
CARE for Teachers: A Mindfulness-Based Approach to Promoting Teachers' Social and Emotional Competence and Well-Being

9

Patricia A. Jennings

Introduction

Teacher quality has grown to become a top priority of our national policy agenda of improving student academic achievement (Wilson et al., 2008). One important dimension of teacher quality involves psychological qualities such as kindness, patience, and flexibility associated with teachers' ability to provide emotional support to their students (Strong, 2011). Especially relevant to this section of this handbook is the mounting evidence that teachers' emotional support adds value to instructional support in narrowing the achievement gap among children at risk of school failure (Crosnoe et al., 2010; Hamre & Pianta, 2005; Howes et al., 2008; Pianta, Belsky, Vandergrift, Houts, & Morrison, 2008).

Emotional support encompasses classroom warmth and child-centeredness as well as teachers' responsiveness towards specific children (NICHD-ECCRN, 2002, 2004). High-quality instructional support is characterized by interactions with students that are direct, intentional, focused, and characterized by feedback linked to student achievement (Hamre & Pianta, 2005). Teachers' skillful application of instructional and

emotional support contributes to a classroom environment that promotes both prosocial behavior and academic success (Oliver & Reschly, 2007). Furthermore, student attachment to school predicts school success, especially among high-risk students, and teachers play a critical role in helping such students feel connected to their school by way of the emotional climate they create in the classroom (Bergin & Bergin, 2009).

However, teachers face challenges that undermine their ability to provide instructional and emotional support to their students. Growing numbers of children come to school unprepared, many with serious behavior problems (Gilliam, 2005; U.S. Department of Health and Human Services, 2000). Disruptive behavior is a problem particularly in classrooms of economically disadvantaged students (Oliver & Reschly, 2007), and the advent of accountability linked to high stakes testing may intensify teacher distress, especially among those who serve children at most risk of school failure (Darling-Hammond & Sykes, 2003).

Indeed, regulating negative emotional reactivity in response to challenging student behaviors is a major stressor for classroom teachers (Carson, Weiss, & Templin, 2010; Montgomery & Rupp, 2005; Sutton & Wheatley, 2003). Experiencing frequent negative emotions may reduce teachers' intrinsic motivation and teaching efficacy (Kavanagh & Bower, 1985). Over time, high levels of emotional stress can affect teachers' performance, may lead to burnout (Tsouloupas,

P.A. Jennings (✉)
Curry School of Education, University of Virginia,
Charlottesville, VA, USA
e-mail: tishjennings@virginia.edu

Carson, Matthews, Grawitch, & Barber, 2010), and may increase the likelihood of a downward spiral of deteriorating teacher performance and student behavior (Osher et al., 2007). In contrast, teachers who regularly experience more positive emotions may experience more resilience (Cohn, Brown, Fredrickson, Milkels, & Conway, 2009; Gu & Day, 2007).

Supporting teachers' well-being and their social and emotional competence (SEC) to manage stress and emotion reactivity in the context of the classroom may be key to optimizing their teaching effectiveness. Managing the social and emotional dynamics of the classroom in a manner that promotes a warm and caring emotional climate most conducive to learning requires that teachers regulate their emotional reactivity in response to student disruptions. Teachers function best when they can both downregulate intense negative emotions, such as anger and frustration, and upregulate positive emotions, such as enthusiasm and interest, in ways that do not threaten their health (Jennings, 2015).

Evidence supports the need for specialized professional development that promotes teachers' well-being and SEC to improve teachers' resilience and reduce their occupational stress, burnout, and attrition thereby improving teachers' capacity to provide well-organized and instructionally and emotionally supportive classrooms, especially in high-risk settings where the most beneficial impacts of such classrooms, as discussed above, are found for the most educationally vulnerable students (Jennings & Greenberg, 2009).

The Prosocial Classroom Model

We developed the Prosocial Classroom theoretical model to explicate the systemic importance of teachers' SEC and well-being for classroom and student impacts (Jennings & Greenberg, 2009; see Fig. 9.1). The model presents an organizational framework proposing that a teacher's well-being and SEC influence the classroom climate and student outcomes. This effect is mediated by the quality of teacher–student relationships,

classroom management, and social and emotional learning (SEL) instruction. We used this model as a guide in the development and researching of professional development programs aimed at cultivating teachers SEC and well-being.

The Collaborative for Academic, Social, and Emotional Learning (CASEL) defines SEC in terms of five competencies: self-awareness, self-regulation, relationship skills, responsible decision-making, and social awareness (Zins, Weissberg, Wang, & Walberg, 2004). Two of these competencies, self-awareness and self-management, are intrapersonal skills. Self-awareness involves the ability to notice and monitor one's emotions, and the thoughts and physical sensations associated with them. It also involves the ability to accurately assess and accept one's strengths and weaknesses with self-compassion. Self-management involves the ability to self-regulate emotional reactivity and associated cognitions and behavior, even in the midst of emotionally provocative situations. Relationship skills, responsible decision-making, and social awareness are intrapersonal skills. Relationship skills include perspective-taking, empathy, and compassion, and facilitate the development and maintenance of supportive interpersonal relationships. The competency of responsible decision-making is the ability to apply relationships skills, self-regulation, and self-responsibility to considering situations and making decisions that take into account multiple needs and perspectives. Finally, the competency of social awareness involves the understanding of how social groups function.

