
BUILDING INNER RESILIENCE IN TEACHERS AND STUDENTS

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Teachers face a variety of stresses in the workplace. Given the stresses that they face and the relatively little support that they receive to address these challenges, it is not surprising that many teachers respond in maladaptive ways; by exhibiting common physiological, emotional, and behavioral manifestations of stress; by creating climates of stress in their classrooms that in turn negatively effect their students; or by leaving the profession altogether. Likewise, students also experience stress in their educational environments and may respond in maladaptive ways. Some teachers and students may be more likely than others to respond negatively to the stress they experience due to temperamental tendencies that put them at risk for maladaptive coping, while others may be more “stress hardy” or resilient. Research suggests that the stress management or coping skills used by more resilient people can be taught to those at risk, allowing them to learn to manage stress effectively. This chapter describes the impacts of a transformational professional development program for teachers designed to improve the stress management skills of both teachers and their students thereby increasing their resilience to ongoing stressors. Through a randomized control trial design, the evaluation of the Inner Resilience Program (IRP) identified several statistically significant effects, including increased teacher mindfulness and relational trust, increased student autonomy in the classroom, decreased

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student frustration, and improved overall wellness for students who were identified as at risk to react maladaptively to stressful situations.

In the spring of 2002, the Inner Resilience Program (IRP), a project of the Tides Center, was founded in response to the effects that the events of September 11, 2001 had on schools in lower Manhattan. For educators in the vicinity of the World Trade Center on that day, many of whom ran for their lives, academic preparedness took a backseat to the question of inner preparedness—the skills and resources that each individual and school community had to access in order to remain calm and balanced so they could make responsible decisions. The events of 9/11 and the period following underscored the importance of acknowledging that teachers need to be resilient—that is, to be equipped with better stress management and coping skills so that they may provide the emotional support their students so desperately need.

TEACHER RISK AND RESILIENCE

While the IRP was founded in response to 9/11, it quickly became apparent to the program team that the need for better stress management and coping skills is not unique to those who were directly impacted by 9/11. A recent survey conducted in the United Kingdom by the National Association of Head Teachers found that 40% of head teachers have been to a doctor's office for a stress-related problem within the last year (Anderson, 2010). In 2006, the Centers for Disease Control and Prevention reported that inner-city high school teachers are more likely to get an ulcer than any other professional (Centers for Disease Control and Prevention, 2006).

The evidence that teachers have an especially great risk of experiencing stress may stem from the depersonalization and sense of isolation that is common in the profession (Demarrais & LeCompte, 1999). The scheduling demands of the work day; the consecutive hours spent in their own classrooms without peer interaction; the social, emotional, and academic needs of so many students can all lead to a perception that the work of teaching is never-ending in its expectations. Humphrey (1992) attributes the increased stress level of teachers to several additional factors: the large numbers of important decisions teachers must make in a single day; the great level of public scrutiny that teachers face; the high risk for violence in many schools; and the level of emotional sensitivity needed to respond to the emotional needs of students.

It is little wonder, then, that nearly half of all new teachers leave the profession within the first 5 years (Ingersoll, 2003). Indeed, stress and poor management of stressors are consistently rated as the main reasons that teachers leave the profession (Darling-Hammond, 2001; Montgomery & Rupp, 2005). Replacing teachers because of this attrition costs billions of dollars annually, and there are costs related to loss in teacher quality and student achievement, which are particularly important to consider given research that suggests teachers become most effective at impacting students' learning outcomes after 3 to 5 years of teaching (Murray, 2005). Furthermore, attrition rates tend to be even higher in low-income, inner city schools (Murray, 2005), where the students most need experienced, high-quality teachers to close the achievement gap and reduce pervasive social and economic inequities.

Teachers who do not leave the profession are at risk of burning out, another serious problem. Burnout occurs when teachers have attempted unsuccessfully to cope with stress over long periods of time (Kyriacou, 2001). It is a multidimensional construct that consists of emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, Jackson, & Leiter, 1997) and can be tremendously destructive to teacher-student relationships, classroom management, and the classroom environment, as well as the health of individual students (Jennings & Greenberg, 2009).

