



# The Relationship Between Adopting Mindfulness Practice and Reperceiving: a Qualitative Investigation of CARE for Teachers

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## Abstract

**Objectives** This study qualitatively examined the relationship between home practice and reperceiving for teachers who participated in the CARE program. We used distress tolerance, mindfulness, burnout, efficacy, compassion, and self-care as proxies for (or direct representations of) underlying components of reperceiving—awareness, emotion regulation, and compassion.

**Methods** From a larger study of 224 elementary teachers in a large urban district, 16 teachers were purposively selected for semi-structured interviews. Selected teachers fit one of three profiles: no adopted mindfulness practice; no practice at baseline but practice at post and follow-up; practice at baseline, post, and follow-up. Four coders employed a directed content analysis to (1) investigate the outcomes discretely, examining their prevalence within the three practice groups; (2) analyze the relationships between outcomes and whether these differed across practice groups; and (3) examine teachers' descriptions of how they used the practices.

**Results** There were no differences between practice groups in teachers' reported amounts of stress, but differences were found across outcomes, specifically mindfulness and efficacy. The no practice group engaged in more suppression and felt less capable of handling their stressors. Teachers who adopted practice described an emerging awareness of their negative emotions, more facility to let go of their stressors, and greater affirmation of the importance of self-care and use of strategies to promote it. Compassion lacked prevalence across practice groups.

**Conclusions** Adoption of mindfulness practice may impact teachers' capacity to reperceive through emotional awareness and self-regulation, but additional research is required to examine the role of compassion.

**Keywords** Teachers · Reperceiving · Stress · Emotion regulation · Practice

Research indicates that regular mindfulness practice facilitates emotional self-awareness (Bergomi et al. 2015), enhances aspects of well-being (Brown and Ryan 2003; Keng et al. 2011), and mitigates psychological distress (Lykins and Baer 2009). Despite these promising findings, the mechanisms by which mindfulness alleviates suffering and impacts positive change

require further investigation. Existing models focus on a variety of cognitive and attentional mediators to explain how mindfulness functions (Grabovac et al. 2011; Shapiro et al. 2006). For example, Shapiro et al. (2006) proposed a testable theory based on the meta-mechanism of “reperceiving,” a shift in perspective, likened to “decentering” (Fresco et al. 2007). According to the theory, reperceiving occurs when three mechanisms of mindfulness—intention, attention, and attitude—operate cyclically to result in re-orienting one's relationship to an experience. Rather than becoming absorbed in an experience, one is able to “simply witness it” through purposeful awareness (Shapiro et al. 2006). Shapiro et al. further hypothesized that reperceiving results in direct and mediated outcomes, including self-regulation; cognitive, emotional, and behavioral flexibility; and ability to navigate exposure to negative somatic or emotional sensations, which then result in positive health outcomes.

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Compassion poses an additional complication to understanding the mechanisms of mindfulness. Shapiro et al. (2006) noted that while compassion is an integral component of the model, underlying intention and attitude (i.e., one's purpose and the qualities one brings to how s/he pays attention), it has been largely ignored in the West as attempts were made to extract secular components of Buddhism. However, compassion is garnering increased attention in current mindfulness research as evidenced in recent literature reviews and meta-analyses (see Bibeau et al. 2016; Khoury et al. 2015; Shonin et al. 2015) and the inclusion of compassion in mindfulness-based interventions (MBIs) for specific populations including medical students (Fernando et al. 2017), psychotherapists (Bibeau et al. 2016), educators (Taylor et al. 2016), and universal populations of non-meditators (Hildebrandt et al. 2017). Although there is evidence that self-compassion mediates well-being (Baer et al. 2012b; Bluth and Blanton 2015), far fewer empirical studies examine the relationship between compassion for others and well-being. A recent study found self-compassion and compassion were not related (López et al. 2018), highlighting the need to test empirically the compelling conceptual arguments that social connections cultivated through compassion foster well-being (see Ozawa-de Silva et al. 2012; Seppala et al. 2013). If compassion operates as an integral component of Shapiro's model, either operating as an outcome or an antecedent of one's ability to re-perceive, it should be included in studies of MBIs.

MBIs typically include aspects that both are internal and external to the individual. Specifically, key components of MBIs are *awareness* and *self-regulation*. These align with Shapiro et al. (2006) model of re-perceiving in that awareness represents what one is paying *attention* to. Self-regulation encompasses how one responds to that awareness (i.e., *intention*), including acceptance of one's emotions, thoughts, and body sensations (i.e., *attitude*) (Kabat-Zinn 1994). Although Western mindfulness-based programs grew out of a clinical population helping individuals to manage chronic pain (e.g., Kabat-Zinn's mindfulness-based stress reduction or MBSR), the principles of awareness and self-regulation also appeal to educators given their constant interpersonal interactions, heightened levels of workplace stress, and risk of occupational burnout (Richards 2012).

Mindfulness-based programs for educators leverage these skills in a variety of ways. Some programs are adaptations of MBSR, focusing on present-moment awareness and acceptance and nonjudgmental consideration of habitual reactions in order to engage in more purposeful action (Flook et al. 2013; Frank et al. 2015). CALM (Comprehensive Approach to Learning Mindfulness) is a short (20 min) daily intervention involving yoga, intention-setting, and caring practices (Harris et al. 2016). SMART (Stress Management and Relaxation Techniques) is based on Kabat-Zinn's Mindfulness-Based

Stress Reduction program with additional content on forgiveness, emotion regulation, and compassion practices (Benn et al. 2012; Taylor et al. 2016). CARE (Cultivating Awareness and Resilience in Education) focuses on emotion skills, mindfulness training, and compassion practices.

Although mindfulness programs for educators have become increasingly popular as a means to counteract teacher burnout and improve teacher well-being, a recent review claimed more research is needed to understand how mechanisms operate (Lomas et al. 2017). Indeed, only 19 studies met Lomas et al.'s eligibility criteria of an empirical investigation of the relationship between an MBI for educators and mindfulness, mental health, well-being, and performance outcomes. Studies predominantly employed pre- and post-self-report measures (Flook et al. 2013; Frank et al. 2015) though some used mediation analyses (Abenavoli et al. 2013; Roeser et al. 2013) and qualitative data (Schussler et al. 2018; Sharp and Jennings 2016) to better understand the nature of underlying mechanisms. Researchers found MBIs contributed to improved attention/awareness (Harris et al. 2016; Roeser et al. 2013) and emotion regulation (Benn et al. 2012; Schussler et al. 2016) and showed mixed improvement in empathy/compassion (Frank et al. 2015; Taylor et al. 2016).