The Prosocial Classroom model proposes that teachers with higher levels of SEC have more supportive relationships with their students, utilize more effective classroom management strategies and more effectively teach social and emotional skills to their students. Teachers who recognize and understand students' emotions and their associated cognitive appraisals are more able to understand their motivations and respond to their needs accordingly. For example, if a teacher understands that her student's disruptive behavior and emotional reactivity results from problems at home, she is better prepared to

The Prosocial Classroom Model

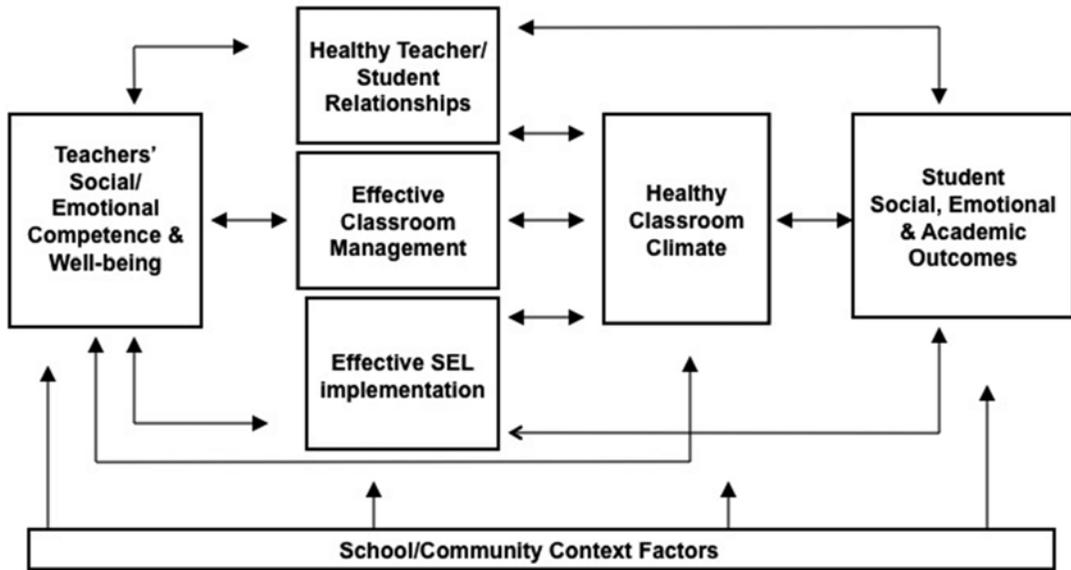


Fig. 9.1 A model of teacher well-being and social and emotional competence, support and classroom and student outcomes. From: Jennings, P.A. & Greenberg, M.T. (2009). *The Prosocial classroom: Teacher social and emo-*

tional competence in relation to student and classroom outcomes. Review of Educational Research, 79: 491–525. Reprinted with permission from SAGE Publications, Inc.

express empathy and help him self-regulate rather than resort to punitive or coercive methods of discipline.

Teachers with higher levels of SEC can better manage their classrooms. These teachers are more authoritative and proactive, monitoring changes in children's engagement and skillfully using their expressions of positive affect and verbal support to promote enthusiasm for learning and to guide student behavior with positive reinforcement. Finally, teachers' SEC supports their ability to successfully teach SEL curriculum. They act as role models and coaches as they apply extensive process-based SEL learning activities in everyday situations as they naturally occur in the classroom.

The Prosocial Classroom model hypothesizes a transactional relationship between these three elements (teacher-child relationships, classroom management, and SEL) and a healthy classroom climate. Accordingly, a healthy classroom climate directly contributes to students' social,

emotional, and academic outcomes. The healthy classroom climate may also reinforce a teacher's enjoyment of teaching, efficacy, and commitment to the profession thereby generating a positive feedback loop that may prevent teacher burnout.

Finally, the model hypothesizes that SEC is context dependent; the SEC of the average adult may not be adequate to successfully manage the specific social and emotional demands of the classroom. However, we propose that the SEC required for the classroom context can be developed through specific training (Jennings & Greenberg, 2009).

In line with the Prosocial Classroom model, teachers' SEC and well-being are hypothesized to be reflected in teachers' classroom behavior (e.g., teaching and management style, interactions with students). These interactions are a primary mechanism through which classroom experiences affect development; for example, teachers with higher levels of SEC may provide higher levels of classroom organization and

emotional and instructional support associated with quality classroom climate (Hamre & Pianta, 2001).

Results of our research have begun to confirm the hypothesized relationships between teachers' SEC and well-being and quality classroom climate. In a study involving a sample of 35 pre-school teachers, we found correlations between teachers' SEC and well-being, and dimensions of supportive classroom climate (Jennings, 2015). For this study, we operationalized SEC as high levels of self-reported mindfulness, self-compassion, and efficacy and well-being as high levels of self-reported positive affect and low levels of self-reported negative affect, depressive symptoms, and burnout.

To measure classroom climate, we used the pre-K version of the *Classroom Assessment Scoring System* (CLASS) observational measure of classroom climate (Pianta, La Paro, & Hamre, 2008). The pre-K CLASS rating system assesses three domains of classroom climate: (a) *emotional support*, (b) *classroom organization*, and (c) *instructional support*. Each domain is composed of dimensions that operationalize teacher–student and student–student interactions. *Emotional support* consists of the dimensions: *positive climate*, *negative climate*, *teacher sensitivity*, and *regard for student perspectives*. *Classroom organization* consists of the dimensions: *behavior management*, *productivity*, and *instructional learning formats*. *Instructional support* is composed of the dimensions: *concept development*, *quality of feedback*, and *language modeling*.