Of course, while teaching may be an inherently stressful profession, not all teachers leave the profession or experience burnout; many even prosper. What is it that allows some teachers to thrive in such a stressful environment while others either leave or burn out? Some researchers theorize that certain temperamental characteristics may prepare some people to handle stressful environments better than others. In their research, Maddi and Kobasa (Kobasa, 1982; Maddi & Kobasa, 1984) used the term "stress-hardy personality" to describe one that is able to cope with and even thrive in the face of extreme stress. This personality is comprised of three components: (a) commitment (having a sense of purpose), (b) control (being able to incorporate stressful events into one's life plan), and (c) challenge (responding to stress as an opportunity to grow) (Kobasa, 1982). These components of a stress-hardy personality bear strong resemblance to resiliency, which is a construct that has been researched in other contexts and is the focus of the current study.

Notably, recent research suggests that people are capable of acquiring a stress-hardy mindset, or a kind of resiliency, rather than seeing it as a fixed, inborn trait. For example, in their qualitative study of resilient teachers (i.e., teachers who persistently and successfully coped with stress), Howard and Johnson (2004) found the following consistent features among participants: a sense of agency, a strong support group, and

competence and a sense of achievement. Notably, they argue that these are learned, rather than innate characteristics: "Apart from some speculation about whether such qualities as patience might be innate, all our teachers firmly believed they had learnt the strategies and dispositions that made them resilient" (Howard & Johnson, 2004, p. 414). Practitioners have also incorporated the idea that such resilience can be taught (Brooks & Goldstein, 2003) and, indeed, it is the fundamental theory underlying the development of the Inner Resilience Program. The multiple components of the IRP are intended to directly increase participants' strategies for stress management and coping skills, including providing and receiving support among one another, thereby building teachers' resilience. The goals of the program are such that no matter what temperamental traits participants enter into the program with, they leave with an increased capacity to manage stress and an awareness of that capacity that can be incorporated into their self-concepts.

STUDENT RISK AND RESILIENCE, AND CLASSROOM CLIMATE

When considering the impact of stress in the educational environment, it is also important to acknowledge the stress that students experience. It is not uncommon for children to experience such stressors in their everyday lives as bullying, grade pressures, test anxiety, and conflicts with peers and teachers (Carson & Bittner, 1994). According to the American Psychological Association's (APA) most recent Stress in America survey, not only are today's children more stressed than they have been in recent years by things like school and their parents' financial difficulties, their stress levels are consistently underestimated by their parents (American Psychological Association, 2009). Perhaps symptomatic of the amount of stress that children experience, rates of early substance abuse and violence among today's children and youth are on the rise (Centers for Disease Control and Prevention, 2008; National Institute of Drug Abuse, 2009; U.S. Department of Health and Human Services, 2001). While all children experience some levels of stress, not unlike adults, children may vary in their vulnerability to the stress in their environments based on their particular temperaments (Carson & Bittner, 1994). Carson and Bittner suggest that children who demonstrate positive characteristics of temperament may have a wider range of responses to stressful life experiences available to them, which may be seen as protective. Specific protective factors for children identified in the literature are similar to those for adults, and include feeling connected to others, having a sense of control and competence, feeling a sense of achievement, and having effective social and problem solving skills (Howard & Johnson, 2004). On the

other hand, some children may have a more restricted range of responses available to them. For example, Carson and Bittner (1994) argue that children who manifest more negative temperamental characteristics (such as negative quality of mood, poor adaptability to change, unpredictability of behavior, and high intensity of reaction) may be "at risk" to react in maladaptive ways to stressful situations. These children, Carson and Bittner argue, are often responded to unfavorably by their peers and teachers alike.

Teachers' own stress levels provide an additional dimension to this problem. Cheney and Barringer (1995) found that highly stressed teachers may be reluctant to probe into underlying reasons for student misbehaviors and also tend to rely on a rigid focus on school rules when dealing with problem behaviors (Cheney & Barringer, 1995). Furthermore, teachers who suffer from burnout are less caring and sympathetic to their students, have a lower tolerance for their mistakes and misbehaviors, are less prepared for classes, and feel less committed and dedicated to their work overall (Byrne, 1993; Jennings & Greenberg, 2009). The toxic interaction of teacher and student stress can lead to the deterioration of the classroom climate, with teachers and students aggravating each other's negative reactions. For certain "at risk" students, this interactive relationship can set in motion a self-reinforcing dynamic in which the child comes to see him or herself as a poor student incapable of success.

