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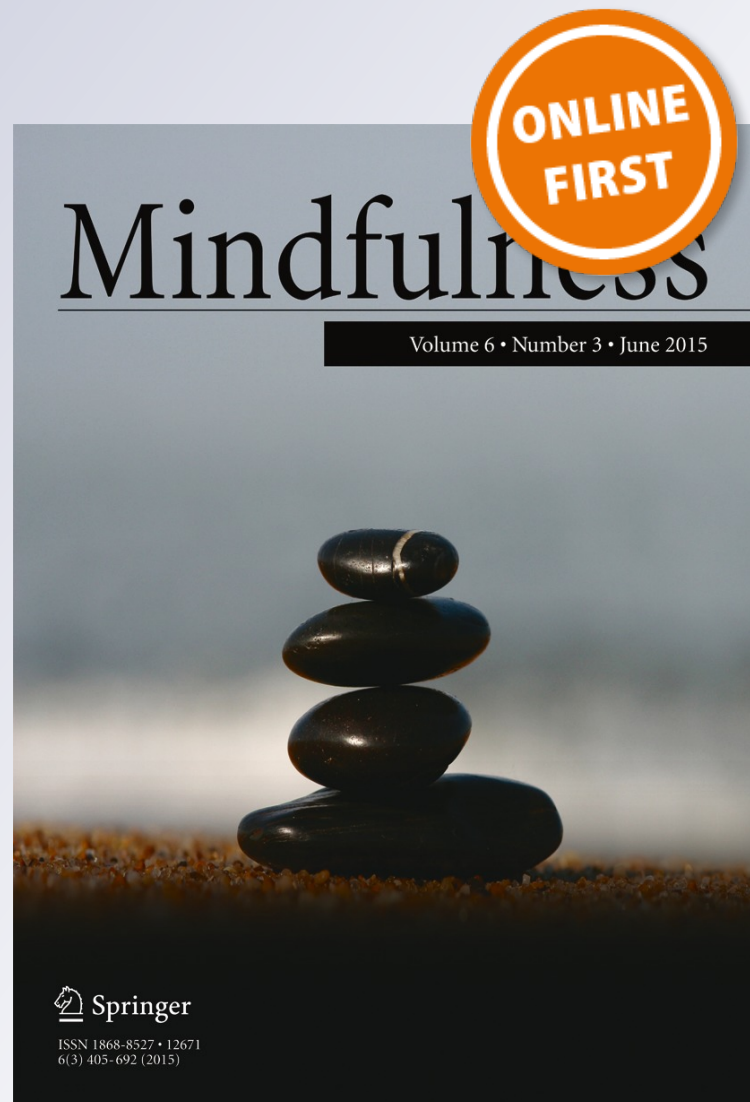
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Mindfulness

ISSN 1868-8527

Mindfulness

DOI 10.1007/s12671-015-0422-7



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Improving Teacher Awareness and Well-Being Through CARE: a Qualitative Analysis of the Underlying Mechanisms

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Abstract The heavy demands of teaching result in many teachers becoming alienated or burning out. Therefore, it is imperative to identify ways to support teachers' internal capacities for managing stress and promoting well-being. Mindfulness is an approach with a growing foundation of empirical support in clinical as well as education settings. Cultivating Awareness and Resilience in Education (CARE) is a mindfulness-based professional development program developed to improve teachers' awareness and well-being and to enhance classroom learning environments. Using an explanatory design, we analyzed data from four focus groups each with three to eight teachers who participated in CARE to explore the mechanisms underlying the intervention effects. Specifically, we examined if/how the CARE intervention affected teachers' awareness and analyzed why CARE affected particular aspects of teachers' physical and emotional health and why some aspects were not affected. Results suggest that participants developed greater self-awareness, including somatic awareness and the need to practice self-care. Participants also improved their ability to become less emotionally reactive. However, participants were less likely to explicitly articulate an improvement in their

teaching efficacy. Implications for professional development are discussed.

Keywords Burnout · Teacher stress · Teacher efficacy · Mindfulness · Professional development · Teacher health

Introduction

Teaching is an unqualified expression of the self (Palmer 1998), requiring a host of pedagogical and content competencies as well as social-emotional competencies, like interpersonal skills. In addition to promoting students' academic achievement, teachers are expected to nurture students' social-emotional and personal development, develop students' critical thinking skills, and ensure students' ability to engage in a vibrant democracy (MetLife 2002; Public Agenda 2002; Rose and Gallup 2000). With an expansion of the use of test scores to evaluate teacher performance and a proliferation of charter and alternative school options, the demand on teachers has increased while support for public education decreases. It is no wonder that many teachers experience heightened stress and *burnout*, with 50 % of teachers leaving the profession within the first 5 years of teaching (Ingersoll 2003; National Commission on Teaching and America's Future 1996).

Many teachers who remain in the profession experience the same burnout symptoms as those who leave. These symptoms include a deterioration in one's moral purpose and sense of efficacy due to mandated external pressures with which they feel forced to comply (MacDonald and Shirley 2009), feelings of hopelessness, exhaustion, or detachment (Maslach et al. 2001), or purposeful *depersonalization* marked by an overly detached or cynical attitude toward the students under the teachers' care (Maslach 1993; Skaalvik and Skaalvik 2010).

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In the absence of any tools to combat these conditions, the result may be a *burnout cascade* (Jennings and Greenberg 2009) whereby the environmental stressors prompt teachers' use of maladaptive, self-protective coping strategies, which further intensifies the problematic external conditions. In other words, teachers' attempts to cope only perpetuate the burnout cascade. For example, when teachers lack the pedagogical and social-emotional resources to effectively manage the emotional and behavioral challenges in their classrooms, children show lower levels of on-task behavior and performance, which leads to greater frustration and emotional exhaustion on the part of the teacher (Marzano et al. 2003). Under these conditions, stressed teachers may resort to reactive and excessively punitive responses that contribute to a self-sustaining cycle of classroom disruption (Osher et al. 2007) negatively affecting the student exhibiting off-task behavior and contributing to a contentious class climate.