Relationships between awareness, self-regulation, and compassion require further investigation, especially for educators whose awareness and regulation of their own emotions are critical to managing the behavior of others and maintaining a positive classroom climate. Teachers who cannot regulate their emotional expressions effectively are more likely to unintentionally fall into coercive cycles with students by reacting to student behavior with anger and hostility (Emmer and Stough 2001). The ability to regulate emotions may help teachers to focus on student needs and maintain constructive engagement during emotionally charged situations, rather than focus on their own frustrations and respond negatively, potentially leading to burnout (Howard and Johnson 2004; Jennings and Greenberg 2009). Therefore, improving teachers' emotion awareness may interrupt a problematic cycle leading to negative outcomes. In addition, emotion regulation may foster positive outcomes, like well-being. There is some evidence that for teachers, emotion regulation relates to promoting positive well-being as measured directly (Beshai et al. 2015; Poulin et al. 2008) or indirectly through positive affect (Harris et al. 2016). In one study of the SMART program, Benn et al. (2012) hypothesized that awareness and emotion regulation buffered against problematic outcomes and facilitated positive responses. Participants who employed mindfulness skills developed awareness of their emotional triggers and were able to "disengage and recover more quickly" when negative emotions occurred (p. 1483). Similarly, Schussler et al. (2016) posited that mindfulness provided teachers who participated in the CARE program more "sophisticated emotion awareness" allowing them to "respond

proactively rather than reactively” (p. 139). The role of compassion, however, is understudied and thus remains unclear.

An assumption inherent in mindfulness-based programs is that regular practice mitigates negative outcomes and catalyzes salutogenic effects. There is evidence that more practice lessens stress, anxiety, or rumination (Baer et al. 2012a; Carmody and Baer 2008; Lykins and Baer 2009) and improves cognitive functions (Jha et al. 2017), mindfulness, and well-being (Bergomi et al. 2015; Huppert and Johnson 2010; Josefsson et al. 2011). Researchers are only beginning to understand the relationships between these variables. In studies of MBSR participants experiencing high degrees of stress along with internalizing symptoms or chronic pain, researchers found that more practice time led to increases in mindfulness and decreases in perceived stress (Baer et al. 2012a; Carmody and Baer 2008). In one study, change in mindfulness skills during the first 3 weeks of the intervention predicted change in perceived stress, especially for participants who followed intervention instructions for practice (Baer et al. 2012a). Furthermore, the importance of weekly frequency of practice showed even stronger associations with mindfulness than past meditation experience (Bergomi et al. 2015).

The prominent role of awareness and emotion regulation for those who practice is supported in a number of these studies. For example, Carmody and Baer (2008) examined the relationships between length of daily home practice and mindfulness, stress, and well-being measures, while Josefsson et al. (2011) looked specifically at the relationship between meditation frequency and mindfulness, with both studies using Baer et al.’s (2008) five facets of mindfulness measure. “Non-reactivity” and “observe” were significantly correlated with meditation amount or frequency (Carmody and Baer 2008; Josefsson et al. 2011) with large effect sizes in Carmody and Baer’s study. Furthermore, Carmody and Baer (2008) found mindfulness skills mediated the relationship between practice time and well-being, with Josefsson et al. (2011) citing non-reactivity as the one facet of mindfulness that significantly mediated the relationship between meditation experience and positive well-being. In a review of research studies examining effects of MBIs on outcomes of well-being, Keng et al. (2011) similarly found that meditators had significantly higher levels of mindfulness and well-being than non-meditators and that this changed linearly with amount of home practice. They suggested that mindfulness meditation practice may enhance psychological well-being by attenuating reactivity to emotional stimuli thereby facilitating disengagement of attention from stimuli (Keng et al. 2011). One hypothesis proposed that non-reactivity, or awareness and self-regulation of negative thoughts and emotions, may be the component most integral to Shapiro’s reperceiving (Josefsson et al. 2011).

Despite these findings, other studies have not shown positive relationships between home practice and outcomes. One review showed either inconsistent or weak effects (Vettese et al. 2009) and another, small but still significant effects (Parsons et al. 2017) between home practice and clinical outcomes. A recent study of mildly depressed older adults showed statistically significant pre- to post-changes in measures of psychological well-being (i.e., mindfulness, quality of life, depression, stress) following participation in an MBI, though these were not related to amount of home practice (Ribeiro et al. 2018). In a study of chronic pain sufferers, Rosenzweig et al. (2010) found positive results for some outcomes, like psychological distress, some somatization symptoms, and general health, but not other outcomes, including anxiety, depression, and bodily pain. They also found differences in results across different pain conditions, suggesting that home practice and outcomes interact differently depending on the needs of the specific population.

Populations may be important to consider when interpreting results examining how home practice relates to outcomes of MBIs and the mechanisms of mindfulness. Some research investigated the relationship between home practice and program outcomes with clinical populations like cancer patients (Specia et al. 2000), individuals with eating disorders (Simons and Gaher 2005), and those diagnosed with chronic pain and anxiety (Carmody and Baer 2008; Crane et al. 2014). Given their acute physical and psychological needs, these individuals may feel more compelled to practice. Other populations in studies of practice included individuals with different baseline conditions and different needs, including adolescent school boys (Huppert and Johnson 2010), military members in high-stress contexts (Jha et al. 2017), and non-clinical meditators and non-meditators (Bergomi et al. 2015; Josefsson et al. 2011). None of these studies included a sample of educators. Educators represent a unique population given their constant interactions with children that require greater awareness, emotion regulation, and compassion, and their high risk of burnout. Better understanding how underlying mechanisms of an MBI function for educators based on adoption of mindfulness practices may help explain the relationship between home practice and outcomes and how aspects of reperceiving—awareness, emotion regulation, compassion—occur for educators in high-stress contexts.

The present study used qualitative interview data to examine how urban, elementary teachers who participated in CARE and reported adoption of mindfulness practices at different time points experienced various program outcomes. Program outcomes included—mindfulness, distress tolerance, internalizing/physical symptoms, time pressure/ burnout, efficacy, compassion—which acted as proxies for (or direct representations of) underlying components of reperceiving, namely, awareness, emotion regulation, and compassion. Specifically, we were interested in (1) how the descriptions

of outcomes differed across participants with different practice profiles, (2) relationships between outcomes and whether this was different depending on if/when participants adopted practices, and (3) how participants described their practice.

## Method

### Participants

This sub-study was part of a larger efficacy trial, which included 224 elementary teachers (half intervention, half waitlist control) from 36 schools in a large, northeastern, urban district in the USA. The self-identified racial/ethnic background of the larger sample was as follows: 31% White, 22% African-American, 26% Hispanic, 4% Asian-American, 5% mixed background; 11% chose not to report their race/ethnicity. The average age was 41 years with the age range being from 22 to 72. Participants averaged 12.5 years of school teaching and were all at the elementary level. Participants volunteered and gave active consent to participate in the study, in accordance with university 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.

Intervention teachers who completed all aspects of the intervention and follow-up measures were invited to participate in a qualitative interview. Twenty-one teachers participated who demographically mirrored the larger sample with an average age of 42 and number of years teaching being 12.8. They taught at their current schools from 2 to 25 years with 9 years being the average. We purposively selected 16 of these teachers for this study based on their self-reported use of weekly or more meditation and mindful movement practices at three time points: baseline, post-intervention, and 8-month follow-up. At post- and follow-up, participants were also asked about their use of CARE practices outside of the professional development. Participants were included who fit one of three practice group profiles: (1) no practice (NP) ( $n = 4$ )—did not engage in practices at any of the three time points; (2) post and follow-up (PFU) ( $n = 9$ )—did not engage in any practices before starting CARE, but engaged in practices at both post and follow-up; and (3) all (ALL) ( $n = 3$ )—engaged in practices on their own before they participated in the CARE program and continued engaging in practices at post and follow-up. Each participant is referred to by the group and teacher number (i.e., NP105). Participants who did not fit one of these profiles were not included. We only included participants in these three groups because we were especially interested in differences between teachers who adopted MB practice after receiving the intervention and those who did not report adopting any practices as well as those who already had a practice at baseline. These comparisons seemed most

instructive in illuminating the relationship between adoption of practice and outcomes, especially the process of re-perceiving.

