

RESEARCH ARTICLE

Mindfulness-based SEL programming to increase preservice teachers' mindfulness and emotional competence

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Abstract

Eighty-seven preservice teachers, some of whom had preschool teaching experience, were randomly assigned to an intervention that included training in breathing awareness meditation infused with social-emotional learning ($n = 43$) or a control group that received training in ($n = 44$) in breathing awareness meditation only. Both groups showed an increase in mindfulness from pre- to posttest. However, as expected, dimensions of emotional competence improved more significantly for preservice teachers in the intervention group. Increases were also greater for participants with teaching experience. Both groups also increased in the belief that classroom misbehavior would result in negative cognitive and social costs to children, but a larger increase was observed for the intervention group. Implications for teacher preparation are discussed.

KEYWORDS

emotional competence, mindfulness, social-emotional learning, teacher training

Approximately 50% of teachers leave the classroom within the first five years (DeAngelis & Presley, 2011). Almost 20% of those that remain in the profession report experiencing significant stress because of work overload and student demands (Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010; Gold et al., 2010; McCallum & Price, 2010). Various types of teacher burnout interventions have been designed to address this issue, including cognitive behavioral therapy, psychoeducational approaches, social support groups, mindfulness-based practices (MBPs), and social-emotional learning (SEL) programs. Primary interventions focus on decreasing the source of stress. Secondary interventions attempt to extend personal resources that contribute to adaptive coping to stress, whereas tertiary programs address serious work-related mental health challenges (Cartwright & Cooper, 2005). Completely eliminating stressors associated with teaching is not possible and waiting until serious negative mental health problems emerge is unadvisable. Thus, the majority of teacher burnout interventions are typically conducted at the secondary level, with a focus on the development of reflective skills, mindfulness, and emotional competence (Curry & O'Brien, 2012; Hong, 2012; Leroux & Théorêt, 2014; Mansfield, Beltman, & Price, 2014).

Building capacity in mindfulness may be a particularly useful strategy for improving teachers' emotional health (Mansfield, Beltman, Weatherby-Fell, & Broadley, 2016b). Mindfulness is defined as a state of mind in which the attentional focus is in the present moment without judgment (Dekeyser, Raes, Leijssen, Leysen, & Dewulf, 2008; Kabat-Zinn, 1990). Teachers' participation in MBP interventions has resulted in reductions in anxiety, emotional exhaustion, and increased mindfulness (Abenavoli, Jennings, Greenberg, Harris, & Katz, 2013; Anderson, Levinson, Barker, & Kiewra, 1999; Beshai, McAlpine, Weare, & Kuyken, 2015; Flook, Goldberg, Pinger, Bonus, & Davidson, 2013; Gold et al., 2010; Harris, Jennings, Katz, Abenavoli, & Greenberg, 2016; Kemeny et al., 2012). MBP interventions can also improve perceptions of student behavior and teachers' development and implementation of curriculum (Frank, Reibel, Broderick, Cantrell, & Metz, 2015; Jennings, Frank, Snowberg, Coccia, & Greenberg, 2013; Napoli, 2004; Singh, Lancioni, Winton, Karazsia, & Singh, 2013; Taylor et al., 2016).

As compared to students with other majors, education undergraduates start their careers with high dispositions for stress and burnout (Fives, Hamman, & Olivarez, 2007; Gold, 1985; Reichl, Wach, Spinath, Brünken, & Karbach, 2014) and experience significant concern about how to cope with the challenges of teaching as early as three months into their teacher preparation programs (Brackenreed & Barnett, 2006). An important goal of preservice teacher education programs is to prepare professionals who will enjoy their work and experience long-term commitment to the profession as well as provide high-quality academic instruction (Mansfield et al., 2016b). Hence, the early years of teaching may represent a sensitive period for cultivating readiness for dealing with teacher stress and burnout (Palomera, Fernández-Berrocal, & Brackett, 2008). Research shows that preservice teachers who participate in an MBP intervention show improvements in teaching self-efficacy, mindfulness, and life satisfaction (Poulin, Mackenzie, Soloway, & Karayolas, 2008). As with in-service teachers, qualitative research has also suggested that preservice teachers view MBP as important for reflective practice and the development of dispositional and pedagogical skills needed for classroom success (Soloway, 2016). Research using a similar methodology has also revealed that preservice teachers exposed to MBPs report less stress and are open to adopting mindfulness as a strategy for beginning the school day (Hartigan, 2017).