Teachers may also inadvertently induce a negative cycle when they use an opposite coping strategy—withdrawal. According to Patterson's Coercive Interaction Cycle (1992), when teachers respond to students' problematic classroom behaviors in a negative, coercive manner, students frequently respond by intensifying their behavior. To avoid further aversive interactions, the teacher may then reduce task demands and therefore provide less instruction to students (Long et al. 2001; Walker et al. 1995). If students are allowed to escape task demands in this fashion, their behavior is reinforced and their opportunities to learn decrease, perpetuating more off-task behavior, compounding the teacher's stress, and negatively impacting the classroom climate.

Interrupting these negative cycles requires not only implementing effective classroom management techniques but also drawing on teachers' social-emotional competencies both to ameliorate teacher burnout and to create a more positive classroom climate. According to the Collaborative for Academic, Social, and Emotional Learning (2008), social-emotional competencies include self-awareness, self-management, social awareness, relationships skills, and responsible decision making. One way to improve teachers' social-emotional competencies, and thereby counteract burnout, is through mindfulness-based interventions (Jennings and Greenberg 2009). In clinical as well as educational settings, mindfulness programs are gaining traction as a means to support individuals' internal capacities for managing stress and promoting their well-being (Brown and Ryan 2003; Carmody and Baer 2007; Greenberg and Harris 2012; Herbert and Forman 2011; Lutz et al. 2008; Mendelson et al. 2010; Schure et al. 2008).

Most mindfulness programs in education settings are targeted at students (e.g., Broderick and Metz 2009; Cohen and Miller 2009; Flook et al. 2010; Mendelson et al. 2010) with a paucity of programs geared toward promoting the well-being of teachers. Because of this, the mechanisms explaining

how mindfulness counteracts teacher burnout are not yet understood. The programs that do exist (aka, Comprehensive Approach to Learning Mindfulness—CALM, Stress Management and Relaxation Techniques—SMART, and the program of the current study, Cultivating Awareness and Resilience in Education—CARE) offer emerging evidence about possible linkages between teacher awareness, well-being, burnout, emotion regulation, and compassion. CALM is a short (20 min) daily intervention involving yoga, somatic breathing, and intention-setting and caring practices (Abenavoli et al. 2013). SMART is based on Jon Kabat-Zinn's Mindfulness-Based Stress Reduction program with additional content on forgiveness, emotion regulation, and compassion practices all geared toward teachers (Benn et al. 2012; Roeser et al. 2013). CARE includes mindful awareness practice, emotion skills instruction, and compassion practice presented over the course of 6–8 weeks in an effort to improve teachers' awareness and well-being and to enhance classroom learning environments.

A common finding across programs is that mindfulness training may result in improved awareness, which may lead to improved physical and emotional well-being mediating teacher burnout. Results of quantitative studies on both CALM and SMART indicate that mindfulness improved teachers' attention and somatic awareness and lessened their negative affect (Abenavoli et al. 2013; Roeser et al. 2013). Specifically, teachers who participated in SMART demonstrated greater focused attention and working memory and greater awareness of physical sensations (Roeser et al. 2013), while teachers who participated in CALM showed a decrease in reported daily physical symptoms and negative affect (Abenavoli et al. 2013). Teachers who participated in CARE also showed a decrease in daily physical symptoms (Jennings et al. 2013). Abenavoli et al. found that the results on daily physical symptoms and negative affect mediated teachers' reports of emotional exhaustion and depersonalization, which are markers of teacher burnout. These results are consistent with results of mindfulness interventions with non-teacher populations whereby mindfulness interventions increased the individuals' awareness of physical symptoms associated with stress and concurrently improved psychological well-being by decreasing things like depressive symptoms, anxiety, negative affect, or rumination (Holland 2004; Mendelson et al. 2010; Noggle et al. 2012; Schure et al. 2008). Brown and Ryan (2003) hypothesized that because mindfulness contributes to increased self-knowledge, it is a key element in one's self-regulation.

In the studies of mindfulness-based programs for teachers, a relationship also may exist between self-awareness and emotion regulation, though this connection is not entirely clear. Findings from pre- and post-measures following CARE training in high-stress urban areas indicated that teachers showed improvements in their mindful awareness after receiving the

training (Jennings et al. 2013; Jennings et al. 2011). Researchers studying CALM and SMART found that mindfulness programs improved teachers' emotion regulation, but they could not make claims about the link to one's awareness (Abenavoli et al. 2013; Benn et al. 2012). Benn et al. (2012) hypothesized, "It seems reasonable to infer that as participants practiced mindfulness, they (a) became more aware and reflective of their typical response to salient emotional triggers (antecedent-focused strategies) and (b) learned how to disengage and recover more quickly from stressful encounters, using new techniques from MT [mindfulness training]" (p. 1483). For teachers, awareness and regulation of one's own emotions are critical to managing the behavior of others. Lack of self-awareness can result in misguided interpretations of another's intention and communication breakdowns that perpetuate negative interaction cycles for teachers and students (Altenbaugh 1998; Delpit 1995; Schussler et al. 2010). Furthermore, if teachers cannot regulate their emotional expressions effectively, they are more likely to unintentionally fall into coercive cycles with students by reacting to student behavior with anger and hostility (Emmer 1994; Emmer and Stough 2001). The ability to regulate emotions may help teachers to focus on student needs and to maintain constructive engagement during emotionally charged situations, rather than focus on their own frustrations and either disengage from the interaction or respond negatively.