Table 1 includes the teachers who comprised each practice group profile, the percent of teachers who fit each profile in the larger intervention group, and the self-reported frequency and length of time teachers engaged in CARE practices at follow-up. The NP group did not report using any CARE practices regularly. The PFU group reported using an average of approximately five different CARE practices weekly (out of a total 9 possible) with the average length of the practices being brief (< 2 min); the longest practice reported on a weekly basis was an average of 11–15 min. The ALL group reported engaging the highest number of practices weekly (over 6) with an average length of 3–5 min; the longest practice endorsed weekly was 16–20 min on average.

### Procedure

The Cultivating Awareness and Resilience in Education (CARE) program components included three broad categories: (1) emotion skills instruction (30%), (2) mindfulness and stress reduction (25%), and (3) compassion practices (25%). Additionally, teachers participated in community building activities (~20%) (Doyle et al. 2019). According to the intervention logic model, the CARE program is designed to interrupt negative cycles that increase teacher stress and lead to burnout (see Fig. 1). The program included 24 contact hours total, over 4-day-long sessions, across approximately 6 weeks. In between sessions, participants were offered individual coaching phone calls. A 6 hour booster session was provided approximately 6 weeks 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 professional development where opportunities for retention of new knowledge and practice of skills are minimal (Darling-Hammond and Richardson 2009). CARE uses experiential, didactic, and interactive professional development activities to nurture teachers' social-emotional competence. It integrates direct instruction with practice and reflection so that participants have opportunities to learn about aspects of each program component, practice applying new skills, discuss in groups, and reflect on their learning through in class and at home activities.

Consistent with other mindfulness-based programs (e.g., MBSR), the curriculum was purposefully designed to incorporate personal practice as a substantial component of the program. A workbook and practice CD provided opportunities for participants to practice at home and in the classroom. Practices included three breaths, intention setting, body scan, centering, mindful walking, mindful listening, breath awareness, wait time, memories of joy, compassion for self and others, and awareness of scripts. Although there were not



**Table 1** Practice groups

Practice group	% of total intervention teachers in this profile	Number Teachers	No. of CARE practices endorsed weekly <sup>a</sup>	Average length of practices endorsed <sup>a</sup>	Average length of longest practice <sup>a</sup>	
No practice (NP)	16%	4	105, 114, 152, 199	0	0	
Post and follow-up (PFU)	35%	9	122, 128, 138, 141, 146, 148, 154, 200, 373	5.29	≤ 2 min	11–15 min
All (ALL)	15%	3	127, 235, 288	6.67	3–5 min	16–20 min

<sup>a</sup> As reported at follow-up

specific requirements for frequency or length of home practice sessions, the participants were encouraged to develop their own self-care plan based upon awareness of their needs. During coaching sessions, program staff encouraged participants to develop a regular formal practice that worked for them.

There is quantitative and qualitative research supporting the effectiveness of CARE in promoting particular outcomes. Quantitative studies suggested teachers in high-need urban populations who completed the CARE program experienced improved outcomes in mindfulness and efficacy and along some subscales of well-being, including time-related hurry and task-related stress (Jennings et al. 2013; Jennings et al. 2011). Qualitative studies of the same population suggested CARE teachers developed more present-centered awareness of emotions and improved emotional non-reactivity (Schussler et al. 2016; Sharp and Jennings 2016). Quantitative evidence from the larger current sample of 224 teachers indicated teachers who went through the CARE program showed increased mindfulness, better emotion regulation, less personal distress, and a decrease in time urgency (Jennings et al. 2017), while qualitative data drawn from the same population suggested that how teachers conceptualized their stress was critical to promoting resilience (Schussler et al.

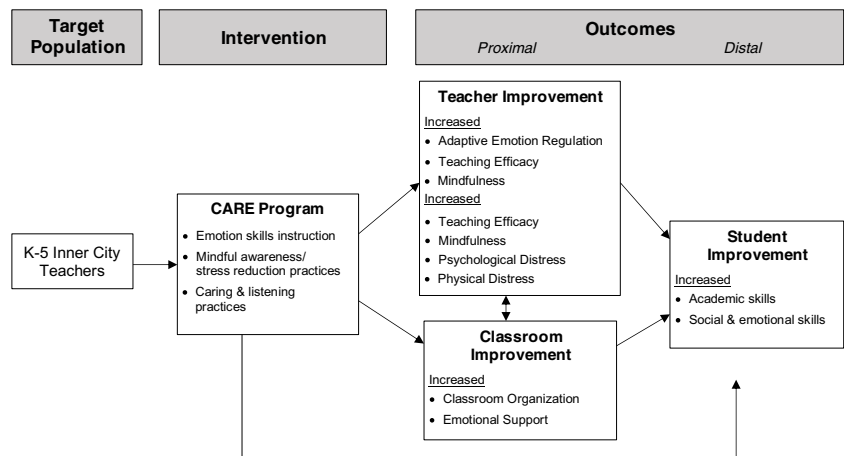
2018). The current study focused on the relationship between adopted practice and participants’ experience of outcomes related to reperiencing.

**Measures**

Interviews were semi-structured and lasted approximately 1 hour each. Interviews took place over the phone at a day and time that participants agreed was convenient to their schedules. One benefit of phone interviews is that the participants’ narratives, as opposed to the interviewer’s interpretations of participants’ non-verbals and context, become the sole focus of data analysis (Holt 2010). For the research questions of this study, participants’ descriptions were critical. Phone interviews were also more conducive to the busy schedules of teachers and enabled greater participation. Interviews took place approximately 17 months after participants experienced the CARE professional development program. The interviewers were a part of the research team, and one had served as a CARE facilitator. The four coders practiced mindfulness but were not mindfulness teachers.

Interview participants were selected after the collection of quantitative data for the purpose of soliciting in-depth information from the teachers’ perspectives as to how and why

**Fig. 1** CARE intervention model



they did or did not experience different outcomes, how they experienced stress and what caused them stress, and if/how they were using CARE or other mindfulness-based (MB) practices. The interview protocol consisted of questions asking teachers to state what was most enjoyable and most challenging about teaching, to identify their sources of stress both before and after receiving the CARE program and to what extent they felt stressed by each, the role that student and teacher emotions do play and should play in the classroom, why they participated in CARE, how they would describe CARE to others, what was most and least helpful about the program, whether there were any skills they learned in CARE that they continued to use and how, whether they would participate in CARE again and why, and what kind of teacher they think would most benefit from CARE. Participants were encouraged to elaborate on their responses. Interviews primarily consisted of participants' descriptions of events or experiences (aka, "Please describe a time when you felt stressed because of a student") rather than direct questions about program outcomes as people in general are better able to describe situations that may illuminate an abstract construct like efficacy or emotion regulation than to recognize and articulate how they embody those constructs (Wilson 2002). Interviews were taped and transcribed in their entirety. All identifying information was removed to maintain confidentiality.