We conducted Pearson correlation analyses comparing scores on the self-report measures and scores on the three domains of the CLASS. Three of the five factors of the *Five Facet Mindfulness Questionnaire* (FFMQ; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006) and *self-compassion* as measured by the *Self-Compassion Scale* (SCS; Neff, 2003) were significantly correlated with the *emotional support* domain of the CLASS: *describe* ($r = .52, p < .01$), *aware* ($r = .50, p < .01$), *non-judge* ($r = .59, p < .01$), and *self-compassion* ($r = .38, p < .05$). None of the correlations between the FFMQ factors and *self-compassion* and the

CLASS domains of *classroom organization* and *instructional support* were significant.

Personal efficacy, as measured by the *Teacher Efficacy Scale* (TES; Hoy & Woolfolk, 1990), and *positive affect* as measured by the *Positive and Negative Affect Schedule* (PANAS; Watson, Clark, & Tellegen, 1988), were significantly correlated with the *emotional support* domain of the CLASS ($r = .39, p < .05$ and $r = .40, p < .05$, respectively).

Two factors of burnout as measured by the *Maslach Burnout Inventory* (MBI; Maslach, Jackson, & Leiter, 1996) *emotional exhaustion* and *depersonalization* were significantly negatively correlated with *emotional support* ($r = -.35, p < .05$ and $r = -.46, p < .01$, respectively).

Depression as measured by the *Beck Depression Inventory* (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) was significantly negatively correlated with all three dimensions of the CLASS: *emotional support* ($r = -.42, p < .05$), *classroom organization* ($r = -.45, p < .01$), and *instructional support* ($r = -.51, p < .01$).

These findings suggest that teachers who are happy, mindful and self-compassionate and who feel efficacious are more likely to create and maintain an emotionally supportive classroom climate. They also suggest that teacher burnout and depression may have adverse effects on classroom climate.

In the same study, we also found support for the hypothesized relationship between teachers' SEC and well-being, and teachers' attitudes associated with supportive teacher–student relationship quality. The same sample of teachers responded to interview questions about a student who they felt exhibited challenging behavior. These responses were coded to reflect patterns or internal working models of expectations, feelings, and beliefs that are reflected in teacher–student relationships following the interview and coding protocol from the *Teacher Relationship Interview* (TRI; Stuhlman & Pianta, 2001). The study focused on two dimensions of relationship quality: *perspective taking* and *sensitivity of discipline*.

The *observe* factor of the FFMQ was significantly correlated with *perspective taking* ($r=.37, p<.05$) and the *aware* factor of the FFMQ was significantly correlated with *sensitivity of discipline* ($r=.41, p<.05$). Both *personal efficacy* and *teaching efficacy* were significantly correlated with *sensitivity of discipline* ($r=.40, p<.05$, and $r=.35, p<.05$, respectively). The *depersonalization* factor of the MBI was significantly negatively correlated with *sensitivity of discipline* ($r=-.46, p<.01$). These results suggest that teachers who are more mindful and efficacious demonstrate more supportive attitudes towards those students whose behavior they find challenging. They also suggest that teachers who report high levels of *depersonalization* demonstrate less sensitivity in their attitudes towards the discipline of challenging students.

Mindful Awareness Practices May Promote SEC

Considering the high social and emotional demands of teaching, and the importance of teachers' SEC and well-being for high-quality classroom climates, it is surprising that teachers rarely receive instruction in SEC (Sutton & Wheatley, 2003). Although much intervention work has focused on the social-emotional skill development of students, little has focused on teachers' development in this area.

A promising approach for cultivating teachers' SEC and well-being is through mindfulness-based contemplative practices (Brown, Ryan, & Creswell, 2007; Grossman, Niemann, Schmidt, & Walach, 2004; Jennings, Lantieri, & Roeser, 2012; Kabat-Zinn, 1990). Consistent with our conceptualization of SEC, *mindful awareness practices* (MAPs) engage and promote self-awareness and self-regulation through a "non-elaborative, nonjudgmental, present-centered awareness in which each thought, feeling, or sensation that arises in the attentional field is acknowledged and accepted as it is" (Bishop et al., 2004, p. 232). This practice involves two

primary mechanisms: *self-regulation of attention* and *non-judgmental awareness*. *Self-regulation of attention* promotes awareness of one's emotional and cognitive experience as it occurs moment-to-moment. *Non-judgmental awareness* is characterized by curiosity, openness, and acceptance of one's moment-to-moment experience.

Practicing mindfulness enhances self-regulatory processes that promote well-being and buffer against psychological distress (Jimenez, Niles, & Park, 2010). A recent study found that contemplative practice results in changes to the brain associated with more effective stress management. MRI brain scans taken before and after an 8-week Mindfulness-Based Stress Reduction (MBSR) program found increased gray matter in the hippocampus, an area important for learning and memory and a reduction of gray matter in the amygdala, a region associated with anxiety and stress. The control group participants who did not practice mindfulness showed no such changes (Hölzel et al., 2011).