Finally, a relationship may exist between better emotional regulation and greater compassion to others, though this causal link is not yet supported empirically. There is evidence that training in SMART enhanced teachers' self-compassion and compassion for others (Benn et al. 2012; Roeser et al. 2013). Benn et al. posited that mindfulness may enhance teachers' awareness of self and others such that they are "more clearly perceiving the other without the veil of clouded judgments and, as such, may encourage individuals to become kinder and more sensitive to the needs of others" (p. 1484). Among non-teacher populations, there also is some indication that mindfulness contributed to an increase in an individual's relational capacities, including an increase in empathy, compassion, social connectedness, and emotional intelligence (Cohen and Miller 2009; Schure et al. 2008). A positive emotional climate in the classroom is predicated on quality teacher-student relationships (Brackett et al. 2011; Hamre and Pianta 2001; Martin and Dowson 2009; Weinstein et al. 2010). Therefore, enhancing teachers' capacities for empathy and compassion is important for both the sake of the teacher as well as the likelihood of an improved classroom climate.

These relationships can be summarized as follows: Attention and self-awareness are likely precursors to physical and emotional well-being. Greater self-awareness may result in improved emotional regulation. Emotional regulation may relate to increased relational capacities. Therefore, mindfulness-based interventions may be ideally suited to

support the development of a mental set that is associated with enhanced teacher well-being and a positive classroom climate. These hypothetical effects of mindfulness training are presented in Fig. 1, the intervention logic model that guided the development of the CARE program (see Jennings et al. 2013). The logic model suggests that through teaching emotional regulation skills, mindful awareness, and caring and compassion practices, (1) teachers will experience improved general well-being, efficacy, and mindfulness, and (2) classroom climate will improve in the areas of classroom organization, instructional support, and emotional support (see Pianta et al. 2008). Furthermore, when teachers' physical and emotional health improves and the classroom climate improves, students will experience benefits such as better student-teacher relationships, increased academic achievement, and improved behavior.

A randomized controlled trial of CARE tested the hypothesis that, compared to controls, teachers who received CARE would show improvements in measures of general well-being, efficacy, burnout/time pressure, and mindfulness (see Jennings et al. 2013). General well-being includes teachers' overall physical and emotional health. Efficacy refers to teaching efficacy defined as teachers' beliefs about their capacity to positively affect aspects of students' learning and engagement (Tschannen-Moran and Hoy 2001). Burnout/time pressure includes high levels of emotional exhaustion and depersonalization, low levels of personal accomplishment (Maslach 1993), and behaviors indicative of hurrying. Mindfulness involves being aware, non-judgmental, and emotionally non-reactive and then acting from that state of mind (Baer et al. 2004). These pre-/post-data indicated whether teachers experienced change on pre-selected outcomes, yet the relationships between underlying mechanisms of mindfulness-based programs for teachers remain to be understood. In particular, the process of how the components of the intervention function to produce the theorized outcomes (e.g., the arrows on the logic model) remains largely unknown. The current study focuses primarily on one aspect of the logic model: the proximal outcomes related to teacher improvement. We specifically wanted to understand the role of CARE in influencing teacher awareness and to explore how different aspects of the program affected or did not affect teachers' physical and emotional health. Therefore, we used a qualitative, explanatory design (McMillan 2004), expanding on the results of the randomized control trial, to explore teachers' beliefs about how aspects of the CARE program related to proximal outcomes for the teacher. Our specific research questions were as follows: (1) Does the CARE program affect teachers' awareness and if so, how? (2) Why and how does CARE affect particular aspects of teachers' physical and emotional health and why are some aspects not affected?

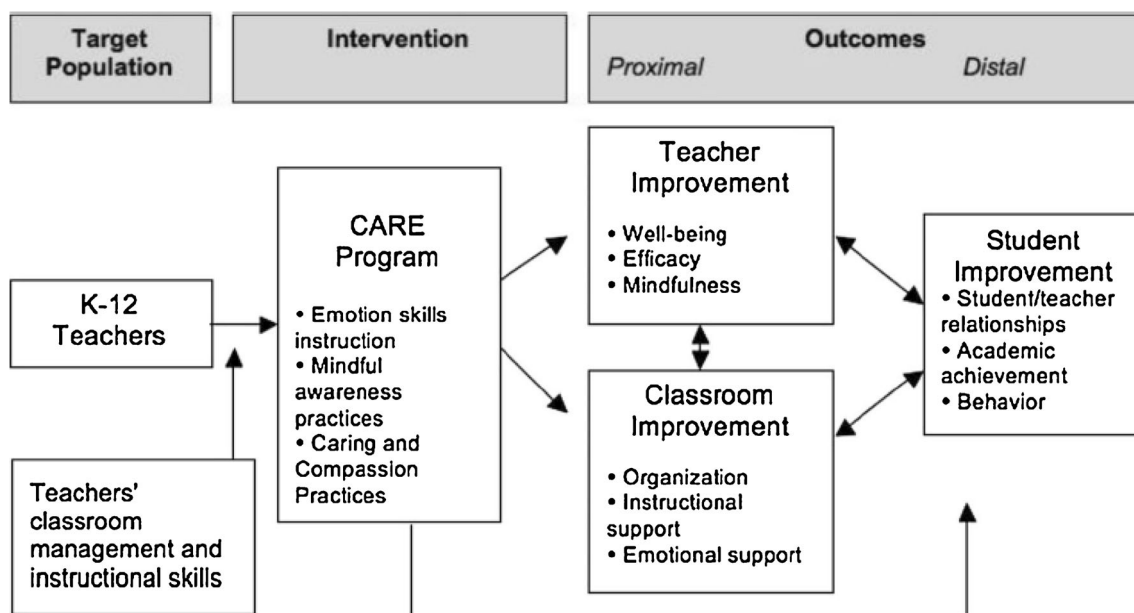


Fig. 1 CARE intervention model. This figure was originally published in Jennings et al. (2013)

Method

Participants

Qualitative data consisted of transcripts from four focus groups (noted as “FG#”) of three to eight participants each. Focus groups were formed after the collection of quantitative data for the purpose of soliciting in-depth information from the teachers’ perspectives as to *how* and *why* particular outcomes showed effects and why some outcomes did not show effects. Focus groups were formed based on volunteers and availability, and demographically, this group was not dissimilar from the larger dataset.

