41 (.85)	1.11	5.44
IPAA[h]	5.34 (2.67)	-.65	9.00	6.17 (2.12)	.55	8.80
Posttest						
ESES[a]	3.99 (.41)	2.88	4.56	3.74(.51)	2.50	4.88
RESE- POS[b]	4.38 (.69)	2.00	5.00	4.18 (.64)	2.75	5.00
RESE-ANG[c]	3.71 (.69)	2.00	5.00	3.21 (.78)	1.75	5.00
RESE- DES[d]	3.60 (.64)	2.00	4.50	3.21 (.82)	1.50	5.00

MESQ-EC[e]	3.82 (.48)	3.00	4.86	3.49 (.53)	2.29	4.71
MESQ-ED[f]	2.97 (.66)	2.00	4.14	3.21 (.46)	2.29	4.29
MDI[g]	2.14 (.67)	1.00	3.89	2.57 (.91)	1.00	5.00
Dosage	4.46 (2.08)	0.00	6.00			

[a]Emotional Self-Efficacy Scale. [b]Positive subscale of the RESE. [c]Anger/Irritation subscale of the RESE. [d]Despondency/Distress subscale of the RESE. [e]Emotion-Coaching subscale of the MESQ. [f]Emotion-Dismissing subscale of the MESQ. [g]Major Depression Inventory. [h]Parent Attachment.

Table 5. Paired-sample means tests for the treatment (n =26) and HDFS control (n = 34) groups.

Treatment Group					
	Mean				
Variable	Pretest	Posttest	Mean Difference	t	df
ESES[a]	3.59	3.99	-.40	-3.10**	25
RESE-POS[b]	4.45	4.38	.07	.66	25
RESE-ANG[c]	3.69	3.71	-.02	-.15	25
RESE-DES[d]	3.49	3.60	-.11	-.73	25
MESQ-EC[e]	3.82	3.82	.00	.06	25
MESQ-ED[f]	3.33	2.97	.36	3.43**	25
MDI[g]	2.30	2.14	.16	1.50	25
HDFS Control Group					
ESES[a]	3.75	3.74	.01	.07	33
RESE-POS[b]	4.41	4.18	.23	2.49**	33
RESE-ANG[c]	3.02	3.21	-.19	-1.48~	33
RESE-DES[d]	3.08	3.21	-.13	-.98	33
MESQ-EC[e]	3.70	3.49	.21	2.24*	33
MESQ-ED[f]	3.38	3.21	.17	1.91*	33
MDI[g]	2.41	2.57	-.16	-1.34~	33

~$p < .10$, *$p < .05$, **$p < .01$

[a]Emotional Self-Efficacy Scale. [b]Positive subscale of the RESE. [c]Anger/Irritation subscale of the RESE. [d]Despondency/Distress subscale of the RESE. [e]Emotion-Coaching subscale of the MESQ. [f]Emotion-Dismissing subscale of the MESQ. [g]Major Depression Inventory.

Table 6. Independent sample means t-tests between treatment (n = 26) and HDFS control (*n* =34) groups.

Variable	Pretest					Posttest				
	Mean		Mean Difference	*t*	df	Mean		Mean Difference	*t*	df
	Treatment	Control				Treatment	Control			
Age	22.44	20.77	-1.67	-1.87*	53					
GPA						3.06	3.23	.17	1.44~	56
ESES[a]	3.59	3.75	.16	1.16	58	3.99	3.74	-.25	-2.02*	58
RESE-POS[b]	4.45	4.41	-.04	-.23	58	4.38	4.18	-.20	-1.16	58
RESE-ANG[c]	3.69	3.02	-.67	-3.06**	58	3.71	3.21	-.50	-2.60**	58
RESE-DES[d]	3.49	3.08	-.41	-2.27*	58	3.60	3.21	-.39	-1.96*	58
MESQ-EC[e]	3.82	3.70	-.12	-1.05	58	3.82	3.49	-.33	-2.48**	58
MESQ-ED[f]	3.33	3.38	.05	.41	58	2.97	3.21	.24	1.66~	58
MDI[g]	2.30	2.41	.11	.47	58	2.14	2.57	.44	2.05*	58
IPAA[h]	5.34	6.17	.83	1.33~	58					