Also at the forefront of efforts to promote resiliency in preservice, early career, and experienced teachers is a focus on SEL (Mansfield, Beltman, Price, & McConney, 2012). Jones and Bouffard (2012) have asserted that SEL skills can be organized into three broad categories: social/interpersonal skills, cognitive regulation, and emotion-related competencies. In the present research, our focus was on emotional competence, as there is mounting evidence that, like mindfulness, it operates to reduce work stress and positively contributes to job performance (Lopes, Côté, & Salovey, 2006). Emotional competence is defined as a set of fundamental skills that includes identifying, expressing, and regulating one's own and others' emotions (Mayer, Salovey, & Caruso, 2008). Most previous research on this topic has focused on teachers' ability to promote emotional competence in their students rather than themselves (Garner, 2010; Taylor, Oberle, Durlak, & Weissberg, 2017).

Teacher emotions are critically important for determining the quality of the classroom climate. Positive teacher emotions result in more effective teaching (Davis, 2003), whereas negative teacher emotions can interfere with the motivation for teaching (Sutton & Wheatley, 2003) and contribute to attrition (Frenzel, Goetz, Ludtke, Pekrun, & Sutton, 2009). Teachers' emotion regulation ability is positively correlated with job satisfaction, but unrelated to measures of burnout (Brackett et al., 2010). Interestingly, some researchers have been unable to achieve change in teachers' ability to recognize students' social-emotional difficulties after receiving training in SEL content alone (Iizuka, Barrett, Gillies, Cook, & Marinovic, 2014; Moor et al., 2007). However, MBP training that is specifically focused on teachers' emotional competence and relationship-building skills can improve teachers' emotion regulation ability, mindfulness, and the quality of their interactions with students (Jennings et al., 2017). Participation in an MBP intervention that includes SEL content has also resulted in increased mindfulness, life satisfaction, and teaching self-efficacy for preservice teachers (Poulin et al., 2008). MBP and SEL programs are complimentary in that they have similar goals of cultivating emotion regulation ability, empathy, and the capacity to be resilient in challenging personal and professional situations (Lawlor, 2016). This similarity in goals and desired outcomes suggest that MBPs and SEL skill training can be easily integrated (de Carvalho, Pinto, & Marôco, 2017).

1 | GOALS AND PREDICTIONS FOR THE PRESENT STUDY

Despite the growing literature touting the overall effectiveness of MBP and SEL programs in school contexts, most research has focused on the well-being of teachers already employed. Making MBP and SEL training available for beginning teachers can reduce the economic burden associated with teacher attrition (Ryan et al., 2017). Guided by the prosocial classroom model advanced by Jennings and Greenberg (2009), the present study explored whether a brief small-scaled MBP can improve preservice teachers' mindfulness, emotional competence, and perceptions of student misbehavior. The model posits that social-emotional competence can support teachers in their efforts to cope with the demands of teaching, avoid symptoms of burnout, and strengthen their capacity for responsiveness to students in ways that result in positive classroom interactions and relationships. Our research contributes to the literature by evaluating the efficacy of a brief small-scale intervention in meditative awareness infused with SEL training in promoting preservice teachers' mindfulness and emotional competence. A further contribution of our study is that we focus on multiple dimensions of emotional competence, including awareness of one's own and others' emotions, emotional display rules, and their usefulness in the classroom because of their role in teacher well-being (Mansfield, Beltman, Broadley, & Weatherby-Fell, 2016a; Zinsser, Denham, Curby, & Shewark, 2015). Earlier studies tend to focus primarily on emotion regulation as the measure of emotional competence.