## Data Analyses

Through a directed content analysis (Hsieh and Shannon 2005), researchers developed codes that were partially emergent and partially a priori (Stemler 2001). Some codes were theory-driven (DeCuir-Gunby et al. 2011), aligned with our research questions around intervention outcomes. For example, we were particularly interested in investigating how participants with different levels of practice described how they managed stress before and after the CARE training and whether these descriptions included changes in their mindfulness, distress tolerance, internalizing and physical symptoms, time pressure/burnout, efficacy, and compassion. We used the following theory-driven definitions for these codes. We define *mindfulness* using the five facet mindfulness components scale, which includes observation, description, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience (see Baer et al. 2008). Where possible, we coded within the sub-categories. *Distress tolerance* is the degree to which individuals are willing to be exposed to negative emotions before pushing them away, trying to change them, or becoming absorbed in them (see Simons and Gaher 2005). *Internalizing/physical symptoms* refers to any physical symptoms caused by stress, including headaches, stomach aches, depression, anxiety. *Hurry/time pressure/ burnout* includes stress manifesting in time pressure as seen in things like time awareness, eating behavior, and

nervous energy and descriptions of high levels of emotional exhaustion and depersonalization (Landy et al. 1991; Maslach and Jackson 1981). *Efficacy* includes the extent to which teachers believe they have the capacity to perform their job competently, including positively impacting student behavior, motivation, and learning (Tschannen-Moran and Hoy 2001). *Compassion* is "feeling for" or "feeling with" another person out of an interest for the other's well-being, specifically, "feelings, cognitions, and behaviors that are focused on caring, concern, tenderness, and an orientation toward supporting, helping and understanding the other(s)" (Sprecher and Fehr 2005, p. 630).

Some codes were data-driven, emerging directly from the data (DeCuir-Gunby et al. 2011). For example, in addition to sources of stress, some teachers described *sources of support*. We also included *self-care* which we define as compassion directed inwardly; examples include the teachers' recognition of the importance of taking care of themselves or their actions to purposefully achieve that end. *Community/collegiality* also emerged in the data through participants' descriptions of feeling connected with colleagues or working in community, as opposed to feeling isolated. Given the teachers were interviewed about one and a half years after the professional development occurred, we also coded for practices participants learned in CARE that endured over time. A final codebook is available from the first author on request.

After working through two interviews to establish the codebook and refine codes, four coders worked in pairs to code the interviews in NVivo 10. Coders did not know the practice group profile of the participants during coding. Coding pairs coded individually and wrote memos for each interview. Coding pairs then met weekly, via telephone, to come to agreement when discrepancies existed. Then, all four coders discussed issues that arose in the paired discussions, clarified ambiguities, and refined the codebook. Finally, the data for the teachers within each practice group profile (i.e., NP, PFU, ALL) were aggregated.

## Results

Results are divided based on the research questions. First, patterns in participants' descriptions of outcomes are provided. Differences across groups existed in prevalence and description of codes, especially in mindfulness; efficacy; and to a lesser extent, distress tolerance and self-care. Second, we present an analysis of the relationships between program outcomes and compare across practice group profiles. Differences were especially found between the NP and PFU/ALL groups with more synergy existing between codes like efficacy, mindfulness, and distress tolerance for those who adopted practice. Third, we explain the nature of participants' descriptions of their practice.

## Descriptions of Outcomes

Participants were asked to describe stressful situations they typically faced including those involving students, curriculum, and administration and to rank these on a scale of 1–5 (5 = most stressful). Across the three practice groups, teachers cited similar stressors. The average composite score across the categories was NP = 10.95, PFU = 10.9, ALL = 12 (see Table 2). Furthermore, managing stress was cited across all practice groups as one of participants' primary motivations to participate in CARE.

We were interested both in patterns of prevalence (e.g., how frequently participants' descriptions showed evidence of the different outcomes) and in whether there were substantive differences in participants' descriptions of how they experienced these outcomes. Table 3 illustrates the eight main outcomes we coded for in the qualitative data. These include both the theory-driven outcomes and the emergent data-driven outcomes. Because the groups were not equal in size, and because we wanted to account for varying units of analysis within each group (phrase vs. paragraph), we chose to display this information by row percentage rather than by number of coded units. Row percentage is not driven by group size and provides a better indication of how the data is distributed across all eight outcomes for each practice group. A matrix analysis is not a standalone analysis but highlights where interesting patterns may be occurring across groups and outcomes for further qualitative analysis, which we describe below.

We also wanted to know how many participants made comments that were coded within the eight outcomes to counteract the possibility that a few participants made many comments within any one category and skewed the data. Table 4 illustrates the number of participants within each practice group who had data within that outcome category. For example, all nine of the participants in the PFU group and all three of the participants in the ALL group made remarks in their interview that were coded as "mindfulness." Three of the four participants in the NP group made comments that were coded as mindfulness. Across all groups, only one participant was not represented in the mindfulness category. The categories

with the most missing data include (from most to least) internalizing/physical symptoms (8), compassion/empathy (6), hurry/time pressure/burnout (5).

The categories that showed some of the more substantive differences of participants' descriptions across groups included mindfulness, efficacy, distress tolerance, compassion/empathy, community/collegiality, and self-care. Although three of the four teachers in the NP group described instances where they exhibited mindfulness, their descriptions were much more superficial than the participants in the other two practice groups. Comments focused on not reacting to stressful situations immediately. NP105 said she was "stopping to think a little more" and NP152 said CARE "forced me to sorta think before I reacted in any given situation."

The PFU group also reported becoming more non-reactive, but they provided a richer, more strategy-oriented explanation of how they went about this. For example, PFU138 noted:

It did get so much better. It was because I knew how to deal with the stresses, so when I did get aggravated, or agitated by any type of situation, instead of me just flying off the handle I learned to take deep breaths, kind of relax before I respond. You know, do a little mini-time out for myself, before I even got to class inside my room. I would do a body scan sometimes if I had the opportunity. Those types of techniques helped me to cope with some of the stress that I encountered in my classroom.

They also described being more aware and purposeful about their use of time and becoming more aware of how stress affected themselves and others. The ALL group was similar, though they articulated the following nuance of non-reactivity: they did not respond to situations in the moment, but they also did not ignore them, and they knew that *their* approach, be it reactive or proactive, was key. As ALL288 said, she knew not to expect, "the child to be too much different, but I could be different." They also talked about how CARE reminded them to do things they already knew to do. For example ALL127 said:

I feel like I had a lot of little bits and pieces before I came to CARE, things that I thought were important as far as understanding how I'm feeling, and understanding why I was becoming stressed, and understanding some of the strategies I could use to try to deal with those things. But I do not feel like I had the ability to put all of those bits and pieces together, and when I came to CARE I was able to take and recognize the areas where I sort of had started to recognize or had started to utilize them, and then put them into real practice. And not feel guilty about it.