THE PROMISE OF MINDFULNESS-BASED PRACTICES

There is growing evidence that engagement in contemplative practices strengthens the brain functions that are responsible for emotion and attention regulation, empathy and compassion, and resilience in the face of life stress (Davidson et al., 2003; Davidson & Harrington, 2002; Davidson & Lutz, 2008; Kabat-Zinn, 2003; Lutz, Brefczynski-Lewis, Johnstone, & Davidson, 2008; Lutz, Slagter, Dunne, & Davidson, 2008; Singer & Lamm, 2009). Jon Kabat-Zinn, who founded the Stress Reduction Program at the University of Massachusetts Medical School, first examined the use of mindfulness practices with adult patients suffering from chronic pain (Kabat-Zinn, 1990). He found that patients reported a decrease in pain, an increased sense of well-being, and a decrease in blood pressure. Davidson and colleagues (2003) have added to the research about the benefits of teaching calming strategies to adults. Their neurological research has demonstrated that meditation can increase the grey matter in the brain, improve the immune system, reduce stress, and promote a sense of well being (Davidson et al., 2003).

A mindfulness-based educational approach involves the introduction of secularized contemplative practices in educational settings to support the development of such skills in teachers and students alike (MLERN, 2010). Several studies have examined the effect of mindfulness training in education, with both adult and child participants. Shapiro, Schwartz, and Bonner (1998) used a randomized control trial design to study the effects of an 8-week meditation-based stress reduction program on premedical and medical students. They found that even a short intervention, an 8-week meditation-based stress reduction program, effectively reduced participants' stress and anxiety levels and increased their empathy toward others. Similarly, Newsome and colleagues (2006) studied the effects on counselors of a semester-long course entitled "Mind/Body Medicine and the Art of Self-Care." Counselors in this course engaged in meditation, yoga, qigong, and conscious relaxation exercises. Counselors reported reduced stress and improvements in their work with clients as a result of the course. Likewise, Singh and colleagues (2006) studied the effects of a 12-week mindful parenting course for parents with autistic children. They found that mothers not only reported additional satisfaction with their parenting skills, but their children also demonstrated less aggression, noncompliance, and self-injury after intervention. In a Vancouver study, children who were taught a mindfulness practice were "less aggressive; less oppositional toward teachers; more attentive in class; and reported more positive emotions, including more optimism" than those who were not (Schonert-Reichl & Lawlor, 2010). Smalley (2008) also reported positive results from teaching mindfulness practices to teenagers with attention deficit hyperactivity disorder (ADHD). She found that learning mindfulness practices reduced their anxiety and increased their ability to focus.

There is evidence that teaching mindfulness-based techniques to individuals with temperamental tendencies toward negative emotional states can be especially effective (Feltman, Robinson, & Ode, 2009). Recent studies in the field of neuroscience have shown that attention and awareness play a key role in people's capacity to self-regulate (Feltman, Robinson, & Ode, 2009). For example, for children who tend to be highly reactive, the capacity for self-regulation is impaired. Therefore, teaching mindfulness strategies to these children, in particular, may help strengthen self-regulatory skills and mitigate negative emotional outcomes. To date, few rigorous studies have examined the effects of teaching contemplative practices to educators for the purpose of stress management. The current study used a rigorous randomized control trial design and examined not only the effect of the program on teachers but also on their classroom environments and on their students.

THE PRESENT STUDY

In 2007-2008, the IRP conducted a randomized control trial research study in New York City (NYC) to examine the effect of the program on participating teachers and their students.¹ Teachers were randomly assigned to treatment or delayed treatment (control) groups. Teachers in the treatment group participated in the intervention (as described below), while teachers in the control group did not receive any treatment during the 2007-2008 school year, but were offered services during 2008-2009. It was hypothesized that the intervention would positively impact teachers' overall well-being (e.g., perceived stress, mindfulness, coping skills), which, in turn, would have a positive impact on the climate of their classrooms and on their students' well-being. It was further theorized that students' well-being would also be positively impacted by activities directly geared for them, such as those in the *Building Resilience from the Inside Out* curriculum module.