One hypothesis that follows from the prosocial classroom framework is that training in MBP and SEL practices may encourage the development of dispositions and social and emotional skills that have been found to improve teachers' capacity to react to and respond appropriately to challenging student behavior (Howard & Johnson, 2004). Along these lines, we predicted that preservice teachers participating in an MBP intervention infused with SEL content would show higher increases in mindfulness and emotional competence than their counterparts assigned to a control condition that included only meditative awareness. We also expected that, at posttest, MBP and SEL intervention participants would be more apt to report believing in the importance of appropriate classroom behavior for children's learning and development than their colleagues randomly assigned to the control group, reflecting the focus of the MBP and SEL infused intervention on increasing preservice teachers' ability to respond appropriately to challenging student behavior.

2 | METHOD

2.1 | Participants

Eighty-seven (out of the 96) enrolled students (age range 19–26 years) participated in the study. All but four were female. Fifty-nine participants were European-Americans, 11 were Asian-American, eight were Latino-American, seven were African-American, and two identified as other. Forty-three participants were early childhood teachers or assistants who were not required to have a college degree or certification to work in preschools. Participants were randomly assigned to either the intervention ($n = 44$) or control group ($n = 43$) and completed baselines assessments of their mindfulness, social-emotional competence and beliefs, and responsiveness to hypothetical vignettes of children engaging in prosocial and antisocial classroom behaviors. To maintain experimental control, the six-week MBP and SEL interventions took place prior to the introduction of social-emotional course content (i.e., attachment, temperament, social competence, prosocial behavior, peer relationships, and teacher–student relationships).

2.2 | Procedure

After first obtaining institutional review board approval and participant consent, preservice teachers enrolled in two child development courses at a large state university were recruited through classroom visits by the principal investigator. Numbers identified participants and data were inaccessible to course instructors. Prior to the onset of the study, all participants reported on their mindfulness practices. None reported engaging in formal practices, although one regularly attended yoga classes that concluded with relaxation.

2.2.1 | Intervention condition

The experimental group participated in a six-week MBP and SEL intervention. The first weekly two-hour session focused on introducing participants to research on mindfulness and the practice of mindfulness meditation. Negative emotions can negatively impact the quality of breathing and there is evidence that deep breathing with prolonged expiration can reduce stress among college students (Cappo & Holmes, 1984). Participants received information about mindfulness meditation practices using selected handouts and readings from Linehan (2014) focused on mindfulness definitions, goals of mindfulness practice, acceptance skills, distress tolerance, and nonjudgment. They were also trained in breathing awareness meditation (Barnes, Pendergrast, Harshfield, & Treiber, 2008), which involves focusing on the present, sustaining attention to the breathing process, and passively observing one's thoughts. For the practice component, participants were instructed to sit in a comfortable position with their backs straight and eyes closed. Next, they were taught to focus on their diaphragm while breathing in a slow, deep, and relaxed manner and guided through a technique that included holding the breath at different parts of the breath cycle. Throughout the guided sessions, participants were reminded that if their attention shifted toward unwanted thoughts, to acknowledge and accept them without judgment, but to then shift their attention back to breathing into their abdomens. Sessions were approximately 15 minutes in length and took place for six weeks. During each session, students had several opportunities to practice through guided instruction. The teacher who guided the meditation sessions was a long-term practitioner trained in several types of meditation and mindfulness.