Participants from the larger dataset included 50 educators. There were 44 teachers (36 regular education, 8 special education) and 6 paraprofessionals from urban and suburban schools in two districts in the northeastern USA. The self-identified ethnic background was as follows: 44 White, 2 African-American, 2 Hispanic, and 1 mixed background. The average age was 36 years with the age range being from 22 to 60. Participants averaged 11 years of school teaching and represented diverse instructional contexts, including elementary and secondary school teachers. Participants volunteered and gave active consent to participate in the study in accordance with the university’s institutional review board procedures. As an incentive, teachers were offered professional development credits for participating in the CARE program and were compensated for the time involved in data collection. Those participating in the additional focus groups received extra compensation.

Procedure

The CARE for Teachers professional development program uses experiential, didactic, and interactive professional development activities to nurture teachers’ social-emotional competence. The program integrates direct instruction with practice and reflection so that participants have opportunities to learn about aspects of each program component, practice their skills in applying this learning, discuss in large and small groups, and also reflect on their learning through in-class and at-home activities. Program components include three broad categories: (1) emotion skills instruction (40 %), (2) mindfulness and stress reduction (40 %), and (3) compassion practice (20 %). According to the intervention logic model, the CARE program is designed to interrupt negative cycles that increase teacher stress and lead to burnout. Consistent with other mindfulness-based programs (e.g., Mindfulness-Based Stress Reduction Program), the curriculum was purposefully designed to incorporate personal practice as a substantial component of the program. A participant workbook and practice CD provide opportunities for participants to practice at home and at work.

The program included 30 contact hours in total, which took place in four day-long sessions over an approximately 6-week period. In between sessions, participants received coaching calls on the phone. A booster session was provided approximately 2 months after the fourth session. The intervention was scheduled over a period of time to reinforce concepts and skills learned in each session and to avoid the pitfalls of more typical one-shot professional development where

opportunities for retention of new knowledge and practice of skills are minimal (Darling-Hammond and Richardson 2009).

Measures

Focus groups were semi-structured and lasted approximately 1 hour each. Focus groups took place after school on a day that participants agreed was convenient to their schedules. The interviewer was a part of the research team but had not interacted with the participants previously and had not participated in administering the CARE intervention. Focus groups were conducted approximately 4.5 months after participants received the CARE training and 4 to 6 weeks after participants received a booster session.

The focus group protocol consisted of basic questions, primarily: What did you find most helpful from the CARE program? Least helpful? Did you connect any practices you learned to what you do with your own students? Did CARE change your level of awareness and if so, please describe ways it helped you be more mindful? Did CARE affect any other changes for you—nature of relationships, your ability to deal with your emotions, the way you handle stress, etc.? Participants were encouraged to elaborate on their responses. Focus groups were taped and transcribed in their entirety. All identifying information was removed to maintain confidentiality.

Data Analyses

In the first phase of data analysis, we focused on the questions about most and least helpful practices and began a simple table of the practices and their descriptions. Because practices were mentioned in either category (most and least helpful), it quickly became clear that the concrete practices each participant identified were less informative than the descriptions of how the practices operated or did not operate. The contextual information within the description of the practice illuminated the underlying mechanisms related to teacher awareness and well-being, which were the focus of our inquiry. Therefore, we employed axial coding (Strauss and Corbin 1990) to identify contextual dimensions of the aspects of practice identified by participants, paying special note of how a program component was beneficial or how any change occurred. For example, one participant noted that *recognizing emotions* was the most helpful practice learned in CARE. How this teacher described this practice was also captured: “Rather than jumping in to take care of a situation, importance of recognizing that sometimes a kid needs a moment.” We also captured direct quotations from participants related to each coded unit. Examples of participants’ descriptions are provided throughout the “Results” Section to provide a *thick description* (Erlandson et al. 1993) and illustrate themes.

Using axial coding in this way was consistent with our goal to understand the mechanisms underlying the intervention. The grain size was fairly large, approximately a paragraph. We began coding into a new category when either: (1) the same speaker shifted to describing another practice, (2) a different speaker began describing another practice, or (3) a different speaker discussed the same practice but the description shifted substantively from the previous speaker.

Because our goals were to better understand what teachers became more aware of and how this awareness related to aspects of their well-being, we used the quantitative measures from the randomized control trial (i.e., *general well-being*, *teacher efficacy*, *teacher burnout*, *mindfulness*), as a basis for a directed content analysis (Hsieh and Shannon 2005) in the second stage of data analysis. We aligned each coded unit from the first phase of data analysis with the related measure (well-being, efficacy, burnout/time pressure, or mindfulness). Results from the RCT showed statistically significant effects with moderate to large effect sizes on a number of subscales for those who participated in the CARE for Teachers program (see Table 1 or Jennings et al. 2013 for more detail). Teacher *efficacy* and *mindfulness* had the greatest number of subscales that showed statistically significant changes. Teachers felt more efficacious regarding their ability to use appropriate instructional strategies, foster student engagement, and in their total sense of efficacy. There were no statistically significant changes to their efficacy related to classroom management. Teachers experienced statistically significant changes in half the *mindfulness* subscales, which included observing, non-reactivity (i.e., avoiding an emotional reaction to an emotionally charged situation) and their total mindfulness. Teachers did not experience significant differences in their ability to act with awareness, be non-judgmental of their own thoughts and feelings, or describe their feelings and thoughts. Subscales on *general well-being* showing significant effects include increased reappraisal (i.e., changing the meaning of a situation to change one’s emotional response to it) and better physical symptoms. Participants did not experience statistically significant change in their positive or negative affect, suppression of emotions, or depressive symptoms. Teachers experienced the least number of statistically significant changes in the teacher *burnout* subscales; teachers demonstrated a decrease only in general hurry. There were no statistically significant changes to the seven other subscales of teacher *burnout*. Mediation analyses were not conducted in the quantitative study, so it is not clear which variables, if any, operated as mediators. However, for this qualitative study, we purposefully used axial coding and content analysis based on the four main measures in the quantitative study to gain insight into possible relationships. These insights were based on teachers’ explanations of how they were or were not affected by CARE.