INTERVENTION

Teachers in the treatment group attended and participated in the following activities: yoga classes, the Nurturing the Inner Life (NTIL) Series, a residential retreat, and training and staff development on using a mindfulness curriculum. These activities were designed to support and reinforce each other.

Treatment group members attended 11 weeks of yoga classes in fall 2007 and 16 weeks of classes in spring 2008. These 75-minute classes were offered through the leadership of a skilled, certified yoga instructor. Participants were introduced to a weekly yoga practice with a focus on stress management and mind-body health. This provided the teachers in the group a time each week to focus on themselves in an atmosphere of safety and relaxation.

For the Nurturing the Inner Life (NTIL) Series, teachers who were receiving treatment gathered for 2.5 hours monthly from October 2007 to June 2008 to explore a variety of reflective approaches to help effectively manage their stress. An atmosphere of warmth and collegiality was actively cultivated as participants engaged in group dialogue, were taught various contemplative practices, and recorded their thoughts and feelings in journals over the course of the series. Each session ended with a shared meal.

Third, treatment group members attended a fall weekend residential retreat. The retreat was designed to honor the genuine need for rest and rejuvenation while also introducing educators to practical strategies for staying calm, strong, and creative within the turmoil and stresses of work and life. Participants spent the weekend as a caring learning commu-

nity—morning yoga was offered; healthy meals were served; and psycho-educational workshops on stress management, conflict resolution, and grief were offered. Teachers were given opportunity for contemplative practice, and each teacher was offered a body work session by a certified body work practitioner, a reflection session with a mental health professional, and an opportunity to talk in large and small groups about the meaning of their work as educators. Participants were able to take home powerful and practical tools to continue the work they had begun.

To make a more direct and long-term impact on students, the IRP worked with teachers to incorporate many of the project's resiliency-building tools and techniques into the fabric of their classroom practices. The program aimed to have the teachers spend the entire first semester of the school year learning to nurture their own inner lives and then to help teach what they learned to their students. In January 2008, treatment group participants were trained in the use of the IRP's K-8 curriculum, *Building Resilience from the Inside Out*. This curriculum module is based on the book, *Building Emotional Intelligence: Techniques to Cultivate Inner Strength in Children* (Lantieri, 2008). The curriculum worked as a guide for teachers to help their students learn to calm their minds and relax their bodies, so that they could be more present for learning in the classroom. A CD that guides students through various mindfulness and progressive muscle-relaxation practices accompanies the curriculum. Each teacher was assigned a staff developer who made site visits² to the teachers' classrooms and provided on-site support for implementing the lessons and helping teachers to provide an atmosphere in their classes for creating more caring and calmer learning communities. Teachers were encouraged to explore all the lessons in the curriculum module with their students and to find activities that worked effectively with their class, and practice them daily if possible.

METHODS

Participants

Teachers were recruited to participate in the study through a variety of methods, including flyers, advertisements in teacher newsletters, and e-mails to the Inner Resilience community. Recruitment took place over the course of 5 months prior to the start of the study. After 70 eligible teachers had committed to the study, participants were randomly assigned to treatment and control conditions. The final teacher sample (i.e., teachers who completed both pre- and postsurveys) was comprised of 57 teachers—29 in the treatment group and 28 in the control group—from elementary schools across four of the five NYC boroughs; with the greatest

Table 13.1. Demographic Composition of the Teacher Sample by Group

Characteristics	Category	Percent	
		Treatment	Control
Gender	Male	3.4	0.0
	Female	96.6	100.0
Age	21-30	44.8	53.6
	31-40	34.5	17.9
	41-50	3.4	14.3
	51-60	3.4	7.1
	Unknown	13.9	7.1
Ethnicity	Hispanic	6.9	10.7
	Black	6.9	7.1
	White	48.3	50.0
	Asian	6.9	3.6
	Other/Mixed	3.4	3.6
	Unknown	27.6	25.0

concentration coming from Manhattan. Within each study group, teachers' mean teaching experience was 5.6 years. Additional demographic information for the teacher sample is included in Table 13.1.