The SEL component of the intervention took place in the five remaining sessions/weeks, each of which was two hours long. These sessions focused on teaching students about dimensions of emotional competence, including understanding and regulating emotions, the use of emotions for children's learning and development, the role of emotions in relationship-building and coping with students' challenging classroom behavior, and promoting an awareness of SEL for fostering their own and students' resilience. Before each of the SEL sessions, students were guided in meditative awareness as described above. The content for the SEL aspect of the intervention consisted of lectures, role-playing, hypothetical case studies, group discussions, and collaborative work, most of which was adapted from the Tuning in to Kids emotion socialization intervention (Havighurst, Wilson, Harley, & Prior, 2009). Originally designed for parents, we deemed the material relevant because teachers often experience negative emotions in response to children's classroom behavior. We adapted the program so that the emotion-related content could be presented in the five remaining weekly sessions. These sessions were organized to include information about rearing emotionally intelligent children, labeling feelings, understanding children's emotions, caregivers' self-care and problem-solving, emotion socialization, and emotionally intelligent teaching. Program participation has resulted in fewer parental emotionally dismissive emotion socialization beliefs and more emotion coaching behaviors in response to negative emotion-related behavior (Havighurst et al., 2009; Havighurst, Wilson, Harley, Prior, & Kehoe, 2010; Wilson, Havighurst, & Harley, 2012). The facilitator for this part of the program held a bachelor's degree in behavioral neuroscience with a minor in psychology. She had several years of experience training parents and teachers of young children on topics related to emotional development. The first author and the facilitator regularly discussed training components and adapted materials when necessary. To ensure integrity, the facilitator and the expert/supervisor met weekly to debrief and discuss challenges and/or revisions. Participants rated the degree to which they perceived the intervention would influence their ability to deal with their own emotions within and beyond the classroom on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*significantly*). Participants rated the quality of intervention instruction as 4.66, $SD = .68$.

2.2.2 | Control condition

Control group participants received the same mindfulness meditation training described above, but did not receive instruction in SEL. The meditation teacher was blind to study hypotheses. After the intervention and completion of the posttest measures, which occurred approximately three weeks after training completion, control group participants received the SEL content in the form of written materials and handouts.

2.3 | Measures

2.3.1 | Mindfulness

At both assessments, participants completed the 14-item Freiburg Mindfulness Inventory to assess mindfulness (Walach, Buchheld, Buttenmuller, Kleinknecht, & Schmidt, 2006). Items were rated from 1 (*rarely*) to 4 (*always*). Higher scores indicate greater mindfulness. A sample item includes "I am open to the experience of the present moment." The measure differentiates between mindfulness practitioners and nonpractitioners (Walach et al., 2006). Scores correlate with health and behavioral outcomes (Leigh, Bowen, & Marlatt, 2005; Sauer, Walach, & Kohls, 2011). Cronbach's alphas were .83 at pretest and .87 at posttest.

2.3.2 | Emotional competence

We assessed emotional competence using the 19-item Self-Report Emotional Intelligence scale ([SREIS] Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). Participants rated items from 1 (*very inaccurate*) to 5 (*very accurate*). The four-item "perceiving emotions" subscale evaluates the ability to identify emotions in the self and others via emotional expression and/or vocal and other situational cues. The three-item "using emotions" subscale assesses the ability to harness feelings that assist in cognitive and social information processing, decision making, and interpersonal communication. The four-item "understanding emotion" subscale evaluates knowledge of emotional vocabulary, the ability to analyze emotions, and the understanding of the normative outcome of emotional displays, emotion-related behavior, and experiences. The final subscale assessed the ability to reduce, enhance, or modify an emotional response in the self and others. Cronbach's alphas ranged from .65 to .81 across both time points. Scores correlate with responses on other well-regarded measures of emotional intelligence (Webb, DelDonno, & Killgore, 2014). Individual subscales are differentially and meaningfully related to students' social-emotional outcomes (Poulou, 2017).

2.3.3 | Emotional display rules

Two subscales of the Emotional Labor of Teaching Scale (Brown, Horner, Kerr, & Scanlon, 2014), an instrument adapted from the Emotional Labor Scale (Brotheridge & Lee, 2003) and the Emotional Labor Strategies Scale (Diefendorff, Croyle, & Gosserand, 2005), were used to assess emotional display rules. One three-item subscale assessed preservice teachers' perceptions of the demand to express positive classroom emotions and three other items examined demands to suppress negative classroom emotion. A sample positive display rule item is "My school will tell me to express positive emotions to students as part of my job." A sample negative item is "I will be expected to suppress my bad moods or negative reactions to students." Items were rated from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's alphas were .82 and .86, respectively. In-service teachers' responses distinguish among schools with different cultures and policies (Brown et al., 2014).