To illustrate how we used the four measures as codes, the participant above who talked about “recognizing emotions” as

Table 1 Quantitative subscales showing significance

	Significant subscales	Not significant subscales
General well-being	Reappraisal Daily physical symptom	Positive affect Negative affect Suppression Depression
Teacher efficacy	Instructional strategies Student engagement Total sense of self-efficacy	Classroom management
Teacher burnout	General hurry	Speech patterns Eating behavior Competitiveness Task-related hurry Emotional exhaustion Depersonalization Personal accomplishment
Mindfulness	Observing Non-reactivity Summary score	Acting with awareness Non-judgmental Describing

These results were originally published in Jennings et al. (2013)

the most helpful practice learned in CARE was aligned with the code mindfulness, specifically the subscale *non-reactive* given that the description involved not “jumping in to take care of a situation” and “recognizing that sometimes a kid needs a moment.” As noted in this example, when the associated subscales were obvious, we coded for these. Some data were double coded as the descriptions seemed to be addressing multiple, related mechanisms.

For reliability purposes, two researchers analyzed approximately one third of the data. Researchers were considered in agreement when an exact match existed. Specifically, the data were aligned with one of nine possible single- or double-coded measures. For example, if one researcher used the code *mindfulness* while the other used *mindfulness and well-being*, it was not calculated as agreement. This resulted in a very conservative Cohen's kappa of 0.72 which is considered acceptable (Landis and Koch 1977).

To better understand how the practices related to the underlying mechanisms, we created Table 2, which summarizes the most helpful practices and their aligned measures (i.e., general well-being, teacher efficacy, teacher burnout, mindfulness). This allowed us to accessibly view how practices were helpful by seeing a tally of the aligned measures for each practice participants mentioned. Because different participants described the same practice as being helpful in different ways, some practices were coded across multiple codes. We also tallied the practices identified as least helpful to confirm our hunch that the practice was less important than the contextual information about how the practice operated. The least helpful practices were not coded by aligned measure because they were not described in a way that lent itself to this coding.

Once we coded all questions (with the exception of *least helpful practices*) for the aligned measures, we obtained summary data of each code and its prevalence to better understand how the focus group data coincided with the measures in the quantitative study. In other words, we wanted to see if the ways that participants talked about their experience in CARE were consistent with the results in the quantitative measures. To accomplish this, we created a summary of the number of units coded for each measure (i.e., general well-being, teacher efficacy, teacher burnout, mindfulness), including data that were double coded (see Table 3). We summarized these data for the following three questions: (1) What was the most helpful practice? (2) If/how CARE changed your level of awareness? (3) Did CARE affect any other changes for you—nature of relationships, your ability to deal with your emotions, the way you handle stress? We calculated total number of coded units across each measure or double-coded measure. We then collapsed these data by the four measures. For example, all data, whether single or double coded, that had to do with *mindfulness* were totaled and percentages were obtained for the four measures (see Table 4). This provided further information about the prevalence of each of the four measures in the topics the participants discussed.

Results

Our purpose in collecting and analyzing qualitative data in conjunction with the quantitative measures was to better understand how aspects of the CARE program affected teachers' awareness and why CARE affected particular aspects of their

Table 2 Most helpful practices (with aligned measures) and least helpful practices

	Most helpful				Least helpful
	Well-being	Mindfulness	Burnout	Efficacy	
CARE in general	4				
Body scan	2	1			3
Taking time for self	2		2		
Breathing	3	3	1	1	
Visual elevator; thermometer	1				
Experiencing joy	1				
20 mindfulness	1	1			
Recognizing emotion	1	3			
Being in the moment; gratitude	1	1	1		
Role playing; stage		1			6
Mindful walking	1				3
CD		1			
Setting intention		2	1		
Centering		2		1	
Answering tough questions		1			
Music			1		
Exploring anger					2
Child interview					2
Practice log					2
Stepping stone					1
Energy vitalizing					1
Mindful listening					1
Phone calls					1
Bells					1

physical and emotional health while some aspects were not affected.

Awareness

For this study, we were specifically interested in what, if anything, teachers became more aware of as a result of participating in CARE, and how awareness operated as a mechanism

that affected teachers' physical and emotional health. The two main things teachers discussed when asked whether and how CARE changed their awareness were (1) the awareness of how they were physically holding stress in their bodies and (2) how they were responding to feeling stressed. Since participants were specifically asked about their awareness, it is no surprise that most of these responses (over 80 %) were coded as *mindfulness*. In 40 % of the coded units (6 of 15) for this

Table 3 Focus group coding by question and aligned measure

Aligned measure	Most helpful practice Coded units (n=29)	Awareness Coded units (n=12)	Relationships/emotions/stress Coded units (n=11)	Total Coded units (n=52)
Well-being	8 (26 %)	1 (8 %)	2 (18 %)	11 (21 %)
Efficacy	0 (0 %)	0 (0 %)	0 (0 %)	0 (0 %)
Burnout	2 (7 %)	2 (17 %)	1 (9 %)	5 (10 %)
Mindfulness	9 (31 %)	7 (58 %)	7 (64 %)	23 (44 %)
Well-being and mindfulness	4 (14 %)	1 (8 %)	1 (9 %)	6 (12 %)
Well-being and burnout	3 (10 %)	1 (8 %)	0 (0 %)	4 (8 %)
Well-being and efficacy	1 (3 %)	0 (0 %)	0 (0 %)	1 (2 %)
Mindfulness and burnout	1 (3 %)	0 (0 %)	0 (0 %)	1 (2 %)
Mindfulness and efficacy	1 (3 %)	0 (0 %)	0 (0 %)	1 (2 %)

Table 4 Percent each outcome single or double coded

Mindfulness	Well-being	Burnout	Efficacy
48 %	34 %	15 %	3 %

question, teachers described becoming 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” (FG1). Remarks such as these were double coded as *well-being* and *mindfulness-observing* which shows the relationship between teachers’ observations of what was happening physically to how it affected their general well-being.