Mindfulness may facilitate emotional self-awareness (Brown & Ryan, 2003) and contribute to engagement or *psychological presence*, defined as "feeling open to oneself and others, connected to work and others, complete rather than fragmented, and within rather than without the boundaries of a given role" (Kahn, 1992, p. 322). Thus, MAPs may support the ability to reflect upon one's internal and external experience from a broader perspective, one that allows for a wider variety of interpretations of and responses to stressful situations (Zelazo & Cunningham, 2007). As a result, mindfulness-based interventions (MBIs) may be ideally suited to the promotion of the teachers' SEC and well-being.

Since MBIs promote cognitive flexibility (Kashdan & Rottenberg, 2010) and self-reflection, they may help teachers overcome the tendency to make automatic, reactive appraisals of students' behavior that contribute to emotional exhaustion (Chang, 2009) and that may negatively impact the classroom emotional climate. In this way, developing greater mindful awareness may support both effective classroom management and caring.

Indeed his kind of *mental set* has been associated with effective classroom management (Marzano, Marzano, & Pickering, 2003).

Mindfulness-Based Approaches to Promoting Teachers' Well-Being and SEC

Over the past decade, several MBIs have been developed and tested with samples of teachers (Jennings et al., 2012). The Cultivating Emotional Balance (CEB) program was tested on a sample of teachers in 2005 and 2006 involving MAPs in combination with emotion skills training. CEB utilizes Ekman's (2004) Emotion Awareness Training system for teaching emotion awareness and mindfulness training developed by Wallace (2005). This hybrid intervention model involves 8 weeks (42 h) of training designed to reduce destructive enactment of the emotions and enhance empathy and compassion.

Tested on a sample of 82 female teachers (preK–12) utilizing a randomized, controlled trial design, the training significantly reduced self-reported depressive symptoms and rumination and increased emotional self-awareness (Kemeny et al., 2012). Female teachers were chosen for the study because measures of cortisol reactivity were included and there can be differential effects by sex. Since it would be difficult to recruit equal numbers of men and women teachers the researchers excluded men.

While the results of CEB have been promising, the intervention was not specifically designed for teachers or focused on improving their performance in the classroom: CEB is a generic model designed for use with any group of healthy adults. To examine whether changes in teachers' well-being found in the original CEB trial translate into improvements in teachers' classroom behavior and classroom climate, we performed a pilot randomized controlled trial examining classroom climate, attitudes towards challenging students, and teachers' SEC and well-being. Results replicated the previous findings that CEB improved teachers' well-being and demonstrated significant improvements in teachers' attitudes about

students they reported as difficult. However, it did not demonstrate effects on teachers' classroom behavior or classroom climate, suggesting that MBIs and emotion skills training may need to be tailored to specifically address the particular challenges of teaching in order for them to change teaching behavior (Jennings, 2007).

CARE for Teachers

Building upon the CEB study and other research (Brown et al., 2007), the Garrison Institute in Garrison, New York began the development of a new intervention directed towards supporting teacher SEC and well-being as a means of improving classroom climate and student academic and social-emotional outcomes. Cultivating Awareness and Resilience in Education™ (CARE) was designed by a team of educators and scientific advisors to promote SEC and well-being to help teachers manage classroom stress and enliven their teaching in order to promote improvements in relationships with students, classroom management, and social-emotional learning.

The CARE program blends didactic instruction in the neuroscience of emotion with related experiential activities including time for group discussion and individual reflection. As a field-based in-service professional development program, CARE is typically presented during the school year in five daylong sessions. The first 4 days are spread out over 4–5 weeks, and a booster session is offered several months later. Facilitators coach teachers by phone and email between sessions to help them practice and apply new skills to their teaching. CARE is also offered to the public every summer in the form of a 5-day intensive retreat at the Garrison Institute.

The CARE Program Model

The CARE intervention aims to build teachers' SEC and well-being utilizing three primary instructional components: (a) emotion skills instruction, (b) mindfulness and stress reduction

practices, and (c) listening and compassion exercises (Jennings, 2011). Each component is described in detail below.

Emotion Skills Instruction Emotional exhaustion is a major contributor to teacher burnout and often interferes with teachers' functioning (Byrne, 1994). To address this problem, CARE introduces emotion skills instruction drawn from the neuroscience of emotion involving a combination of didactic instruction and experiential activities (e.g., reflective practices and role-plays) to support teachers' recognition of emotional states and exploration of their *emotional landscapes*—their habitual emotional patterns. CARE aims to help teachers to be more sensitive to students' needs, more aware of classroom emotional climate, and more able to regulate their emotions while managing provocative behavior. To promote resilience and the ability to reappraise emotionally challenging situations, CARE introduces the practice of self-induction of positive emotions (Cohn et al., 2009).

Mindfulness/Stress Reduction Practices CARE introduces a series of MAPs, beginning with short periods of silent reflection and extending to activities that bring mindfulness into aspects of daily living such as standing, walking, being present in front of a group, and listening to others. This series of activities culminates in mindful role-plays where teachers apply CARE skills to challenging situations that they face in their work settings. Through these activities, teachers learn to bring mindful awareness to their classroom management and their relationships with students, parents, and colleagues.

Caring and Listening Practices To promote empathy and compassion, CARE introduces *caring practice* and *mindful listening*. A secularized adaptation of the Buddhist *loving-kindness practice* or *metta*, caring practice involves silent reflection focused on generating feelings of care for self and others. Practiced over time this activity produces increases in daily experiences of

positive emotions and decreased illness and depressive symptoms (Fredrickson, Coffey, Pek, Cohn, & Finkel, 2008). Mindful listening exercises develop the skill to simply listen to another and apply mindful awareness to emotional reactions, such as urges to offer advice or judge, without acting upon them. These exercises are designed to help teachers listen more effectively to students and respond with greater sensitivity, especially during conflict situations where a calm, supportive presence can support conflict resolution.