2.3.4 | Challenging child behavior

Respondents read three short vignettes adapted to be gender neutral from Arbeau and Coplan (2007) that depicted children engaging in aggressive and unsociable behaviors. Participants' perceptions of the developmental "costs to children's academic and social development" were coded from 1 (*not at all likely*) to 5 (*very likely*). We created mean scores for each variable. Higher scores indicated greater perceived costs to developmental outcomes. Teachers are most positive in their attitudes and responses toward hypothetical children depicted as frequently displaying prosocial behavior. In contrast, negative responses are typical in relation to aggressive behavior (Arbeau & Coplan, 2007).

2.4 | Overview of analyses

We conducted four sets of analyses. The first set examined effectiveness of the randomization procedure, which focused on providing simple descriptive data. Next, we examined differences between the intervention and control groups on the posttest measures. Finally, regression analyses explored associations between participants' responses

to hypothetical child vignettes and their conceptions of mindfulness and emotional competencies and beliefs about misbehavior at both pretest and posttest assessments.

3 | RESULTS

Before presenting the main analyses, we first discuss the results from a post hoc power analysis, which was conducted using GPower (Erdfelder, Faul, & Buchner, 1996). Small, medium, and large effect sizes were tested for the present sample of 87 participants. The statistical power for this study, given an alpha of .05, was .95 and .99 for the detection of moderate-to-large effect sizes, critical F values were 3.97 and 3.95, respectively.

3.1 | Preliminary analyses

We first examined the effectiveness of the randomization procedure. To do so, we conducted a one-way analysis of variance (ANOVA) with group as the between-subjects variable and the demographic variables as dependent measures. A significant effect for teacher status emerged ($\chi^2(1) = 5.18, p < .02$). Twenty-nine participants assigned to the intervention group were working as preschool teachers or teacher assistants, whereas only 14 of those in the control group were teaching. Groups were similar in terms of age, gender, race, and credits earned.

A series of repeated-measures tests determined whether there were differences in outcomes by time point, using teacher work status as a covariate. In these analyses, group assignment (intervention or control) was the between-subjects factor and time was the within-subjects factor. Multivariate models examined the effect of the intervention and, if significant, univariate analyses were conducted as a follow-up.

3.2 | Main analyses: Pretest and posttest differences on outcome measures

3.2.1 | Mindfulness

For mindfulness, a significant main effect of time emerged ($F(1, 84) = 24.90, p < .001$, partial $\eta^2 = .23$), but was qualified by a significant interaction of time \times group ($F(1, 84) = 24.06, p < .001, \eta^2 = .22$). The MBP and SEL intervention group showed a greater increase in mindfulness than the control group.

3.2.2 | Emotional competence

Repeated measures analyses examined differences across baseline and posttest scores of the emotional intelligence measures. Teacher status was included as a covariate. A significant main effect of time emerged for emotion perception ($F(1, 84) = 11.18, p < .001$, partial $\eta^2 = .12$). A significant interaction of time \times teacher status also emerged ($F(1, 84) = 11.17, p < .001, \eta^2 = .12$). Emotion perception increased more significantly from pre- to posttest for participants with teaching experience. For emotion understanding, a significant main effect of time emerged ($F(1, 84) = 258.96, p < .001$, partial $\eta^2 = .75$), such that the ability to understand emotions increased from baseline to posttest for both groups. A significant interaction of time \times teacher status also emerged ($F(1, 84) = 10.31, p < .002, \eta^2 = .11$). Emotion understanding increased more significantly after the intervention for participants with teaching experience. For emotion use, a significant main effect of time ($F(1, 84) = 11.25, p < .001$, partial $\eta^2 = .12$). Emotion use increased from baseline to posttest for both groups. A significant interaction of time \times teacher status also emerged ($F(1, 84) = 10.31, p < .002, \eta^2 = .11$). Emotion use increased more significantly for participants with teaching experience. There was a significant main effect of time ($F(1, 84) = 180.84, p < .001$, partial $\eta^2 = .68$). Emotion management ability increased from baseline to posttest for both groups. A significant interaction of time \times teacher status also emerged ($F(1, 84) = 5.63, p < .02, \eta^2 = .06$). A significant time \times group interaction also emerged ($F(1, 84) = 7.77, p < .01$, partial $\eta^2 = .09$), and the intervention group experienced a larger increase than the control group, even after accounting for teacher status.