Some participants explicitly made the connection between awareness of their physical stress and awareness of their mental state: “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” (FG2). In addition, a number of teachers noted their struggle to practice self-care and how they became more aware of this need. One teacher commented that keeping a log of her day helped her to see how her time is spent and how it is important for her to build in small things for herself throughout her day rather than waiting until the summer. Another teacher described the tension she felt with other teachers not in the program who took pride in using all their free time for work: “It seems to just be a competition...and it’s like if you do something fun, you’re not doing your job” (FG4). Although this teacher became more aware that she should be taking better care of herself, she juxtaposed that awareness with the unspoken expectations of her colleagues, who were not participating in CARE, to whom it was difficult not to compare herself.

A number of the teachers’ responses (about a third of the coded units) to the question of how CARE changed their awareness focused on their attitudes, emotions, and responses to others. One third of the data coded as *mindfulness* were coded with the subscale *non-reactive*. Teachers described how they became more adept at the speed and manner with which they responded to others, especially their students. This teacher’s response was typical of other participants: “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” (FG1). This theme of becoming more aware of their own emotions and using this awareness to avoid problematic responses also came up in

response to other questions during the focus groups, which will be discussed more next.

Physical and Emotional Health

When asked about the most helpful practices, teachers tended to identify those that immediately affected them, especially those practices that helped them take care of themselves, namely by reducing their physical and emotional stress. For example, four participants noted that the CARE program in general helped them to feel more validated and cared for. One of those participants appreciated the emphasis on concrete skills to manage stress: “It was being proactive about how we can become healthier persons in the midst of this stress” (FG4). It is no surprise then that the greatest number of practices was aligned with the *well-being* code and that many of the practices that aligned with the *mindfulness* code were categorized by the subscale *non-reactivity*. The teachers appreciated practices that helped them become less reactive to emotional triggers, which helped lessen their feelings of stress. Though some teachers said they taught the very portable practice of breathing to their students, this was more an added bonus and not the main reason they labeled it as the most helpful practice.

As mentioned earlier, teachers noted that they became much less emotionally reactive to situations that would have triggered them in the past. This was consistent with the quantitative data where intervention effects on the *mindfulness–non-reactive* subscale was significant and had a large effect size. One teacher noted that the culture of schools worked against teachers acknowledging themselves as emotional beings and that this probably was to their detriment: “Emotions are such an innate part of who we are that it needs to be part of what we do and how we teach.... We all try to be like these professionals who don’t have emotions all the time but we do. And why not admit it and recognize it and respect it so that we can respond better” (FG4). When they described how *mindfulness–non-reactive* functioned, many of the teachers specifically discussed how it improved their relationships with others, especially their students. This teacher’s description was characteristic of descriptions across all four focus groups: “It’s not taking it personally when somebody gets you mad. It allows me to get my emotions out of the way so that I can help them [students] and I’m not worried about how I’m reacting to them being in that place” (FG4). One teacher likened her non-reactivity to *wait time* explaining, “I take a minute and calm myself down before I try to take care of the situation” (FG2). As described by the participants, CARE helped the teachers to develop an awareness of their emotions which then helped them to reduce or neutralize their negative emotions. Being in a more neutral, less emotionally charged state helped teachers relate to others, especially their students, more effectively.

An interesting pattern emerged regarding how teachers described practices that aligned with the *well-being* code. As seen in Table 3, the number of single-coded units dealing with well-being was 21 %, less than half the number of single-coded units for *mindfulness* (44 %). However, Table 4 shows that the percent of coded units that address *well-being* whether single or double coded is 34 %, more than a 50 % increase. This signifies that participants' comments frequently were coded as *well-being* in conjunction with one of the other codes. For example, we have discussed above how a number of participants described how developing an awareness of their emotional reactions helped them to be more calm and to respond more effectively to their students. In these instances, *well-being* was double coded with *mindfulness–non-reactive*. A little less prevalent in the data were ideas double coded as *well-being* and *burnout*.

The one inconsistent pattern involved *efficacy*. Despite efficacy being so prominent in the quantitative results, we found little explicit evidence of it in teachers' comments during the focus groups. As seen in Table 3, none of the data were aligned with just *efficacy*, and as seen in Table 4, only 3 % of the data were double coded to include *efficacy*. This was surprising since in the quantitative data; more subscales for the *efficacy* measure showed statistical significance than any of the other measures (see Table 1). In one of the two instances where we coded a comment as *efficacy*, the teacher was explaining why she thought the *centering activity* was one of the most helpful practices: "I have also used the centering activity when I have to go to a meeting where I'm nervous or it's a higher profile meeting with a parent that you never know what to expect when you walk in. I can feel myself like it's in the pit of my stomach where I get nervous. I just take a few minutes to... get my paperwork organized and I can just kind of think about it and center myself before the meeting gets started and I feel like it can run a little more smoothly if I can be more calm. Otherwise, I have a tendency to talk fast and I end up with a teammate telling me to slow me down.... So if I can just organize myself a little bit, I feel like I appear more together even if I'm not" (FG1). Efficacy relates to teachers' beliefs regarding their capacities to carry out their job duties effectively (Bandura 1977). This teacher recognized that approaching a potentially difficult encounter from a place of mindfulness (*acting with awareness* subscale) gave her more confidence in her own abilities to successfully navigate the meeting. Although in the quantitative data many teachers reported a greater sense of efficacy, during the focus groups, most did not explicitly articulate these beliefs when they described their experiences with the CARE program.