The final student sample was comprised of 855 students—471 in the treatment group and 384 in the control group. After exploring whether there were statistically significant initial differences between groups, the only difference that was found was that there was a higher percentage of fifth-grade students in the treatment group (31%) than in the control group (20%), and a higher percentage of third-grade students in the control group (37%) than in the treatment group (19%). Additional demographic information for the student sample is shown in Table 13.2.

Instrumentation

Teachers and students from the treatment and control groups completed a battery of surveys in the fall and spring of the school year. The surveys were designed to tap participants' perceptions of their own wellness, as well as their perceptions of the classroom climate. Wherever possible, published instruments with established score reliability and validity were used in the study. Wellness surveys for teachers included measures to assess their stress levels (i.e., Perceived Stress Scale [PSS]), coping skills (i.e., Coping Inventory for Stressful Situations [CISS]), attention/mindful-

Table 13.2. Demographic Composition of the Student Sample by Group

Characteristics	Category	Percent	
		Treatment	Control
Grade	3	18.5	36.7
	4	46.5	43.0
	5	30.6	19.8
	Other	4.4	0.5
Gender	Male	53.6	46.9
	Female	46.5	53.1
Ethnicity	Hispanic	47.1	52.1
	Black	7.4	24.0
	White	13.8	12.8
	Asian	31.4	10.9
	Native American/Alaskan Native	0.2	0.3
Other	English language learners (ELLs)	30.6	22.0
	Special education	6.4	16.9
	Free or reduced price lunch eligible	42.9	37.2

ness levels (i.e., Mindfulness Attention Awareness Scale [MAAS]), awareness of body sensations and processes (i.e., Body Awareness Questionnaire [BAQ]), extent of professional satisfaction (i.e., Maslach Burnout Inventory – Educator Survey [MBI-ES] and Professional Quality of Life Scale [ProQOL]), and the quality of their professional lives and relationships with their colleagues (i.e., Teacher to Teacher Trust Scale). To assess the extent to which the classroom climate was influenced, treatment and control group teachers and their students also completed versions of the Classroom Climate Inventory in the fall and spring. Classroom climate was examined in terms of the teacher’s leadership and management style and the supportiveness of the environment. Student wellness was measured through a set of scales from the Early Adolescent Temperament Questionnaire-Revised, Short Form (EATQ-R SF). Scales from the EATQ-R SF for fifth-grade participants included those measuring aggression, attention, depressive mood, fear, frustration, pleasure sensitivity, and perceptual sensitivity. A modified version was created for third- and fourth-grade students. This version was more developmentally appropriate and included less complex wording, fewer overall items, and a 3-point (rather than 5-point) response scale. Items for the third- and fourth-grade survey were adapted from six of the original EATQ-R SF scales, including: aggression, attention, depressive mood, fear, frustration, and perceptual sensitivity. Table 13.3 presents key information about each of the instruments utilized in this study.

Table 13.3. Instruments and Scales

Instrument	Source	Construct	N	Items	Item Scale	Total Score Range ^a	Interpretation
Teacher Measures							
Stress Likert Scale	Locally developed	Stress	1	1 for “Very low” to 7 for “Very high”	1-7	Higher scores indicate greater current perceived stress.	
Perceived Stress Scale (PSS)	Cohen, Kamarck, & Mermelstein (1983)	Stress	10 ^b	0 for “Never” to 4 for “Very Often”	0-40	Higher scores indicate greater perceived stress.	
Body Awareness Questionnaire (BAQ)	Shields, Mallory, & Simon (1989)	Body Awareness	5 ^c	1 for “Not at all true of me” to 7 for “Very true of me”	1-7	Higher scores indicate greater sensitivity to normal body processes & sensations.	
Coping Inventory for Stressful Situations (CISS)	Endler & Parker (1999)	Task-oriented coping	16	1 for “Not at all” to 5 for “Very much”	16-80	Higher scores indicate greater tendency toward task-oriented coping.	
		Emotion-oriented coping	16	1 for “Not at all” to 5 for “Very much”	16-80	Higher scores indicate greater tendency toward emotion-oriented coping.	
		Avoidance-oriented coping	16	1 for “Not at all” to 5 for “Very much”	16-80	Higher scores indicate greater tendency toward avoidance-oriented coping overall.	
		Avoidance coping via distraction	8	1 for “Not at all” to 5 for “Very much”	8-40	Higher scores indicate greater tendency toward avoidance-oriented coping via distraction.	
		Avoidance coping via social diversion	5	1 for “Not at all” to 5 for “Very much”	5-25	Higher scores indicate greater tendency toward avoidance-oriented coping via social diversion.	
Mindfulness Attention Awareness Scale (MAAS)	Brown & Ryan (2003)	Mindfulness	15	1 for “Almost always” to 6 for “Almost Never”	1-6	Higher scores indicate greater attention to or awareness of what is occurring in the present.	