For negative display rules, a significant main effect of time was found ($F(1, 84) = 13.56, p < .001$, partial $\eta^2 = .14$), with both groups showing increases in negative display rules from pre- to posttest. A significant time \times group interaction

TABLE 1 Means and standard deviations for study variables across group ($n = 87$)

Variables	Intervention Pretest		Intervention Posttest		Control Pretest		Control Posttest	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Mindfulness	42.48	8.74	47.56	8.73	51.37	8.24	47.59	7.09
Perceiving emotions	3.91	.57	4.10	.74	3.73	.69	3.84	.91
Using emotions	2.81	.46	4.46	.65	2.81	.45	4.07	.82
Understanding emotions	3.90	1.03	4.59	.47	3.56	1.21	4.32	.82
Managing emotions	2.84	.53	4.48	.65	3.11	.44	4.18	.75
Positive display rules	4.04	1.02	4.26	.77	4.39	.65	4.42	.79
Negative display rules	3.48	1.11	4.46	.76	3.52	.79	3.88	.88
Academic costs	2.31	.50	2.24	.49	4.46	.76	3.99	1.03
Social costs	2.66	.58	4.29	.84	2.69	.69	3.93	.91

TABLE 2 Means and standard deviations for study variables across group ($n = 87$)

Variables	Teaching Experience		Teaching Experience		No Teaching Experience		No Teaching Experience	
	Intervention Pretest		Intervention Posttest		Control Pretest		Control Posttest	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Mindfulness	46.38	8.54	48.30	7.09	43.98	9.40	50.39	8.40
Perceiving emotions	3.91	.69	3.68	.84	3.74	.59	3.68	.84
Using emotions	2.79	.37	3.92	.68	2.83	.51	4.54	.72
Understanding emotions	3.38	1.12	4.49	.57	4.02	1.06	4.43	.76
Managing emotions	3.11	.47	4.16	.68	2.87	.51	4.46	.72
Positive display rules	4.09	.93	4.31	.86	4.31	.80	4.36	.72
Negative display rules	3.59	.82	4.10	.84	3.43	1.06	4.22	.90
Academic costs	2.31	1.50	4.42	.57	2.23	.54	4.05	1.13
Social costs	2.76	.73	3.94	.84	2.60	.54	4.24	.90

was also found ($F(1,84) = 3.75, p < .05$, partial $\eta^2 = .43$). Both groups showed an increase in negative display rules, but intervention participants showed a greater change. Descriptive data are presented in Tables 1 and 2.

3.2.3 | Challenging child behavior

The next repeated measures MANCOVA involving baseline and posttest scores was an omnibus test of preservice teachers' beliefs about the costs of challenging behavior to children's academic and social outcomes. There was a significant main effect of time for cognitive costs ($F(1, 84) = 147.99, p < .001$, partial $\eta^2 = .63$), with participants in both groups perceiving a greater cognitive cost to misbehaving children at the posttest assessment. A significant time \times group interaction was also found ($F(1,84) = 5.03, p < .01$, partial $\eta^2 = .06$). The intervention group experienced a larger

increase than the control group even after accounting for teacher status. For social costs, a significant main effect of time was found ($F(1, 84) = 110.89, p < .001, \text{partial } \eta^2 = .57$), with participants in both groups perceiving a greater social cost to misbehaving children at the posttest assessment.

3.2.4 | Mediation analyses

Across groups, changes in mindfulness, the ability to perceive, understand, use, and manage emotions were all associated with teachers' beliefs about the costs (i.e., negative effects) of children's challenging classroom behavior to their social development (all $ps < .01$). Thus, conditions were met for a test of potential mediation effects of the intervention on changes in mindfulness and emotional competence, which could, in turn, be associated with the costs to social development. For mediation to occur, the following conditions have to be met: (1) group had to have a significant effect on social costs, and (2) group had to have a significant effect on the potential mediators (change in mindfulness and emotional competence), and the potential mediator was associated with change in the social costs measure, after accounting for group. The group variable was only marginally related to beliefs about social costs ($F(1, 85) = 2.92, p < .09$), indicating that further testing of this variable was not warranted.