~ $p < .10$,*$p < .05$, **$p < .01$

[a]Emotional Self-Efficacy Scale. [b]Positive subscale of RESE. [c]Anger/Irritation subscale of RESE. [d]Despondency/ Distress subscale of the RESE. [e]Emotion-coaching subscale of the MESQ. [f]Emotion-dismissing subscale of the MESQ. [g]Major Depression Inventory. [h]Parent Attachment

Table 7. Correlation table for treatment (n = 26) and HDFS control (n = 34) groups.

	Pretest								Posttest								
Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. ESES[a]	-.16	.43**	.23~	.29*	-.04	.00	-.21	.06	.49**	.27~	.24~	.28~	.01	.11	-.34*	.00	-.08
2. POS[b]	.04	-.03	.03	.05	-.04	.04	-.28~	.24~	.41**	.53***	.02	.26~	.13	.21	-.45**	-.34*	-.26~
3. ANG[c]	.47**	.19	.37**	.82***	-.34*	.20	-.28	.38*	.31*	-.16	.66***	.40**	-.16	.05	-.35*	.46**	-.12
4. DES[d]	.37*	.29~	.63***	.29*	-.34*	.15	-.27~	.26~	.38*	-.15	.61***	.48**	-.27~	.04	-.23	.36*	-.03
5. EC[e]	.07	.16	.44*	.34*	.14	-.07	.13	-.14	-.21	.11	-.09	-.17	.43**	-.08	.20	.15	.15
6. ED[f]	.21	-.05	-.02	-.13	.07	-.05	.27~	.26~	.16	.06	.33*	.33*	-.24~	.38*	.14	.22	-.13
7. MDI[g]	-.19	-.39*	-.16	-.19	-.01	.02	-.06	-.34*	-.32*	-.24~	-.20	-.24~	-.13	-.02	.67***	-.03	.08
8. IPAA[h]	-.03	-.01	-.09	-.08	-.26~	-.22	-.12	-.17~	.11	.07	.36*	.12	-.25~	-.05	-.25~	.23	-.10
9. ESES[a]	.23	.57**	-.03	-.07	.18	-.06	-.28~	.04	.26*	.48**	.48**	.49**	.12	.37*	-.60***	-.16	-.19
10. POS[b]	-.10	.65***	-.33	-.20	-.08	.09	-.19	.12	.60***	.15	.05	.23~	.42**	.23~	-.51***	-.30~	-.16
11. ANG[c]	.52**	.36*	.54**	.26~	.18	.00	-.21	.00	.53**	.24	.32**	.66***	-.11	.15	-.27~	.38*	-.02
12. DES[d]	.44*	.49**	.25	.32~	.23	-.05	-.27~	-.18	.67***	.33	.66***	.25*	-.02	-.35*	-.29*	.03	-.20
13. EC[e]	.28~	.45*	.31~	.28~	.48**	.26	-.28~	-.01	.48**	.36*	.29~	.51**	.31**	.09	-.13	-.19	-.22
14. ED[f]	.22	.05	-.03	-.12	-.19	.60***	-.02	.02	.11	.18	-.08	-.17	.35*	-.21~	-.29*	-.22	-.24~

15. MDI[g]	-.14	-.20	-.11	-.37*	-.11	.13	.75***	-.13	-.19	-.06	-.19	-.23	-.18	.14	-.26*	.14	.09
16. Age	.05	.11	.11	.37*	.12	.04	-.18	-.45*	-.16	-.22	-.07	.15	.31~	.02	-.22	.25*	-.17
17. GPA	-.07	.35*	.07	-.17	.02	-.06	-.31~	.30~	.49**	.29~	.38*	.15	.14	-.02	-.17	-.30~	-.19*
18. Dosage[i]	-.20	-.23	.03	.20	.34*	-.33~	-.23	-.04	-.03	-.21	-.03	.18	.13	-.52**	-.33*	.16	.14
19. Dosage[j]	-.22*	-.07	.33**	.31**	.23*	-.16	-.13	-.16	.21~	.06	.27*	.26*	.31**	-.39**	-.31**	.29*	-.11