CARE Logic Model The CARE program was designed to promote teachers' social and emotional development and well-being as hypothesized in the project logic model (Fig. 9.2). The CARE program elements are designed to improve teachers' well-being, efficacy, mindfulness, and to improve the classroom climate (e.g., classroom organization, instructional support, and emotional support). The model proposes that these teacher and classroom improvements reinforce each other and contribute to improvements in students' academic and social and emotional skills. Finally, it is expected that CARE will have a direct effect on student outcomes.

Research

Development and Evaluation Research In response to ongoing program evaluation, teachers overwhelmingly report that they enjoy CARE and find that it helps them deal with the emotions of teaching, resulting in improvements in classroom management and relationships with their students. The first pilot program was offered to a group of 17 public school teachers in Denver, CO. All the participants reported that the program benefited their professional lives. In response to open-ended questions about how the program had affected them, one teacher shared that CARE was "the most valuable, personally rewarding and important class that [she has] ever

CARE Logic Model

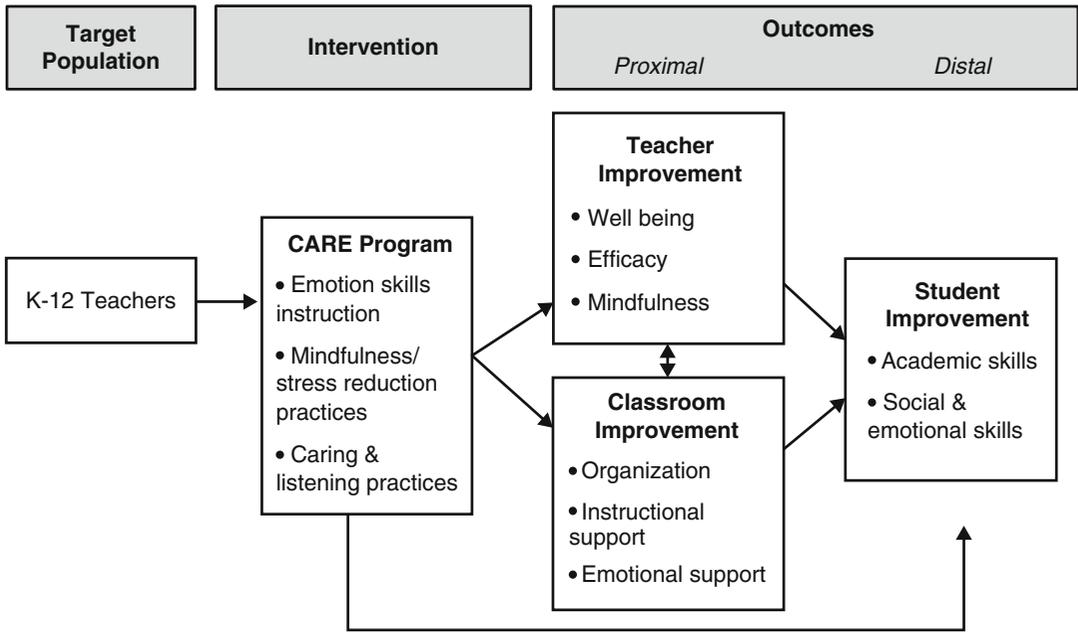


Fig. 9.2 CARE logic model

taken.” Another teacher commented, “I am more grounded and focused and able to deal better with uncomfortable situations that arise in my classroom.” According to another, “Now I have the tools to stay calm, reflective, appreciative, joyful and grateful every day, which will help me interact positively with my students and colleagues.” Another wrote, “I am learning to slow down, wait and respond rather than react. I am also taking better care of myself.”

A middle school teacher from this sample applied the caring practice to help him deal with his frustration and uncomfortable feelings in response to a difficult class. He wrote:

I am amazed at how the exploration of caring practice has changed my relationship with students. After focusing on the most challenging students in my “bad” class, things have started to change. This was the class that I used to dislike, grudgingly waiting for it to come every day, hoping that the challenging students may be absent. These feelings began to diminish as I used the caring practice in private, and I think the students noticed the subtle change. I have been in a much better mood when this class arrives, instead of immediately being on the defensive and anticipating a problem. This has increased my use of humor and personal talk with the students.

In April 2009, Wellspring conducted an evaluation of a series of summer retreats at the Garrison Institute in New York and a program offered to teachers at a private school outside of Philadelphia. Eighty-five participants with valid email addresses (out of 93 total participants) were invited to take the online evaluation survey (Jennings, 2011).

Most of the responding participants found CARE to be valuable and reported being highly likely or likely to recommend CARE to a colleague. Eighty-four percent said that CARE was highly important or important for their professional development, and 87 % strongly agreed or agreed that all teachers should receive this training. Comments included the following:

I now have a calm and unshakable feeling that is deep within me, and this helps me to stay present, grounded, focused, creative, and thankful for each of the little miracles that I experience each and every day!

I found the time to be some of the best spent time on training that I have had. I have implemented the strategies that I learned throughout a very difficult year and have offered some of the ideas to my colleagues and my student teachers.

The interpersonal (listening) work was very powerful. Most professional trainings lack this type of experiential component, which is the type of learning that stays with me.