4 | DISCUSSION

Preservice, beginning, and experienced teachers all report insecurity regarding their ability to deal with work-related emotions and challenging student behaviors and emotions (Boulton, 1997). Following Jennings and Greenberg's (2009) prosocial classroom model, the present study explored whether a brief small-scaled MBP infused with SEL training could improve preservice teachers' mindfulness and emotional competence. Another objective was to determine whether increases in both could result in changes in preservice teachers' perceptions of student misbehavior.

4.1 | Mindfulness

Consistent with our hypotheses, mindfulness scores increased from baseline to posttest for both groups, but increased more significantly for the MBP and SEL intervention participants. Previous research has demonstrated that training in MBP alone does not always result in increased mindfulness or stress reduction for preservice teachers, especially when the allotted practice time is limited (Brown, 2017). The present moment focus, attentional self-awareness, and sustained engagement of mindfulness meditation, when accompanied by training in aspects of emotional competence, may produce changes in the ability to bring awareness to everyday activities in ways that could reduce stress for beginning teachers (Linehan, 2014). Participation in a comprehensive MBP program that includes gentle stretching, body awareness, mindfulness, and training in compassion for self and others can improve preservice teachers' mindfulness and well-being (Hue & Lau, 2015). It could also be that mindfulness meditation may focus more specifically on encouraging acceptance and not on developing change skills that include SEL elements. Our data suggest that a less comprehensive program of meditation and breathing awareness can also result in positive outcomes for beginning teachers.

4.2 | Emotional competence

Teachers experience a wide variety of emotions of significant intensity when teaching, interacting with students, parents, other members of the school community, and in relation to educational policies (Burić, Penezić, & Sorić, 2017). Awareness, understanding, and regulation of emotion within and beyond the school context contribute to teachers' instructional effectiveness, student-teacher relational quality, and overall job satisfaction (Frenzel, 2014). Emotional competence also plays an important role in well-being, work engagement, and teaching self-efficacy (Burić, & Macuka, 2017; Day & Qing, 2009) and can predict teacher retention and attrition and conceptions of classroom

management (Hong, 2012). However, the bulk of research on teacher emotions has focused on the construct of emotion regulation, despite the fact that a lack of emotion awareness and the inability to understand emotions may also operate to detract from teachers' stress and well-being. Emotional competence may help teachers attend to and make sense of their own social-emotional concerns as they relate to teaching (Nizielski, Hallum, Lopes, & Schütz, 2012).

Congruent with the prosocial classroom model, we found that participation in a MBP program infused with SEL content can positively impact preservice teachers' ability to perceive, understand, use, as well as regulate emotions. Our findings hint at the fact that a proactive approach that allows for training before students take on a more formal classroom role may offer a particularly useful opportunity for the development of emotion-related skills that can facilitate teacher resilience. Emotion-based intervention programs can enhance employability (Nelis et al., 2011) and individuals prone to experiencing high levels of work stress benefit from participation in an intervention that promotes mindfulness and emotional competence (Williams, Ciarrochi, & Deane, 2010). Our findings lend support to proposals that encourage SEL-related training for all preservice teachers.

Teaching experience also contributed to the strength of the associations we observed. Most teachers do not receive any training about how to support children's emotional competence during teacher preparation (Schonert-Reichl, Hanson-Peterson, & Hymel, 2015). Preservice teachers with experience as either teacher assistants or preschool teachers have had more classroom opportunities to practice regulating their own emotions and observing how children's emotions contribute to the experience of teaching and to children's developmental outcomes. This greater exposure to classroom emotion could mean that they were already more stressed, which could have made them more amenable to the MBP/SEL intervention.