**Table 2** Average amount of stress by practice group

	Curriculum	Students	Administration	Aggregate
NP ( <i>n</i> = 4)	3.0	4.3	3.25	10.95
PFU ( <i>n</i> = 9)	3.2	3.6	4.1	10.9
ALL ( <i>n</i> = 3)	4.0	4.0	4.0	12
Aggregate	10.2	11.9	11.35	

Averages were on a scale of 1 (least stressed) to 5 (most stressed). Aggregates are the total for each row or column

**Table 3** Outcomes across practice groups

	Distress tolerance	Mindfulness	Internalizing physical symptoms	Hurry time pressure burnout	Efficacy	Compassion empathy	Self-care	Community collegiality
NP ( <i>n</i> = 4)	9.27%	7.16%	2.53%	3.87%	41.47%	12.05%	8.33%	15.32%
PFU ( <i>n</i> = 9)	12.88%	31.4%	4.89%	7.35%	13.92%	8.55%	10.94%	10.07%
ALL ( <i>n</i> = 3)	11.59%	28.40%	0.52%	9.76%	13.53%	12.26%	11.95%	12%

Each row totals 100%

Comments like these led to our addition of the self-care code, discussed later.

One of the more deceiving outcomes from Table 3 is the outcome of “efficacy.” Although it appeared that the NP group expressed a greater sense of efficacy than the other groups given that 42% of their codes across outcome measure fell into this category, it should be noted that most of these codes were expressions of a lack of efficacy. Teachers would say things like, “You know when the kids are too far gone there’s almost nothing you can do. And, there’s not much I can do with the administrators, they just, throw at us so many new things,” (NP105) or “I tried to manage the kids and the problems in the room as best I could” but she felt inept (NP114). Indeed, students were deemed the highest stressor by NP teachers (see Table 2). The lack of efficacy felt by participants in the NP and the PFU groups embodied topics from student behavior and lack of skills to curriculum and administration. The lack of efficacy expressed within the ALL took on a different tone. Their lack of efficacy revolved around having high expectations for themselves and their students that was not realized: “Because I personally believe every teacher wants more for their students, more than they can actually give. And when ... you know there’s more to give and you really can’t give it because there’s no time, then you become a little frustrated” (ALL288).

Distress tolerance was tightly linked to mindfulness and efficacy as it indicated how the teachers managed their stressors. The teachers who did not report a mindfulness practice at any time point were more likely to ignore or suppress their stressors, despite feeling pressure. NP199 noted some school climate issues at her school that caused her to retreat and close herself off from her administration and most of her

colleagues. She said she managed her stress by avoiding and ignoring and focusing on what brought her happiness: “I tried to like, steer clear, honestly, and I tried to put my joy in what I love, which was the kids. So then when I immersed myself in with the children, the more I could just kind of ignore.” The group who adopted some mindfulness practices also engaged in some escapism and suppression, but this was mixed with some perspective-taking among the group. PFU128’s comments were said while laughing giving them a slightly different tenor than if she had not been laughing:

The administration has to do what they have to do, and that’s the way it is, and I just figure I got to handle this the best way I can. Be it breathing, talking about it, and just making the best out of it. Cause it’s not forever (laughs). So that’s how I felt this year, breathing, talk about it, leaving the situation, and being thankful for the opportunity to run out of the building an hour ahead of time a lot of times (laughs).

In contrast, the ALL group who had the most extensive experience with mindfulness practices expressed the most recognition of what was in their control and how to use adaptive practices to manage stress. “This year I would say, I had a better sense of what to do and I just kind of like decided that I was going to do the best I could and just kind of let it go” (ALL127). ALL 288 said, “I pretty much had to be more tolerable, be more patient of the matter and understand that getting excited about it cause I can’t get my instruction across was not going to solve it.”

One thing that seemed to set apart the individuals who adopted a mindfulness practice at some point (i.e., the PFU

**Table 4** Outcomes across practice groups based on number of participants commenting

	Distress tolerance	Mindfulness	Internalizing physical symptoms	Hurry time pressure burnout	Efficacy	Compassion empathy	Self-care	Community collegiality
NP ( <i>n</i> = 4)	2 (50%)	3 (75%)	1 (25%)	2 (50%)	4 (100%)	3 (75%)	3 (75%)	3 (75%)
PFU ( <i>n</i> = 9)	8 (89%)	9 (100%)	6 (67%)	6 (67%)	8 (89%)	4 (44%)	8 (89%)	6 (67%)
ALL ( <i>n</i> = 3)	3 (100%)	3 (100%)	1 (33%)	3 (100%)	3 (100%)	3 (100%)	3 (100%)	3 (100%)
Participants missing	3	1	8	5	1	6	2	4



group and the ALL group) from the NP group who had not adopted any kind of practice was in how they expressed compassion and empathy for others. Four of the six coded units in the NP group came from one teacher which skewed the data within this row. And one of the other two teachers expressed how a parent showed empathy to her: “I got a wonderful letter from a parent that put me over the top and I just said, ‘well, you know what, I guess I did do a good job’” (NP114). In contrast, more of the PFU and ALL teachers expressed the importance of the teacher being calm as a way to bring a sense of calm to the students:

And you have all these students in front of you looking for guidance and direction and looking for that balance. Sometimes students they come in frazzled and they have stuff on their mind, and it kind of takes a balanced teacher to come in and try to give ‘em that reassurance and that attention, but if you do not have that you cannot give it. (PFU122)

The words “calm” and “understand” appeared frequently in these descriptions. The teachers, in becoming less reactive to their own stressors, were able to see their students in a different way. For example, PFU138 said, “When I did respond to the kids, it was becoming more nurturing, it was becoming more understanding, and becoming more patient. And understanding that, trying to really, really connect with the kid.”

Based on Table 3, it seemed there was a fairly even emphasis on community/collegiality across the different practice groups. However, the way teachers described bonding with their colleagues and their reasons for developing these bonds was very different. Teachers in the NP group primarily discussed the need to commiserate with others, to feel like they were with others who understood the stresses and challenges they faced as teachers. NP152 described the most memorable parts of the training as “just being around people that were almost like me on a daily basis, and hearing from people that were going through the same thing, it just made you feel like you weren’t alone.” For both the PFU as well as the ALL group, community was necessary for practicing the strategies and was a natural corollary of learning together. For example, PFU373 described the most memorable part of the training as “the kind of experiences during the workshops where we would actually get up and do exercises, whether we’d be doing the walking, doing the movement. I particularly like that because it was team building, cause we all did it together. I also liked the small group interactions where we talked about the same situations.” PFU128 also said it was important to have others who understood her stress but noted the importance of this collegiality for reinforcing CARE strategies, “Also having people who understand the stress help me get through situations in school by breathing, talking, observing, all those things.”

Since the CARE program is predicated on the concept that educators, especially, need to “put their own oxygen masks on first” if they are to best care for others, it is not surprising that we found evidence across practice groups of teachers noting ways they took care of themselves. However, in the PFU and ALL groups, participants more explicitly affirmed the importance of self-care and described a more comprehensive range of strategies that were both proactive and in the moment. To illustrate, three of the four teachers in the NP group made a total of only five comments coded in the “self-care” category. NP114 made the generic comment, “So I’m de-stressing myself this summer totally” after lamenting about the difficult year she had. NP152 and NP199 talked about using time better: “I would give myself an hour a night to get work done at home.” In contrast, those with a practice, who had 3–4 times as many coded units, internalized and articulated the importance of self-care:

And then CARE is something that teachers use to literally take care of yourself and I think as adults as teachers we forget to take care of ourselves and it teaches you how to try and find power within yourself to center yourself and to put forward the vision that you have for your day and for your life and to put yourself in a way that will make that achievable as opposed to just some goal you have in the distance.... It’s just taking care of yourself versus just making sure you are okay. (PFU200).