I am much more present with my students throughout the day. I'm aware when emotions start to take over in a positive or negative way. This awareness helps me respond rather than react to a situation.

One teacher explained how CARE helped her be more responsive to a disruptive student:

CARE has given me the tools and skills to be more calm and centered. In a particular situation, I can act in response to what is needed in the moment rather than reacting to it. Taking deep breaths, I can calm myself down and notice what feelings his comments are triggering in me. I can see beyond his behavior (shouting, swearing, interrupting the class) into his feelings and the needs behind those feelings which triggered his reaction. This way of relating to myself and others is a more compassionate way that leads to open and honest communication. This provides a model to the student of how to relate to himself and to others with compassion. It creates an atmosphere of confidence, trust, and more joy in the classroom. (Jennings, 2011, p. 40)

In 2008, the U.S. Department of Education Institute of Educational Sciences (IES) awarded Pennsylvania State University and the Garrison Institute funding to complete the development and preliminary evaluation of CARE. A series of studies were conducted to examine whether CARE improves teachers' and student teachers' well-being and SEC and consequently whether it improves their ability to create and maintain a well-managed learning environment and provide optimal emotional and instructional support to their students (for full details of these studies see Jennings, Snowberg, Coccia, & Greenberg, 2011; Jennings, Frank, Snowberg, Coccia, & Greenberg, 2013; Schussler, Jennings, Sharp, & Frank, 2015).

The studies involved three samples: two samples of urban teachers working in high poverty schools ($N=39$ and 50) and one sample of student teachers and some of their mentors working in more affluent suburban and semi-rural schools ($N=43$). For these studies, we utilized most of the same measures reported above (Jennings, 2014), but we added a measure of time urgency to operationalize well-being (e.g., we hypothesized

that lower levels of time urgency would be evidence of well-being).

Studies 1 and 2 are reported in Jennings et al. (2011). In Study 1, we examined pre-post CARE changes among a sample of 31 teachers working in the urban setting. Two factors on the *Time Urgency Scale* (TUS; Landy, Rastegary, Thayer, & Colvin, 1991) showed significant ($p < .10$) change: *task-related hurry* ($d = .24$) and *general hurry* ($d = .27$), suggesting that teachers felt reduced stress associated with time demands. The most consistent significant effects were found among measures of mindfulness. We found significant ($p < .10$) improvement at post-test for the five facets of the FFMQ ranging in effect size from $d = .21$ to $.94$ and the *Mindfulness in Teaching Scale* (MTS; Frank, Jennings, & Greenberg, 2015) scores improved at post-test with an effect size of $d = .48$.

As expected, urban teachers found CARE to be enjoyable and beneficial to their teaching. Overall, participants reported high levels of satisfaction with the program and found it helpful in improving their classroom management and relationships with students. A majority reported improvements in their students' behavior and academic performance as a result of participating in CARE. Focus group data supported the program satisfaction findings and revealed that as a result of CARE, teachers developed a greater awareness of their stress and emotional reactivity and cultivated skills to better self-regulate in the midst of their busy working lives.

Study 2 involved a sample of student teachers and their mentors from a suburban/semi-rural district. This sub-study included random assignment to CARE or a wait-list control condition. At the pretest period, two groups were created from 43 subjects: a treatment group consisting of 16 students and five mentors and a control group consisting of 16 students and six mentors. In addition to the self-report measures used with the urban sample, the classrooms of these student teachers and their mentors were observed and rated using the CLASS measure (Pianta, La Paro & Hamre, 2008).

In this study, we hypothesized that CARE student teachers and their mentors would report

higher levels of autonomy supportiveness than controls. To test this hypothesis, we utilized the *Problems in Schools Questionnaire* (PIS; Deci, Schwartz, Sheinman, & Ryan, 1981). The PIS is based on Ryan and Deci's (2000) self-determination theory and assesses whether teachers are oriented towards controlling their students' behavior versus supporting their autonomy as it relates to promoting intrinsic motivation. In support of our hypothesis, we found a significant treatment effect on the PIS motivating total score ($p < .05$; $d = .63$).

However, contrary to our expectations, we found no significant treatment effects on measures of mindfulness or the dimensions of the CLASS. These student teachers and mentors did not report the same high level of satisfaction as found among the urban sample. Furthermore, the student teachers and mentors did not report high levels of engagement with the program nor the same beneficial personal or professional outcomes.

Several factors may elucidate the differences in findings across the two samples. The urban and suburban/semi-rural school environments are enormously different. The urban schools serve high-poverty neighborhoods with large numbers of children with behavioral and academic difficulties that put them at risk of school failure. These teachers reported that they had marginal institutional support. In contrast, student teachers and mentors worked in suburban/semi-rural school environments with lower numbers of children at-risk and stronger institutional support. The district was stable and well funded by a high local tax rate and had very low teacher turnover. Indeed, the mentor teachers were chosen to become mentors based upon their exceptional performance, and they reported that CARE did not provide new information but served as a reminder of an orientation that was familiar to them.

Although student teachers reported having high levels of stress associated with the pressure of academic performance (lesson plans, coursework, and performance evaluations), it is notable that CARE did not appear to be as relevant to their current needs as it did to the urban sample.

Sharing the program with mentors may have inhibited the uptake of the material by the student teachers, who may have been reluctant to openly express their concerns about classroom difficulties in the presence of their mentors. It may be especially important to take social hierarchies into account when planning and delivering such programs, as the presence of supervisors may inhibit participation. Furthermore, mentors, chosen for their superior teaching, may have provided a buffer for the student teachers, protecting them from the occupational stress that the urban sample of teachers reported. These contrasting results suggest that CARE may need modification to be helpful to student teachers.