(Table continues on next page)

Table 13.3. (Continued)

<i>Instrument</i>	<i>Source</i>	<i>Construct</i>	<i>N Items</i>	<i>Item Scale</i>	<i>Total Score Range^a</i>	<i>Interpretation</i>
Professional Quality of Life Scale (Pro-QOL)	Stamm (2005)	Compassion satisfaction	10	0 for "Never" to 5 for "Very Often"	0-50	Higher scores indicate greater compassion Satisfaction.
		Burnout	10	0 for "Never" to 5 for "Very Often"	0-50	Higher scores indicate greater burnout.
		Fatigue/secondary trauma	10	0 for "Never" to 5 for "Very Often"	0-50	Higher scores indicate greater fatigue.
		Emotional exhaustion	9	0 for "Never" to 6 for "Every day"	0-54	Higher scores indicate greater perceptions of emotional exhaustion.
Maslach Burnout Inventory – Educator Survey (MBI-ES)	Maslach, Jackson, & Leiter (1996)	Personal accomplishment	8	0 for "Never" to 6 for "Every day"	0-48	Higher scores indicate greater perceptions of personal accomplishment.
		Depersonalization	5	0 for "Never" to 6 for "Every day"	0-30	Higher scores indicate greater perceptions of depersonalization.
Teacher-to-Teacher Trust Scale	Bryk & Schneider (2002)	Relational trust	4	-2 for "Strongly Disagree" to +2 for "Strongly Agree"	-2-2	Higher scores indicate greater relational trust among teachers.
Classroom Climate Inventory	Developmental Studies Center (2005)	Student autonomy and influence in the classroom	10	0 for "Never" to 4 for "Always"	0-4	Higher scores indicate greater student autonomy and influence.
		Classroom Supportiveness	14	1 for "Strongly Disagree" to 5 for "Strongly Agree"	1-5	Higher scores indicate greater classroom supportiveness.
Student Measures—5th grade						
Classroom Climate Inventory	Developmental Studies Center (2005)	Student autonomy and influence in the classroom	10	0 for "Never" to 4 for "Always"	0-4	Higher scores indicate greater student autonomy and influence.
		Classroom supportiveness	14	1 for "Strongly Disagree" to 5 for "Strongly Agree"	1-5	Higher scores indicate greater classroom supportiveness.
		Aggression	6	1 for "Almost always untrue" to 5 for "Almost always true"	1-5 on each factor	Higher scores on each indicate greater aggression, attention, depressive mood, fear, frustration, pleasure sensitivity and perceptual sensitivity.
		Attention	6	1 for "Almost always untrue" to 5 for "Almost always true"	1-5 on each factor	Higher scores on each indicate greater aggression, attention, depressive mood, fear, frustration, pleasure sensitivity and perceptual sensitivity.
Early Adolescent Temperament Questionnaire – Revised Short Form (EATQ-R SF)	Capaldi & Rothbart (1992); Ellis & Rothbart (2001)	Depressive mood	6	1 for "Almost always untrue" to 5 for "Almost always true"	1-5 on each factor	Higher scores on each indicate greater aggression, attention, depressive mood, fear, frustration, pleasure sensitivity and perceptual sensitivity.
		Fear	6	1 for "Almost always untrue" to 5 for "Almost always true"	1-5 on each factor	Higher scores on each indicate greater aggression, attention, depressive mood, fear, frustration, pleasure sensitivity and perceptual sensitivity.
		Frustration	7	1 for "Almost always untrue" to 5 for "Almost always true"	1-5 on each factor	Higher scores on each indicate greater aggression, attention, depressive mood, fear, frustration, pleasure sensitivity and perceptual sensitivity.
		Pleasure sensitivity	3	1 for "Almost always untrue" to 5 for "Almost always true"	1-5 on each factor	Higher scores on each indicate greater aggression, attention, depressive mood, fear, frustration, pleasure sensitivity and perceptual sensitivity.
Student Measures—5th and 4th grade Classroom Climate Inventory	Developmental Studies Center (2005)	Perceptual sensitivity	4	1 for "Almost always untrue" to 5 for "Almost always true"	1-5 on each factor	Higher scores on each indicate greater aggression, attention, depressive mood, fear, frustration, pleasure sensitivity and perceptual sensitivity.
		Student autonomy and influence in the classroom	5	1 for "A little" to 3 for "A lot"	1-3 on each scale	Higher scores on each indicate greater student autonomy and influence, and greater classroom supportiveness.
		Classroom supportiveness	8	1 for "This is not at all like me" to 3 for "This is a lot like me"	1-3 on each factor	Higher scores on each indicate greater aggression, attention, depressive mood, fear, frustration, and perceptual sensitivity.
		Aggression	4	1 for "This is not at all like me" to 3 for "This is a lot like me"	1-3 on each factor	Higher scores on each indicate greater aggression, attention, depressive mood, fear, frustration, and perceptual sensitivity.