One theme that emerged from three of the four focus groups that was not captured in the coding of the four aligned measures was the desire for a greater sense of community. Teachers wanted opportunities to relate to their colleagues, in general and as having a shared language around the skills

learned in CARE. In making a general comment about the program, one teacher said, "I liked that they built chat with other teachers into the day" (FG3). Another teacher noted how helpful it was to both communicate and eat in a way that was not rushed by the time constraints of a typical school day: "It was my colleagues that helped me more than anything like seeing them.... We got an hour lunch to sit down and chat and eat good food. That was a treat" (FG1). Another teacher thought having shared language and experiences related to the program would help herself and her colleagues: "I just wish more of my colleagues had the opportunity or were aware of it, because it's kind of like we've had our own little club here and you talk about it and it would be helpful" (FG4). A few noted that CARE was a powerful model for professional development because it adopted a strengths based as opposed to deficit approach: "PD [professional development] is all 'you are doing this and this wrong,' whereas CARE's focus is completely different" (FG3). In the same focus group, another participant added that CARE helped counter the ubiquitous negativity in the district.

Discussion

The purpose of collecting and analyzing qualitative data for this study was to better understand the mechanisms underlying the CARE intervention. Specifically, we were interested in whether and how CARE affected teachers' awareness and why CARE affected particular aspects of teachers' physical and emotional health and why some aspects of their health were not affected. Since a major component of CARE is mindfulness-based practice aiming to cultivate participants' awareness across a variety of dimensions, it is not surprising that *mindfulness* emerged as the predominant code. Consistent with its purpose, participants said the CARE program helped them become more aware of both their physical and emotional health. They developed somatic awareness, identifying when their bodies were displaying signs of stress, and they felt equipped with strategies—like simple breathing or a body scan—to help ameliorate that stress. A salient finding was teachers' awareness that they needed to practice self-care, a finding comparable to Roeser et al.'s (2013) finding that following training in SMART, teachers practiced more self-compassion which mediated a decline in their symptoms of stress. Participating in the CARE program not only validated the need for self-care but also gave teachers the permission to attain it. It is well documented that teachers experience a tension between engaging in restorative practices for themselves and meeting the endless needs of their students (MacDonald and Shirley 2009; Skovholt and Trotter-Matthison 2011). We posit that acknowledging this tension and engaging in professional development explicitly focused

on teachers' needs and not the needs of their students contribute to teachers' well-being.

Teachers also developed more sophisticated emotion awareness and described becoming less emotionally reactive as a result of strategies learned, breathing and emotion awareness exercises being the most commonly used. The prevalence of *mindfulness–non-reactive* codes suggests that CARE is a viable option for interrupting the two problematic cycles that can lead to teacher burnout—the Burnout Cascade (Jennings and Greenberg 2009) and the Coercive Interaction Cycle (Patterson et al. 1992)—by providing teachers with the emotional wherewithal to simply pause before responding. Such pauses allow the teacher to respond proactively rather than reactively and to reconfigure negative emotions into a more neutral state. Shapiro et al. (2006) termed this mindfulness shift in perspective “reperceiving.” Contrary to changing the content of one’s thoughts, reperceiving involves “a profound shift in one’s relationship to thoughts and emotions, the result being greater clarity, perspective, objectivity, and ultimately equanimity” (p. 379). Teachers’ awareness of and ability to regulate negative emotions contributed to their general well-being, a finding consistent with other empirical studies of mindfulness-related interventions for both teachers (Abenavoli et al. 2013; Benn et al. 2012; Roeser et al. 2013) and other populations (Brown and Ryan 2003; Mendelson et al. 2010; Noggle et al. 2012).

For teachers, emotion regulation precipitated by self-awareness also has positive implications for their relationships. It was beyond the scope of this study to investigate whether increased self-awareness and also emotion regulation led to increased empathy and compassion as suggested by other researchers (Cohen and Miller 2009; Roeser et al. 2013; Schure et al. 2008). We did not collect data on students’ perspectives of their relationships with teachers or classroom observations showing evidence of the nature of teacher-student interactions. However, teachers did comment on how their relationships were affected, which suggests that increased emotional self-regulation facilitates opportunities for greater compassion by improving one’s relationships with others. Although it is unclear whether the teachers experienced greater compassion or empathy, the teachers did report that they were able to *respond* to others in a more constructive manner. Given the importance of teacher-student interactions for establishing the climate of the classroom (Brackett et al. 2011; Brok et al. 2004; Hamre et al. 2013) and that teachers are interacting with and responding to students constantly throughout the school day, more research investigating the mechanisms for how mindfulness interventions affect teacher-student interactions is certainly warranted.

Probably the most surprising finding in this data was the lack of explicit evidence regarding teachers’ efficacy, especially since all but one of the *efficacy* subscales showed statistical significance in the quantitative data. Other studies of