Strategies teachers used included taking time at lunch, pausing to breathe, continuing activities that individuals knew replenished them personally like running (ALL127), or being purposeful “to stay in the moment” (PFU154).

Given the minimal data coded as internalizing/physical symptoms and hurry/time pressure/ burnout, it was difficult to make comparisons across groups.

### Relationships Between Mechanisms of Change

When looking at differences across practice groups, we noticed specific codes frequently overlapped. Since quantitative studies of MBIs have identified significant mediators or moderators impacting mindfulness (Carmody and Baer 2008; Lykins and Baer 2009) and our previous investigations of CARE found specific constructs operated synergistically resulting in greater teacher resilience (Schussler et al. 2018), we were not surprised to find overlap (i.e., double coding) between outcomes. For this study, we wanted to understand if these relationships differed across practice groups as such patterns may indicate how practices learned in CARE related to outcomes collectively, not just individually (see Table 5). Such patterns could provide insight into the nature of re-perceiving and how it is impacted by practice. We added

the “Managing stress outside of CARE” code to Table 5 as we wanted to see which outcomes cross-referenced with how participants described handling their stress outside of the program. Darker shadings within each practice group (>n) indicate greater prevalence of double coding.

In the no practice group, two of four teachers (NP114 and NP199) provided most of the overall coding references for all outcomes including almost all of the cross-references between outcomes. As described above, efficacy contained the most coding references for this practice group and it also included the most examples of overlap, with only seven instances of double coding that do not include efficacy.

Only two outcomes, distress tolerance and compassion/empathy, included more than one double-coding reference with efficacy; all other double-coding references with efficacy occurred only once within this practice group. In reviewing all efficacy codes, we noticed teachers’ perceptions of their ability to manage their classrooms were somewhat more nuanced in the cases where other outcomes were also coded, compared to other cases where the efficacy code was used on its own as teachers described stressful situations. The instances where efficacy was double-coded with other outcomes demonstrated

more positive representations of teachers’ experiences. For example, NP114 both described a healthy distress tolerance and a sense of efficacy when she noted, “I think you can’t let that stuff bother you and do your job the way you know how to do it.... I think we are faced with stress every day in our classroom, and if you can just find a way to manage that for yourself and not let that overcome you, I think that’s the best way to manage a classroom.” Similarly, NP199, a bilingual teacher, expressed positive efficacy and compassion in describing her decisions about prioritizing what to teach her second and third grade students:

I learned that, what was more important was what the children learned, and not what they were able to show on the exam. And, some of the things that they were able to learn are not things that are actually measured on this exam.... I just wanted them to leave with confidence, and the ability to speak and write on whatever level, as long as they were not afraid of the language.... And for them to kind of get acquainted with the culture of being in [the city]. There were so many factors that needed attention and not an exam.

**Table 5** Cross-references of outcomes by practice group

	Distress Tolerance	Mindfulness	Internalizing, Physical Symptoms	Hurry Time Pressure Burnout	Efficacy	Compassion Empathy	Self Care	Community; Collegiality	Managing Stress outside CARE
<b>No Practice (n=4)</b>									
Distress Tolerance	9	--	--	--	--	--	--	--	--
Internalizing, Physical Symptoms	0	8	--	--	--	--	--	--	--
Time, Pressure	0	0	1	--	--	--	--	--	--
Hurry Time Pressure Burnout	0	1	0	2	--	--	--	--	--
Efficacy	2	1	0	1	18	--	--	--	--
Compassion Empathy	0	0	0	0	2	6	--	--	--
Self Care	0	1	0	1	0	0	5	--	--
Community; Collegiality	1	0	0	0	1	0	0	11	--
Managing Stress outside CARE	2	0	0	0	1	1	0	0	7
<b>Post &amp; FU (n=9)</b>									
Distress Tolerance	32	--	--	--	--	--	--	--	--
Internalizing, Physical Symptoms	14	54	--	--	--	--	--	--	--
Time, Pressure	4	5	19	--	--	--	--	--	--
Hurry Time Pressure Burnout	2	5	0	24	--	--	--	--	--
Efficacy	9	7	3	1	33	--	--	--	--
Compassion Empathy	1	6	1	1	1	18	--	--	--
Self Care	3	8	1	4	0	2	33	--	--
Community; Collegiality	1	1	0	0	2	0	4	21	--
Managing Stress outside CARE	3	8	3	3	0	1	1	1	23
<b>All (n=3)</b>									
Distress Tolerance	14	--	--	--	--	--	--	--	--
Internalizing, Physical Symptoms	7	26	--	--	--	--	--	--	--
Time, Pressure	1	0	1	--	--	--	--	--	--
Hurry Time Pressure Burnout	0	2	0	12	--	--	--	--	--
Efficacy	2	3	0	1	18	--	--	--	--
Compassion Empathy	1	4	0	0	2	12	--	--	--
Self Care	2	0	0	4	1	2	16	--	--
Community; Collegiality	1	0	0	1	1	0	1	11	--
Managing Stress outside CARE	0	2	0	0	1	0	0	0	8

Darker shadings within each practice group (>n) indicate greater prevalence of double coding.

This teacher claimed she “learned to let go the first year” and not become too stressed by the pressures of testing even with her limited English proficiency students. These coping skills were not related to her experience in CARE as she was a fourth year teacher. Overall, there were few overlapping outcomes for those who did not practice.

The PFU group included examples of double coding across all eight of the outcomes categories. Mindfulness emerged as having the highest number of cross-references which were represented by every other outcome category and included five or more examples of double coding for all but one outcome. Distress tolerance overlapped the most with mindfulness in this group, with 14 double-coding references that accounted for seven out of nine teachers; it should be noted, however, that two teachers provided examples of negative coding. It is also interesting to consider that the next highest pairing of double-coding in this group emerged between efficacy and distress tolerance, although the majority of these examples were instances of negative coding. These examples of double coding reveal an acceptance of what is, an inclination to not take things personally, and purposeful perspective-taking. Selected examples are below:

...After going through CARE I just kind of got to a point where, not that I did not worry about things but that, I just took it with a grain of salt, I just took it as a new challenge, something I had to deal with. And that was it. It's honestly that my perception of situations... the way I thought of it, my mindset changed. Like before, my mindset would start to get frazzled, I would overthink it... But then with CARE it became different, because that is just stupid to me, I just stop and breathe and think about I'm actually expected, being asked to do, and then realizing, “oh, it's not that bad.” (PFU122) That has helped me, because I go into that, like “you know what, from the first moment...something happened with that kid, that made the rest of the day off.” And I think once you start to recognize that earlier, you get to a point where you can stop it earlier. You're like, “you know what, that happened and I'm gonna let it go,” and just get back to what it is that I'm doing to the best of my ability. (PFU146)

Double-coding references within the ALL practice group were similar to those of the PFU group, though with even greater concentrations, taking into account the group size, and more mention of practices or strategies. For the ALL group, while representing only three teachers, there were many more examples of double-coding references across the outcomes, in alignment with higher frequencies of overall coding for this group. Out of the eight outcomes, seven included examples of double coding, with one teacher in particular accounting for many of these cross-references (ALL127).