During the second year of the IES-funded project, we conducted a pilot randomized, controlled trial involving 50 teachers from the same urban setting as Study 1 (Study 3) (Jennings et al., 2013). We randomly assigned teachers to receive CARE ($n = 23$) or become part of a wait-list control group ($n = 27$). To operationalize and measure well-being, we added the *Emotion Regulation Questionnaire* (Gross & John, 2003), the *Maslach Burnout Inventory* (MBI; Maslach et al., 1996), and *Daily Physical Symptoms* (DPS; Larsen & Kasimatis, 1997) to our self-report battery. A series of ANCOVAs, controlling for baseline measures, indicated that significant intervention effects were found on the *reappraisal* subscale of the ERQ ($F(1, 47) = 10.9$, $p = .002$; $d = .80$), and the DPS ($F(1, 47) = 10.2$, $p = .002$; $d = -.32$). Contrary to our hypothesis, we did not find intervention effects on the PANAS or a measure of depression, the *Center for Epidemiologic Studies Depression Scale* (CES-D-20; Radloff, 1977).

Significant and positive intervention effects were found for the total score on the *Teachers' Sense of Efficacy Questionnaire* (TSES; Tschannen-Moran & Woolfolk Hoy, 2001) ($F(1, 47) = 10.6$, $p = .002$; $d = .60$), efficacy in *student engagement* ($F(1, 47) = 10.3$, $p = .002$; $d = .56$), and sense of efficacy in *instruction* ($F(1, 47) = 11.6$, $p = .001$; $d = .59$). However, no significant intervention effects were found on the efficacy in *classroom management* subscale ($F(1, 47) = 2.3$, $p = .13$; $d = .24$).

Significant intervention effects were found on the *general hurry* subscale of the TUS ($F(1, 47)=5.4, p=.025; d=-.42$) and the *personal accomplishment* subscale of the MBI ($F(1, 47)=3.9, p=.05; d=.40$). Significant intervention effects were found for the *observe* ($F(1, 47)=9.8, p=.003; d=.69$) and *non-react* ($F(1, 47)=8.4, p=.006; d=.73$) subscales of the FFMQ. Significant intervention effects were also found on the FFMQ summary mindfulness score (average of all items) ($F(1, 47)=4.29, p=.044, d=.56$).

As in Study 1, CARE was well received by the participants. Most (93 %) reported that they “strongly agreed” or “agreed” that this type of program should be integrated into preparation and in-service training for all teachers. Participants reported that CARE improved their self-awareness (97 %, $n=28$) and well-being (93 %, $n=27$). Most “strongly agreed” or “agreed” that as a result of CARE they are “better able to manage classroom behaviors effectively and compassionately” (83 %, $n=24$) and are “better able to establish and maintain supportive relationships” with their students (79 %, $n=23$). Finally, participants noticed improvements in their students’ (“much better” or “better”) prosocial behavior (74 %, $n=20$), on-task behavior (74 %, $n=20$), and academic performance (65 %, $n=17$) as a result of their participation in CARE.

To better understand the mechanisms through which the CARE program affected teachers’ self-awareness, self-regulation, and aspects of their physical and emotional health, we conducted focus groups with the teachers who received CARE after the last quantitative data collection period was complete. There were four focus groups with 5–8 members each. These data were analyzed using explanatory design (McMillan, 2004).

In the focus groups, teachers described becoming more aware of how they physically held stress and also how they could alleviate it. For example, one participant said, “It has made me more aware of my posture before it gets to the headache. I better do some shoulder rolls or take some breaths.”

Some participants expressed recognition of the connection between their awareness of their physical stress and their awareness of their mental state of being. For example, one participant said, “I think [CARE] helps you make that connection between your physical feelings and your mental state of being.... When you feel tired, to realize that that’s affecting how you are going to think about things and how you are going to react to things in turn. I think it heightens the awareness of that.”

Teachers described how they became more aware of how they responded to others, especially their students. For example one teacher said, “I’m quicker to catch things coming out of my mouth or quicker to not react as fast which helps in the classroom.... I think it has helped me work through some of my ADHD tendencies of wanting to jump all the time, to think and be mindful of what and how I’m feeling and reacting.”

Participants reported that CARE helped them to become more aware of their emotions which then helped them to regulate their negative emotions. They reported that being able to maintain a more neutral, less emotionally charged state helped them relate to their students more effectively (Schussler et al., 2015).

Although further research is necessary to fully understand CARE’s effects for teachers working under various conditions, the results of Study 3 suggest that CARE is a promising intervention to support teachers experiencing the emotional stress of working in challenging settings. In this way, CARE may begin to address an important professional development need that has been long ignored by the education research community.

CARE’s Affect on Classroom Climate and Student Outcomes

To examine whether CARE’s affect on teachers’ SEC and well-being might translate into improvements in classroom climates and student behavioral and academic outcomes as suggested by the Prosocial Classroom model, we were awarded a second grant from IES to conduct a large efficacy trial of

CARE in the context of 36 schools across two cohorts of teachers located in high poverty neighborhoods of a large city located on the East Coast of the United States. Teachers were randomly assigned within schools to receive CARE or be part of a wait-list control group.