NOTE: Correlations for the HDFS Control group in the upper diagonal and Correlations for the Treatment group in the lower diagonal, correlations on the diagonal represent correlation with condition. ~p < .10, * p <.05, **p < .01, ***p <.01

[a]Emotional Self-Efficacy Scale. [b]Positive subscale of RESE. [c]Anger/Irritation subscale of RESE. [d]Despondency/ Distress subscale of the RESE. [e]Emotion-coaching subscale of the MESQ. [f]Emotion-dismissing subscale of the MESQ. [g]Major Depression Inventory. [h]Parent Attachment. [i]Dosage for the treatment group. [j]Dosage correlations for full sample, with HDFS control group's dosage counted as "0 sessions."

Table 8. Regression analyses for ESES.

	Model I			Model II			Model III			Model IV		
Variable	B	*SE*	β	B	*SE*	β	B	*SE*	β	B	*SE*	β
Constant	2.85	.45		2.54	.45		2.66	.50		1.48	.80	
ESES_pre	.27	.12	.28*	.32	.12	.33**	.30	.12	.31*	.62	.20	.64**
Condition				.30	.12	.31*	.26	.23	.27	2.05	.96	2.10*
MDI[2]							.00	.00	-.21	.00	.00	-.18
IPAA							.00	.03	.01	.00	.03	.00
Dosage							.01	.04	.03	.00	.04	-.02
Interaction[a]										-.47	.25	-1.78~
R^2		.080			.173			.216			.266	
ΔR^2		.080*			.093*			.043			.050~	

[a]Time*Condition. ~p < .10, *p <.05, **p < .01

Table 9. Regression analyses for positive subscale of the RESE.

	Model I			Model II			Model III			Model IV		
Variable	B	*SE*	β	B	*SE*	β	B	*SE*	β	B	*SE*	β
Constant	3.95	.24		4.06	.40		4.63	.94		4.97	1.70	
Pretest[2]	.005	.00	.54*	.01	.00	.55*	.01	.00	.54*	.00	.01	.24
Condition				-.10	.30	-.07	-.35	.50	-.24	-.68	1.44	-.47
MDI[2]							.00	.01	.05	.00	.01	.04
IPAA							-.01	.05	-.08	-.01	.05	-.07
Dosage							-.05	.07	-.24	-.05	.08	-.24
Interaction[a]										.00	.01	.39
R^2		.292			.297			.325			.329	
ΔR^2		.292*			.005			.028			.004	

[a]Time*Condition. **$p < .01$, ***$p < .001$

Table 10. Regression analyses for the anger/irritation subscale of the RESE.

	Model I			Model II			Model III			Model IV		
Variable	B	*SE*	β	B	*SE*	β	B	*SE*	β	B	*SE*	β
Constant	1.53	.29		1.56	.30		1.22	.39		1.20	.44	
Pretest	.57	.09	.66***	.54	.09	.63***	.56	.10	.64***	.57	.12	.65***
Condition				.14	.17	.09	.20	.31	.13	.28	.79	.18
MDI^2							.00	.00	.12	.00	.00	.12
IPAA							.04	.04	.12	.04	.04	.12
Dosage							-.01	.06	-.02	-.01	.06	-.02
Interaction[a]										-.02	.21	-.05
R^2		.435			.442			.461			.461	
ΔR^2		.435***			.007			.019			.000	

[a]Time*Condition. ***$p < .001$

Table 11. Regression analyses for the despondency/distress subscale of the RESE.

	Model I			Model II			Model III			Model IV		
Variable	B	*SE*	β	B	*SE*	β	B	*SE*	β	B	*SE*	β
Constant	1.76	.42		1.80	.42		1.83	.53		1.43	.64	
Pretest	.50	.13	.46***	.46	.13	.43***	.47	.14	.43***	.60	.18	.56**
Condition				.20	.19	.13	.07	.35	.04	1.05	.97	.69
MDI^2							.001	.003	.04	-.15	.11	-.17
IPAA							-.01	.04	-.04	-.02	.04	-.05
Dosage							.03	.07	.09	.04	.07	.14
Interaction[a]										-.32	.29	-.74
R^2		.213			.228			.234			.251	
ΔR^2		.213***			.015			.006			.017	

[a]Time*Condition. **$p < .01$, ***$p < .001$

Table 12. Regression analyses for the emotion-coaching subscale of the MESQ.