mindfulness interventions with teacher have also showed either a statistically significant increase in efficacy post-intervention (Benn et al. 2012) or a decrease in low *personal accomplishment* (Abenavoli et al. 2013). Efficacy beliefs are defined as teachers’ judgments about their own capacities to affect student learning and student engagement even with challenging students (Bandura 1997; Tschannen-Moran and Hoy 2001). Bandura (1977, 1997) postulated there are four sources of efficacy expectations: mastery experiences, physiological and emotional states, vicarious experiences, and social persuasion. Mastery is believed to be the most powerful source of efficacy. From the data analyzed for this study, we hypothesize that the teacher’s mastery experience is affected by the emotional valence the teacher brings to it. Presumably, the mastery of the teachers who participated in the CARE intervention remained fairly constant over the course of the study; they likely did not experience a spike in their knowledge and skills related to teaching. Yet, teachers’ self-reported efficacy on the quantitative measures increased. From the quantitative and qualitative data, there is evidence that aspects of teachers’ well-being and mindfulness improved, especially their self-awareness and emotion regulation. This is consistent with the findings of Abenavoli et al. (2013) who found that for the teachers who participated in the CALM program, mindfulness related to reduced feelings of low personal accomplishment partially due to greater positive affect and fewer daily physical symptoms. We speculate that greater self-awareness and emotional regulation may affect negative efficacy beliefs by creating a more positive emotional state for the teacher. Although the teacher’s mastery has remained fairly constant, he may feel more in control of the situation and hence more competent, given that he feels a heightened sense of control over his own emotions. If he has experienced the developmental mindfulness process of reperceiving (Shapiro et al. 2006), he now is in control of his emotions, rather than his emotions controlling him.

Although teachers did not explicitly articulate feeling a greater sense of efficacy as a result of the CARE program, we speculate that increased awareness and emotional regulation improves teachers’ effectiveness, at least in part because of greater efficacy. This induces a positive trajectory where beliefs and performance are supporting each other (see Tschannen-Moran et al. 1998). We suspect that a number of the teachers actually experienced a heightened sense of efficacy as a result of CARE, though most did not specifically describe that feeling in the focus groups. Instead, they described experiences that resulted from their increased efficacy but did not explicitly attribute those experiences to greater efficacy. If teacher self-efficacy beliefs are malleable, as suggested by Skaalvik and Skaalvik (2007), then teacher professional development should not only address pedagogical practice in an attempt to improve teacher mastery but should also attend to teachers’ self-awareness and emotional regulation skills.

The focus group data presented in this study also indicates that a mindfulness-based professional development intervention like CARE may be most effective when implemented by a whole school rather than with individuals. The participants in this study desired more opportunities to spend time with their colleagues, fostering relationships and feeling a shared sense of purpose in their work. CARE afforded them some opportunities for such collaboration, but they thought more widespread participation in their schools would create the support and reinforcement to more fully embody what CARE offered. It may also bolster their *collective teacher efficacy* which is the beliefs in the abilities of the faculty as a whole to reach their goals (Skaalvik and Skaalvik 2010). Skaalvik and Skaalvik found that collective teacher efficacy and teacher self-efficacy were independent but correlated constructs. Collective teacher efficacy was strongly related to administrative support. The social conditions of the work environment—namely the school's culture, administrative leadership, and relationships among colleagues—are most salient to teachers' decisions to remain teaching at a school or to leave (Johnson et al. 2012), even in high-needs environments (Johnson and Birkeland 2003). A practical implication then is to implement CARE as a whole school professional development program as a means to reduce teacher burnout. This may be especially true for teachers in high-needs schools in urban areas, like many who participated in this study.

This study has several limitations. First, it should be noted that the data were based on teacher self-report. Therefore, conjectures about the relationships between mechanisms stem from teachers' perceptions of how those mechanisms operated for them. We cannot make any claims about what happened in the teachers' classrooms and whether students or others noticed changes as a result of teachers' improved awareness, emotional regulation, and well-being. Second, although focus groups provide an efficient means of collecting information from multiple participants, they also sometimes result in *group think* whereby a comment by one person becomes the collective opinion of the group. Third, this study included educators across grade levels, ages, years of experience, and positions, and the focus groups were scheduled at times of convenience to the participants. Therefore, we cannot attribute specific comments to individuals. Furthermore, Hargreaves (2000) found that the *emotional geographies* of elementary and secondary school teachers differ, and they seek different kinds of *psychic rewards* when they interact with students, yet we cannot differentiate between elementary and secondary teachers in our sample. More research should investigate these differences.

Conclusion

The deleterious effects of teacher burnout are evident in economic costs (Barnes et al. 2007; Myung et al. 2013) as well as

the deterioration of teacher and student flourishing (Jennings and Greenberg 2009; MacDonald and Shirley 2009). Mindfulness-based interventions may buffer teachers from the symptoms of burnout. The results of this study suggest that CARE may help sustain educational professionals by addressing specific aspects of teachers' social-emotional competence. Specifically, CARE may improve teachers' physical and emotional health by encouraging their use of self-care techniques and improving their awareness and emotional regulation. Data from this study also suggest that teachers' increased self-awareness and emotion regulation improved their ability to interact with students in more positive ways, possibly as a result of greater efficacy, though teachers did not explicitly articulate enhanced feelings of efficacy in the focus groups. Further examining the relationships between self-awareness, emotion regulation, compassion/empathy, and efficacy and other underlying mechanisms would be a good next step for future research. This research should involve analyses that are both quantitative, through regression and other mediational analyses, and qualitative, including triangulating data to include observations of the underlying mechanisms rather than just teacher perceptions. With more evidence of program efficacy, we may experience a shift in how educators approach professional development, so that we consider not only the skills the teachers need to care for their students but also the skills and frame of mind the teachers need to care for themselves so that they have a greater capacity to meet the needs of their students.

Acknowledgments Funds for the research reported in this article were provided by a grant from the US Department of Education Institute of Educational Sciences #R305A090179. Thanks to the Garrison Institute for providing the support for the development of the CARE program. Also, special thanks to Christa Turksma and Richard Brown who developed CARE with one of the authors. Thanks to the Prevention Research Center, Pennsylvania State University for the ongoing support of CARE and other social-emotional learning initiatives.

Integrity of Research and Reporting This study received approval by the Institutional Review Board of Pennsylvania State University and was conducted in accordance with the ethical standards detailed therein.

Consent All participants provided informed consent prior to their inclusion in the study reported on in this manuscript.

Conflict of Interest The authors declare that they do not have competing interests with the funding agency that sponsored this research.

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