During the first year of this study (Cohort 1), we collected data from 51 teachers from 8 schools randomly assigned within schools to CARE ($n=25$) or a wait list control condition ($n=28$). Participants completed a battery of self-report measures at pre- and post-intervention to assess the impact of the CARE program on well-being, efficacy, burnout/time pressure, and mindfulness. ANCOVAs were computed between the CARE group and control group for each outcome, and the pretest scores served as a covariate.

Considering the limited sample size of Cohort 1, the preliminary results showed promise. Compared to teachers assigned to the control group, CARE participants were significantly ($p<.05$) less anxious ($d=-.77$) as measured by the *Generalized Anxiety Disorder* scale (Spitzer, Kroenke, Williams, & Lowe, 2006). They also reported a significantly ($p<.01$) reduced sense of *task-related hurry* ($d=-.40$) as measured by the TUS. We found significant ($p<.05$) increases in the *non-react* factor ($d=.44$) of the FFMQ and *total efficacy score* on the TES ($d=.27$).

There were trends towards improvements in *positive affect* as measured by the PANAS ($p=.12$, $d=.26$), *depression* ($p=.12$, $d=-.77$), as measured by the *Patient Health Questionnaire* (Kroenke & Spitzer, 2002), *emotional exhaustion* ($p=.15$, $d=-.59$), and *depersonalization* ($p=.12$, $d=-.26$) factors of the MBI, *sleep* as measured by the *Perceived Sleep Scale* ($p=.15$, $d=.55$), the *non-react* dimension of FFMQ and the *interpersonal awareness* dimension of MTS ($p=.08$, $d=.77$) (Jennings et al., 2014).

At the time of this writing, we had completed the collection of pre-post data on all 226 teachers (117 assigned to the intervention group and 107 assigned to the control group), their classrooms, and 5036 of their students. One more wave of follow-up data collection is scheduled for the fall of 2014 and preliminary data analyses are currently underway. These data will allow us to test

our hypotheses that teachers' participation in CARE has intervention effects on teachers, classrooms, and students and whether levels of risk among students moderate the effects of CARE on student outcomes.

Evaluation of Fidelity Fidelity measures were developed and piloted in preparation for Cohort 2 of the study described above which required two CARE programs delivered concurrently, only one of which was presented by a program developer. The *CARE Daily Session Fidelity Rating Form* was created to evaluate the percentage of core intervention components covered during the training, the degree to which participant objectives were achieved, and the time spent on each activity of the program. Quality of delivery was assessed with the *CARE Facilitator Skill Rating Form*. Participant engagement, knowledge of concepts, and satisfaction with the program were also assessed. Two project staff who helped develop the fidelity measures observed and rated the Cohort 1 CARE program with high interrater reliability (>80 %).

The Cohort 1 CARE program was presented with a high degree of fidelity to the intervention model. Ninety percent of the core components were covered and most participant objectives were met each day of training. As expected, of the 30 h spent in training, 6.5 were spent engaging in experiential and mindfulness practices. Participant engagement was high. Participating teachers attended an average of 4.22 (out of 5) days and scored high on the knowledge assessments ($M=95$ %). The overall mean facilitator rating for the entire program was 3.66 out of 4 (Doyle, Jennings, DeWeese, & Frank, 2014). Results from the second cohort are being analyzed at the time of this writing.

Future Directions

Given the high social and emotional demands of teaching, plus the high costs of teacher attrition, it is surprising that little work has explored teacher stress and burnout and how to prevent it. Indeed, it is surprising that there has never been a

large longitudinal study of teacher career development in the USA.

While there is strong evidence that nearly 50 % of teachers leave the profession within their first 5 years of teaching (Ingersoll, 2003; National Commission on Teaching and America's Future, 1996), there is little understanding regarding what factors contribute to this high level of attrition and what types of interventions might reduce it. Furthermore, evidence suggests that job satisfaction among teachers is in steep decline. In 2013, MetLife Survey of the American Teacher reported:

Teachers are less satisfied with their careers; in the past two years there has been a significant decline in teachers' satisfaction with their profession. In one of the most dramatic findings of the report, teacher satisfaction has decreased by 15 points since the MetLife Survey of the American Teacher measured job satisfaction two years ago, now reaching the lowest level of job satisfaction seen in the survey series in more than two decades. This decline in teacher satisfaction is coupled with large increases in the number of teachers who indicate that they are likely to leave teaching for another occupation and in the number who do not feel their jobs are secure. (MetLife, 2013, p. 3)

These data are alarming and point to the urgent need for larger and more comprehensive studies of teacher development and occupational stress. Research is needed to better understand the development and nature of teacher stress and burnout and to find the appropriate means for providing the skills to teachers to help them develop the resilience to maintain their commitment to the profession. Both longitudinal and intervention studies are required to better understand the personal characteristics associated with burnout and teacher performance and to explore what interventions may be most helpful to teachers at various stages in their careers, including pre-service teacher education.

While more research is needed to explore the mechanisms of teacher stress and how MAPs may help reduce stress and improve teachers' performance, preliminary research has demonstrated that MBIs show promise. The growing body of research pointing to the effectiveness of mindfulness in reducing stress and promoting well-being supports the movement to apply a

mindfulness-based approach to teacher professional development. Mindfulness-based approaches are also being applied to supporting students' stress reduction and learning. Indeed, mindfulness may be key to helping both teachers and students develop the resilience they need to maintain optimal affective and cognitive states for teaching and learning.

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