Mindfulness had the highest number of cross-references, which included two or more examples of double coding with five of the remaining outcome categories.

As with the PFU group, mindfulness and distress tolerance overlapped the most with seven coding references, and each teacher in this group accounted for at least one example of double coding. Teachers tended to express acceptance toward situations they faced, which helped them to detach from an immediate visceral response and deal with challenging situations more purposefully. For example, ALL127 described the benefits of CARE:

I guess to a certain degree I always felt a little bit more alone in feeling like somebody who maybe needed to be able to take those moments, take that time, focus on myself. But also, sort of like the comfort in recognizing that other people are struggling too. Like I said, the guilt, it's ok to process the things the way that you need to process them, take the time that you need to, to calm down from it, even in the moments of the classroom. Allowing that to be a central part of who I am... So it's ok in those moments to like, take 3 breaths...

The self-care and hurry/time pressure/burnout overlaps showed both a strong commitment to students, which made it difficult to practice self-care, and recognition that they would be more effective if they did engage in self-care. For example, ALL288 expressed frustration at not being able to give her students more support, “because there's not time...and you know if they had maybe a little more, you'd get more from them.” She explained that this stress could also unnecessarily “put a lot of pressure” on the students. ALL235 mentioned “setting certain boundaries” like having lunch on her own, which helped ensure things “do get done because I'm not that stressed.”

## Practices

In addition to differences in length and frequency of practices (see Table 1), participants' description of their experiences with the CARE practices varied across the three practice groups. NP teachers provided superficial knowledge of CARE skills and practices or indicated they were not using practices. When asked about which CARE practice she continued to use, NP114 stated, “Yeah, using some... I don't think about them every day, but when I do think about them I'm like, ‘oh, yeah, maybe I should use that’.” Similarly NP105 answered, “The ones like breathing or just taking a minute to think, I kind of try to do as much as I can, but some I haven't really been able to incorporate.” These responses suggest while some of the skills learned in CARE were somewhat memorable, like mindful breathing, teachers had not meaningfully incorporated them into their work. Also, when asked whether they handled stressful situations similarly or differently after participating in

CARE, NP teachers used broad, abstract language that did not specifically relate to CARE practices.

Conversely, teachers in the PFU group reported a regular utilization of CARE practices as a means of emotion regulation and as a de-stressor. In general, they described doing the practices as needed, but occasionally, they reported implementing a regular practice routine. PFU141 described her intentionality in how she used CARE practice to de-stress and manage her reactions to challenging situations: “I can take a deep breath, and I actually walk through the halls and...it’s like a de-stressor for me to just walk through the halls and just concentrate on that walking and calm myself down.” Similarly PFU128 stated, “But now I’ll go outside and just take a walk, a quiet walk alone, and come back feeling less stressed...I write things down, I write what’s going on with me in the morning and what’s going on with me at the end of the day.” These teachers intentionally used practices like mindful walking and journaling both to de-stress and to self-reflect and described initiating a regular practice routine. PFU154 even described putting notes to remind herself “to continue with [certain practices].” PFU teachers also specifically noted that they responded to stressful situations differently following CARE training. PFU128 said, “I’m more thoughtful as to how I’m going to respond to things. Before CARE, I would’ve went toe-to-toe with my principal, in an argumentative way.”

The ALL teachers, like the PFU group, had rich responses around practice, and they were more adept at integrating CARE practices in their classrooms with students. ALL127 discussed emotional intelligence in her classroom, “This year I’ve done a lot of work with my students on emotional intelligence and being able to articulate with them how I’m feeling in moments, like if something’s really bothering me.” Moreover, she connected and shared the CARE skills with her students: “The work that I’ve done with them and helping them to identify their own feelings; they do journaling on a regular basis now.” ALL127 was deliberate about creating an emotional working space for not only her emotional awareness but also for that of her students and the relational awareness between them. ALL288 described showing her students some of the CARE practices, including mindful breathing: “I do it with 2nd grade, I showed my students, I modeled for them the importance of doing some of those techniques...” She described how she modeled the CARE practices with her students when she noticed them getting anxious, “I had them stand up, close their eyes and just breathe slowly... I gave them a theme to think about if they were at the beach, pretend like you’re in the sand and you can hear the ocean.”

## Discussion

The purpose of this study was to qualitatively examine the relationship between home practice and re-perceiving for a group of

urban, elementary school teachers. We used distress tolerance, mindfulness, burnout, efficacy, compassion, and self-care as proxies for (or direct representations of) re-perceiving and included teachers who adopted practices fitting three profiles: no adopted MB practice (NP); no practice at baseline but practice at post and follow-up (PFU); practice at baseline, post, and follow-up (ALL). We explored the outcomes discretely, qualitatively examining their prevalence within the three teacher groups, as well as differences between them. We also investigated the relationships between these outcomes and whether these differed across teacher groups, and we examined teachers’ descriptions of how they used the practices.

It is not surprising that the biggest differences were found between the NP teachers, who did not adopt MB practices at any point, and all other participants. Differences were found both in the prevalence of outcomes teachers discussed and descriptions of their experiences. Some of the largest differences presented in their lack of efficacy and mindfulness, though there was evidence of lack of efficacy across groups. The NP teachers’ descriptions coded as lack of efficacy involved their perceptions that they struggled to manage challenging situations in their classrooms, be it students with emotional problems, shifting curricular mandates, or administrative demands. Interestingly, the teachers across the three different groups cited similar stressors. Therefore, the differences following the intervention likely were not because NP teachers experienced different kinds of stress. Rather, teachers who reported using practices approached stressful situations with a broader repertoire of strategies that may have enabled critical aspects of re-perceiving, especially awareness and emotion regulation.

Patterns across particular outcomes—especially mindfulness, efficacy, distress tolerance, and self-care—provide insight into how adoption of MB practices may foster greater capacity for re-perceiving. For example, teachers who reported adoption of MB practices following the CARE training included mindfulness in their descriptions at a much higher rate than non-practicing teachers, and they had notably fewer reported instances of negative efficacy (see Table 3). There were also more teachers who adopted practices who described instances coded as distress tolerance and self-care (see Table 4). Qualitatively, teachers described an emerging awareness of their negative emotions (coded as mindfulness), more facility to let go of their stressors (coded as efficacy and/or distress tolerance), and greater affirmation of the importance of self-care and use of strategies to promote it. This suggests that teachers who adopt MB practices not only may be more aware of their stressors (Davidson and Kaszniak 2015), but through practice, they gain skills to improve their capacity to manage stress, namely by becoming less reactive, a process that involves both the awareness and regulation of negative emotions that previously led to problematic behaviors (i.e., “flying off the handle,” responding “in an argumentative way,” etc.). Prior research on MBIs for teachers also notes specific pre- to



post-improvements on mindfulness measures (Lomas et al. 2017) and in teachers' emotion regulation (Frank et al. 2015; Jennings et al. 2013; Sharp and Jennings 2016) as does the larger study from which this sample was drawn (Jennings et al. 2017). Research exploring the value of practice also found statistically significant correlations between home practice and improved mindfulness (Bergomi et al. 2015; Huppert and Johnson 2010) as well as between meditation experience and improved mindfulness (Josefsson et al. 2011; Lykins and Baer 2009).