	Model I			Model II			Model III			Model IV		
Variable	B	*SE*	β	B	*SE*	β	B	*SE*	β	B	*SE*	β
Constant	1.63	.50		1.66	.49		1.77	.56		1.76	.67	
Pretest	.53	.13	.47***	.50	.13	.43***	.52	.14	.45***	.52	.18	.46**
Condition				.26	.12	.25*	.29	.23	.28	.32	1.04	.30
MDI^2							.00	.00	-.17	.00	.00	-.17
IPAA							-.02	.03	-.10	-.02	.03	-.10
Dosage							-.01	.05	-.07	-.01	.05	-.07
Interaction[a]										-.01	.28	-.03
R^2		.219			.280			.307			.307	
ΔR^2		.219***			.061*			.027			.000	

[a]Time*Condition. *$p < .05$, **$p < .01$, ***$p < .001$

Table 13. Regression analyses for the emotion-dismissing subscale of the MESQ.

	Model I			Model II			Model III			Model IV		
Variable	B	*SE*	β	B	*SE*	β	B	*SE*	β	B	*SE*	β
Constant	1.14	.47		1.28	.47		1.58	.49		1.97	.61	
Pretest	.59	.14	.49***	.57	.14	.48***	.49	.14	.41***	.36	.19	.30~
Condition				-.21	.13	-.19	.34	.24	.30	-.75	1.04	-.67
MDI^2							.00	.00	.01	.00	.00	.03
IPAA							-.01	.03	-.02	-.01	.03	.02
Dosage							-.13	.05	-.58**	-.11	.05	-.52*
Interaction[a]										.31	.29	.93
R^2		.238			.273			.361			.375	
ΔR^2		.238***			.035			.088~			.014	

[a]Time*Condition. *$p < .05$, **$p < .01$, ***$p < .001$

Table 14. Paired-sample means tests for the treatment subsample (n = 18) and ELC control group (n = 18).

	Treatment Group					ELC Control				
Variable	Mean		Mean Difference	*t*	df	Mean		Mean Difference	*t*	df
	Pretest	Posttest				Pretest	Posttest			
ECBS[a]	2.30	3.07	-.77	-5.05***	17	2.66	3.57	-0.91	-6.34***	17

[a]Emotion-coaching behavior scale. ***p < .001

Table 15. Independent sample means tests for treatment (n = 18) and ELC control (n = 18) groups.

	Pretest					Posttest				
Variable	Mean		Mean Difference	*t*	df	Mean		Mean Difference	*t*	df
	Treatment	ELC Control				Treatment	ELC Control			
ECBS[a]	2.30	2.66	.36	1.64~	34	3.07	3.57	.50	2.14*	34

[a]Emotion-coaching behavior scale. ~$p < .10$, *$p < .05$

Table 16. Regression analyses for emotion-coaching behavior.

	Model I			Model II			Model III			Model IV		
Variable	B	*SE*	β	B	*SE*	β	B	*SE*	β	B	*SE*	β
Constant	1.70	.38		1.98	.43		1.98	.43		2.18	.54	
Pretest	.65	.15	.61***	.60	.15	.55***	.60	.15	.55***	.95	.56	.88~
Condition				-.28	.20	-.19	-.23	.52	-.16	-.71	.90	-.49
Dosage							-.01	.09	-.04	-.02	.10	-.07
Interaction[a]										-.21	.32	-.55
R^2		.366			.401			.401			.409	
ΔR^2		.366***			.035			.000			.008	

[a]Time*Condition. ~$p < .10$, ***$p < .001$

Appendix 2: Measures

Emotional Self-Efficacy Scale (Kirk et al., 2008)

Please place a check in the boxes below indicating the extent to which you feel confident about each of the following items.