^aTotal scale scores calculated as per original instruments via summing or averaging across items. ^bOriginal PSS instrument contains 14 items. ^cOriginal BAQ instrument contains 18 items.

Additional analyses were conducted to explore possible links between the intervention and academic achievement. These analyses examined data on English language arts (ELA) and mathematics state achievement test scores as well as average daily attendance (ADA) rates, to test whether students in the treatment and control groups differed in their growth in these areas from before the intervention was implemented through the end of the intervention period. The analyses compared pre- and post-gains across the two groups (treatment, control), where possible.

Analyses

To determine whether differences existed in the responses of treatment and control teachers (and their students) from pre- to postsurveys, a series of repeated measures analysis of variance (ANOVA) tests were conducted. In addition to testing for statistical significance, differences between the groups over time were tested for *meaningfulness*; that is, whether the differences have practical meaning. Effect size (here, Cohen's *d*) was calculated by expressing the magnitude of the gains in terms of standard deviation units. A gain of more than one third of a standard deviation (i.e., an effect size of more than 0.33 or less than -0.33) was considered meaningful.

RESULTS

Results of Between-Group Analyses (Treatment Versus Control)

Repeated measures statistical analyses indicated that the program had a statistically significant and meaningful impact for participating treatment teachers (in comparison to control group teachers) on three teacher wellness factors: reducing teachers' stress levels ($F = 6.592, p = .013$), increasing levels of attention and mindfulness ($F = 8.879, p = .004$), and strengthening relational trust with colleagues ($F = 4.374, p = .041$). Several of the comparative changes that did not reach statistical significance but possessed moderate to large effect sizes included: stress as measured by the Perceived Stress Scale ($d = 0.33$), body awareness ($d = 0.35$), emotion-oriented coping ($d = 0.53$), avoidance-oriented coping via distraction ($d = 0.36$), and burnout ($d = 0.40$). These observations point to areas for further study. Table 13.4 provides a detailed summary of the results.