The present study extends beyond these findings by qualitatively examining these constructs collectively, not just individually. The strong relationships between codes for mindfulness, distress tolerance, and efficacy, and to a lesser extent, self-care (see Table 5), suggests that these constructs must operate synergistically, not just demonstrate gains separately, to foster teachers' capacity to manage stress or develop their "resilience" (Luthar et al. 2000) to the stresses of teaching. In the prevention science literature, resilience has been defined as an individual's ability to overcome potential negative trajectories and function adequately despite the presence of risk or trauma (Fergus and Zimmerman 2005; Masten 2011). For teachers, resilience is believed to be multidimensional, socially constructed, and developmental, encompassing aspects of professional identity/mission as well as teacher emotions (Gu and Day 2007; Tait 2008). Yet, Mansfield et al. (2012) concluded there are important aspects, especially around teacher emotion, which are largely absent in the teacher resilience literature. The early career teachers in their study identified "being reflective, and the ability to distance oneself emotionally so as to 'not take things personally'" as important aspects of emotional resilience, yet these are missing in existing frameworks of teacher resilience (Mansfield et al. 2012). The ability to "not take things personally" may require a great deal of "emotional labor" (Hargreaves 2001; Hochschild 1983), especially if teachers are lacking in strategies to manage their emotions. In the present study, we found that those who adopted a regular practice seemed the most capable of not only being aware of negative emotions (Simons and Gaher 2005) but also effectively using non-reactivity to channel them constructively (Keng et al. 2011). They intentionally used strategies, like body scan or taking deep breaths before responding, to de-center (Fresco et al. 2007), shifting their internal perspective on the experience itself and also shifting the manner in which they responded. Self-regulation equated to emotion regulation. The mindfulness-based strategies served to reinforce their emotional awareness and emotion regulation, and thus enhanced teachers' self-efficacy to deal with challenges.

The combination of intention and action may be critical to understanding how practices impact the realization of positive outcomes for teachers in an MBI like CARE. It is well documented that teachers with a strong sense of identity and

mission are more likely to achieve intended outcomes related to student achievement and well-being (Korthagen 2004; Tschannen-Moran and Hoy 2001). It is also well documented that many teachers suffer from a "problem of enactment" (Kennedy 1999) whereby they struggle to flexibly apply their knowledge and skills, in situ, to reach intended outcomes (Hammerness et al. 2005; Schussler and Murrell 2016). Self-efficacy is an integral component of resilience in that it proactively animates productive action aimed at reaching desired outcomes as opposed to simply reactively buffering from adversity (Tait 2008). The PFU and ALL teachers in this study embodied resilient qualities by increasing mindfulness, thereby attenuating reactivity to emotional stimuli and engaging in self-care by facilitating disengagement of attention from negative stimuli. They also embraced a strong sense of mission, knowing what they wanted to achieve both in the long run and in the present moment, and they employed strategies that increased their emotion awareness and regulation. Teachers may feel more in control when they know what they want to accomplish and believe they have the capacity to accomplish it, despite the various curricular, student, or administrative stressors they experience. Since much of what occurs in classrooms is unscripted, teachers must have both the pedagogical and emotional acumen to manage challenging situations with cognitive and emotional clarity followed by purposeful, self-regulated actions. MB practices may help orient teachers in this manner.

It should be noted that changes in efficacy have been inconsistent in studies of MBIs for teachers (Frank et al. 2015; Poulin et al. 2008) and specifically CARE (Jennings et al. 2017; Jennings et al. 2013; Schussler et al. 2016). For example, in the larger study from which the current sample was drawn, teaching efficacy increased but was not statistically significant (Jennings et al. 2017). However, teachers in a prior study of CARE did report statistically significant improvements in efficacy (Jennings et al. 2013), although their baseline scores were much lower than in the more recent study. A previous qualitative study of CARE which did not identify teaching efficacy as a significant code concluded that teachers are less likely to explicitly articulate improvements in their efficacy (Schussler et al. 2016). Efficacy may be important to fostering teachers' resilience but difficult to detect qualitatively, as teachers often do not discuss their perceptions of or actions demonstrating their own competence in the face of adversity. However, a lack of efficacy may be articulated readily, as in the current study. Future research should investigate the role of efficacy in re-perceiving to determine if it is a precursor, an outcome, or both, and, depending on its importance, explore how efficacy can be increased.

One aspect of re-perceiving that received fewer coded units than anticipated was compassion/empathy. For the NP and PFU teachers, there were a number of teachers with nothing coded in this category, and there was little overlap with other

outcomes. Likewise, the larger study also showed no significant effect for interpersonal mindfulness (Jennings et al. 2017), and a study of the SMART program also showed no significant change in teachers' compassion (Taylor et al. 2016). However, in the present study, the ALL teachers who had an established practice, all had statements coded as compassion/empathy and some of these statements overlapped with the mindfulness code (see Table 5). It may be that teachers with more experience in MB practices, because they have more awareness of their emotions and can better practice emotion regulation, have the capacity to be less judgmental and reactive, and thus express more compassion toward others. It may also be that those who practice self-care, or "self-compassion" (Neff 2002), are better equipped to express compassion for others. Although correlations between self-compassion and compassion for others are weak (López et al. 2018), there is evidence that medical students and psychotherapists with higher self-compassion are more likely to exhibit compassionate behaviors to those in their care after exposure to an MB intervention (Bibeau et al. 2016; Fernando et al. 2017). Further research is needed to investigate whether other aspects of re-perceiving (e.g., emotion awareness and self-regulation) are precursors to compassion, and whether more experience with MB practices helps to activate more compassionate behaviors.

### Limitations and Future Research

This study examined teacher interviews following their participation in CARE to compare how those who adopted practices at different time points experienced program outcomes related to re-perceiving. The sample was limited to a subset of the larger quantitative study of elementary teachers in one large, urban district, and the results are not generalizable. Relatedly, the participants within each practice group profile are not necessarily representative of all participants from the intervention within that profile. However, insights concerning the impact of practice on emotion awareness and emotion regulation for re-orienting how teachers manage their stressors can guide future studies. For example, more research is needed to examine the role of efficacy and compassion. In addition to investigating whether emotion awareness and regulation are precursors to compassion, more research should examine whether teachers with an already strong sense of mission and pedagogical efficacy are more willing to implement MB practices which reinforces their emotion regulation and emotional efficacy.

Future research should investigate how dosage (aka, duration and frequency) of practices as well as practice quality impacts outcomes. It is unknown whether home practice beyond the 10–30 minutes by participants in this study would impact outcomes. In addition, it is not clear why some participants, especially those with no previous practice, did or did not choose to adopt MB practices. Biobehavioral data such as cortisol may yield

insight into whether physiology explains differences in how those who adopt practices respond to stress and whether mindfulness practices affect their body chemistry differently.

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### Compliance with Ethical Standards

**Conflict of Interest** In accordance with ethical obligations, PAJ reports that she is one of the developers of the CARE program and, as such, may benefit from publication of this research. DLS, AD, DR, AAD, SLD, JLB, and MTG have no conflicts of interest to declare.

**Ethical Approval** All procedures performed involving human participants were in accordance with the ethical standards of the University of Virginia, Pennsylvania State University, and the New York City Department of Education Institutional Review Boards and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**Informed Consent** Informed consent was obtained from all individual participants included in this study.

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