	Not at all confident (1)		Neutral (3)		Very confident (5)
a) Understanding what causes your emotions to change					
b) Correctly identifying your own positive emotions					
c) Knowing what causes you to feel a negative emotion					
d) Realizing what causes another person to feel a negative emotion					
e) Realizing what causes another person to feel a positive emotion					
f) Correctly identifying when another person is feeling a positive emotion					
g) Figure out what causes another					

person's differing emotions					
h) Using positive emotions to generate good ideas					
i) Recognizing what emotion is being communicated through your facial expression					
j) Noticing the emotion your body language is portraying					
k) Generating the right emotion so that creative ideas can unfold					
l) Noticing the emotion another person's body language is portraying					
m) Changing your negative emotion to positive emotion					
n) Figuring out what causes you to feel differing emotions					
o) Understanding what causes another person's emotions to change					
p) Helping another person to regulate					

emotions when under pressure					
q) Correctly identifying your own negative emotions					
r) Knowing what causes you to feel a positive emotion					
s) Helping another person calm down when he or she is angry					
t) Correctly identifying when another person is feeling a negative emotion					
u) Getting into a mood that best suits the occasion					
v) Creating emotions to enhance cognitive performance					
w) Regulating your own emotions when close to reaching a goal					
x) Creating a positive emotion when feeling a negative emotion					
y) Using positive emotions to generate novel solutions to old problems					

z) Recognizing what emotion another person is communicating through his or her facial expressions					
aa)Creating emotions to enhance physical performance					
bb) Helping another person to change a negative emotion to a positive emotion					
cc) Calming down when feeling angry					
dd) Regulating your own emotions when under pressure					
ee) Helping another person regulate emotions after he or she has suffered a loss					
ff) Generating in yourself the emotion another person is feeling					

Regulatory Emotional Self-Efficacy (RESE)

How well can you… (put a mark in the correct box)

	Not Well At All (1)	**Somewhat Well (2)**	**(3)**	**Fairly Well (4)**	**Very Well (5)**
a) Express joy when good things happen to you?					
b) Keep from getting discouraged by strong criticism?					
c) Avoid flying off the handle when you get angry?					
d) Manage negative feelings when reprimanded by others important to you?					
e) Feel gratified over achieving what you set out to do?					
f) Keep from getting discouraged in the face of difficulties?					
g) Reduce your upset when you don't get the appreciation you feel you deserve?					
h) Express enjoyment freely when you are with others?					
i) Avoid getting upset when others keep giving you a hard time?					
j) Get over irritation quickly for wrongs you have experienced?					
k) Keep from getting dejected when you are lonely?					
l) Rejoice over your successes?					

Maternal Emotional Style Questionnaire

When answering the following items, please only consider your professional interactions with young children. Please rate the following items from 1 (strongly disagree) to 5 (strongly agree) by placing a check in the boxes below.

____ 1. When a child is sad, it's time to problem-solve.

____ 2. Anger is an emotion worth exploring.

____ 3. When a child is sad, I am expected to fix the world and make it perfect.

____ 4. When a child is sad, it is time to get close.

____ 5. Sadness is something that one has to get over, to ride out, not to dwell on.

____ 6. I prefer a happy child to a child who is overly emotional.

____ 7. I help a child get over sadness quickly so he/she can move on to other things.

____ 8. When a child is angry, it's an opportunity for getting close.

____ 9. When a child is angry, I take some time to try to experience this feeling with the child.

____ 10. I try to change a child's angry moods into cheerful ones.

____ 11. Childhood is a happy-go-lucky time, not a time for feeling sad or angry.

____ 12. When a child gets angry my goal is to get him/her to stop.

____ 13. When a child is angry I want to know what he/she is thinking.

____ 14. When a child is angry, it's time to solve a problem.

ASSESSMENT OF EMOTION-RELATED SOCIAL BEHAVIORS
(adapted from Kremenitzer, 2010)

Based on your observations of the student's behavior in her interactions with the children (and others, if relevant) at the AUELC, please assess how well the student has developed the following skills.