We also found that participants in both groups showed an increase in the reported use of negative display rules (i.e., the demands to suppress negative classroom emotion), although the intervention group showed a greater boost. Emotional display rules represent the ability to exercise control of one's emotions in accordance with professional norms (Goldberg & Grandey, 2007; Hochschild, 1983; Kramer & Hess, 2002). The inauthentic or required display of specific emotions in professional settings can result in burnout (Brotheridge & Grandey, 2002). When individuals experience display rule autonomy and are able to express negative emotions in adaptive ways, they may experience low levels of stress-induced physiological arousal, which should require less effortful control to manage their feelings (Goldberg & Grandey, 2007). The lack of effect for positive display rules was not entirely unexpected as they often result in inauthenticity and burnout (Goldberg & Grandey, 2007). Training in MBP and SEL may help preservice teachers learn to internalize the regulation of negative emotion as a part of their professional identities as teachers (Zembylas, 2005).

Another key finding was that increases in mindfulness and emotional competence from pretest to posttest were associated with preservice teachers' perceptions of how children's negative classroom behavior can affect their academic and social developmental outcomes. Training in mindfulness and SEL may make a meaningful difference in preservice teachers' own well-being and emotional competence, which could positively impact their interpretations of children's challenging behavior. Preservice teachers who are mindful as well as emotionally competent may be particularly able to respond appropriately to distressed students (Garner, Moses, & Waajid, 2013) and less likely to approach students from a deficit-oriented perspective (Clonan, Chafouleas, McDougal, & Riley-Tillman, 2004).

4.3 | Implications for practice

Research on the critical role of teachers in enhancing social-emotional competencies at school is increasing (Hemmeter, Ostrosky, & Fox, 2006). However, training for teachers in this area is not keeping pace with the research (Klassen, Perry, & Frenzel, 2012). Approximately two-thirds of teachers perceive themselves as being moderately or poorly prepared for understanding and regulating emotions at work (Onchwari, 2010). Researchers have found that there are minimal opportunities for training once students leave the university classroom (Foster, Johnson-Shelton, & Taylor, 2007), which suggests that preservice training in this area is critical (Palomera et al., 2008). An intermediate

step may be in the form of workshops that allow for experiential and active learning, at least in the case of social-emotional concepts. Our findings also suggest that integrating knowledge about SEL into teacher training may provide an important opportunity to build the personal and professional emotional resilience of emerging teachers who, from all accounts, will face enormous challenges in their teaching roles (Gu & Day, 2007). Undergraduate students low in emotion-related competence have a more difficult time adjusting to college than their more competent peers, regardless of major (Kerr, Johnson, Gans, & Krumrine, 2004), a finding that suggests that SEL training may benefit all undergraduate students.

Understanding the perspective of the teachers, especially those beginning their careers, can contribute to the development of evidence-based SEL interventions and provide ideas about how to infuse this content into traditional lessons (Elias & Leverett, 2011; McGoey et al., 2014). Offering mindfulness-based SEL training to beginning teachers may help to improve teacher well-being and to identify instructional placements for teachers that allow for a greater classroom “fit” for emotionally and behaviorally dysregulated students, practices that would benefit both teachers and students (Miller & Nickerson, 2007).

4.4 | Study limitations and future directions

This research has several limitations. First, some of the preservice teachers were employed as preschool teachers or teacher assistants. However, all of the participants were working toward their undergraduate degrees. Our inclusion of students about to enter the classroom as professional teachers allowed us to demonstrate that efforts to improve prospective teachers' readiness for the emotional challenges for teaching should begin before they get to the classroom (see Kemeny et al., 2012). Beginning teachers are often called on to implement SEL interventions in their classrooms and having a “head start” could improve the outcomes that are achieved for these programs. This makes for an indirect linkage between the kind of training we offered and potential outcomes for students. Still, we did not include direct measures of preservice teachers' classroom interactions with students. We also acknowledge that the intervention was relatively brief. It will be important to examine whether the improvements we observed can be maintained. Despite these limitations, our results reinforce the notion that preservice teachers' well-being can be enhanced by a brief MBP/SEL program. Moreover, although MBP and SEL programs are both aimed at the development of emotion-related skills that can be used to cope adaptively with personal and work-related challenges (Lawlor, 2016), our results suggest that the variable elements of the programs may target these skills from a unique perspective. Understanding more about how this occurs should be an area for future research.

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