0	1	2	3	4	5
Can't Assess (Not Observed)	Not at All Developed	Beginning to Develop	Developing	Fairly Well Developed	Very Well Developed

_____1. Perceives children's LOW intensity NEGATIVE emotions (e.g., boredom, loneliness, discouragement, irritability, worry).

_____ 2. Engages with children when they are experiencing LOW intensity NEGATIVE emotions.

_____ 3. Perceives children's LOW intensity POSITIVE emotions (e.g., contentment, pleasure, satisfaction).

_____ 4. Engages with children when they are experiencing LOW intensity POSITIVE emotions.

_____ 5. Perceives children's HIGH intensity NEGATIVE emotions (e.g., anger, panic, despair, grief, rage)

_____ 6. Engages with children when they are experiencing HIGH intensity NEGATIVE emotions.

_____ 7. Perceives children's HIGH intensity POSITIVE emotions (e.g., excitement, enthusiasm, delight, joy)

_____ 8. Engages with children when they are experiencing HIGH intensity POSITIVE emotions.

_____ 9. In response to a child's emotions, uses a calm, positive, warm tone of voice.

_____ 10. In response to a child's emotions, uses appropriate words that reflect the child's feelings.

_____ 11. In response to a child's emotions, avoids using power (e.g., greater strength, size, psychological control) to pressure the child to feel or display feelings differently.

_____ 12. In response to a child's emotions, shows empathy and attunement to the child's needs.

_____ 13. Can sensitively assist a child to move from a negative mood state into a neutral or positive mood state.

_____ 14. Can move herself/himself from a negative mood state into a neutral or positive mood state.

_____ 15. Can openly communicate about her/his own feelings in a professional manner.

Inventory of Parent and Peer Attachment

Please place a check in the box that best describes how you feel.

	Never True (1)	Rarely True (2)	Sometimes True (3)	Often True (4)	Always True (3)
a) My parents are good parents.					
b) I can depend on my parents to help me solve a problem.					
c) I like to get my parents' view on things I'm worried about.					
d) It helps to show my feelings when I'm upset.					
e) My parents can tell when I'm upset about something.					
f) I feel silly or ashamed when I talk about my problems with my parents.					
g) I easily get upset at home.					
h) When I talk about things with my parents they listen to what I think.					
i) My parents listen to my opinions.					
j) My parents support me to talk about my worries.					
k) I don't know who I can depend on.					
l) When I am angry about something, my parents try to understand.					
m) My parents understand my problems.					
n) I can count on my parents when I need to talk about a problem.					
o) No one understands me.					
p) If my parents know that I am upset about something, they ask me about it.					
q) I like to get my friends' opinions on things I am worried about.					

r) My friends can tell when I'm upset about something.					
s) When we talk, my friends listen to my opinion.					
t) I feel silly or ashamed when I talk about my problems with my friends.					
u) My friends support me to talk about my problems.					
v) I feel the need to be around my friends.					
w) My friends don't understand my problems.					
x) I do not feel like I belong when I am with my friends.					
y) My friends are good friends.					
z) When I am angry about something, my friends try to understand.					
aa) My friends care about the way I feel.					
bb) I can count on my friends to listen when something is bothering me.					
cc) My friends get annoyed with me for no reason.					
dd) If my friends know that I am upset about something, they ask me about it.					

Major Depression Inventory

How much of the time… (indicate the correct response.)

	All the time	Most of the time	Slightly more than half the time	Slightly less than half the time	Some of the time	At no time
1) Have you felt in low spirits or sad?						
2) Have you lost interest in your daily activities?						
3) Have you felt lacking in energy and strength?						
4) Have you felt less confident?						
5) Have you had a bad conscience or feelings of guilt?						
6) Have you felt that life was not worth living?						
7) Have you had difficulty concentrating e.g., when reading the newspaper or watching the television?						
8a) Have you felt very restless?						
8b) Have you felt subdued?						
9) Have you had trouble sleeping at night?						
10a) Have you suffered from reduced appetite?						
10b) Have you suffered from increased appetite?						