Table 13.4. Teacher Wellness Qualities Measured and Results

Wellness Quality Measured	Scale	Treatment Group		Control Group		ANOVA (Time*Group)	Cohen's <i>d</i>
		Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)		
Stress	Stress Likert Scale	Pre = 5.12 (1.03) Post = 4.54 (1.36)	Pre = 4.61 (1.42) Post = 5.11 (1.13)	$F = 6.592,$ $p = .013^*$		0.71	
Stress	PSS	Pre = 22.89 (6.17) Post = 17.43 (6.88)	Pre = 22.48 (7.07) Post = 19.59 (6.00)	$F = 1.470$ $p = .231$		0.33	
Body awareness	BAQ	Pre = 4.41 (1.03) Post = 4.92 (1.04)	Pre = 4.22 (0.98) Post = 4.37 (1.14)	$F = 1.649$ $p = .205$		0.35	
Task-oriented coping	CISS	Pre = 55.93 (6.84) Post = 58.21 (7.36)	Pre = 58.75 (8.44) Post = 59.18 (7.15)	$F = 1.142$ $p = .290$		0.29	
Emotion-oriented coping	CISS	Pre = 48.03 (9.26) Post = 40.68 (10.34)	Pre = 47.86 (9.62) Post = 45.29 (11.40)	$F = 3.803$ $p = .056$		0.53	
Avoidance-oriented coping	CISS	Pre = 52.71 (9.41) Post = 52.43 (6.69)	Pre = 48.68 (10.11) Post = 49.43 (10.57)	$F = 0.244$ $p = .624$		0.13	
Avoidance-coping via distraction	CISS	Pre = 24.93 (5.47) Post = 23.86 (5.01)	Pre = 22.39 (5.99) Post = 23.00 (6.37)	$F = 1.760$ $p = .190$		0.36	
Avoidance coping via social diversion	CISS	Pre = 18.89 (4.76) Post = 19.64 (2.50)	Pre = 17.75 (4.77) Post = 17.93 (5.44)	$F = 0.279$ $p = .600$		0.14	
Mindfulness	MAAS	Pre = 3.64 (0.61) Post = 4.20 (0.48)	Pre = 3.74 (0.82) Post = 3.80 (0.84)	$F = 8.879$ $p = .004^*$		0.81	
Compassion satisfaction	ProQol	Pre = 35.93 (6.77) Post = 35.29 (8.44)	Pre = 33.70 (7.49) Post = 34.19 (8.66)	$F = 0.284$ $p = .596$		0.14	
Burnout	ProQol	Pre = 28.61 (4.52) Post = 24.21 (5.80)	Pre = 26.89 (6.00) Post = 24.74 (5.40)	$F = 2.147$ $p = .149$		0.40	
Fatigue/secondary trauma	ProQol	Pre = 18.93 (5.44) Post = 15.57 (5.29)	Pre = 16.96 (6.62) Post = 13.89 (4.91)	$F = 0.030$ $p = .864$		0.06	
Emotional exhaustion	MBI-ES	Pre = 31.07 (8.93) Post = 24.86 (12.18)	Pre = 29.11 (12.24) Post = 25.15 (12.27)	$F = 0.523$ $p = .473$		0.20	
Personal accomplishment	MBI-ES	Pre = 35.50 (7.61) Post = 37.14 (6.29)	Pre = 31.48 (9.50) Post = 34.15 (7.97)	$F = 0.239$ $p = .627$		0.13	
Depersonalization	MBI-ES	Pre = 8.11 (6.17) Post = 8.21 (7.34)	Pre = 8.67 (6.82) Post = 9.59 (8.31)	$F = 0.207$ $p = .651$		0.13	
Relational trust	Teacher-to-Teacher Trust	Pre = 1.17 (0.86) Post = 1.27 (0.79)	Pre = 1.30 (0.75) Post = 1.07 (0.75)	$F = 4.374$ $p = .041^*$		0.57	

*Indicates $p < .05$ based on results of repeated measures ANOVA tests.

Table 13.5. Classroom Climate Qualities Measured and Results

Classroom Climate Quality Measured	Scale	Treatment Group Mean (SD)	Control Group Mean (SD)	ANOVA (Time*Group)	Cohen's <i>d</i>
Teachers' Perspective					
Student autonomy and influence	Classroom Climate Inventory	Pre = 2.07 (0.33) Post = 2.26 (0.53)	Pre = 1.91 (0.40) Post = 2.02 (0.44)	$F = 1.161$ $p = .286$	0.29
Classroom supportiveness	Classroom Climate Inventory	Pre = 2.71 (0.47) Post = 2.79 (0.73)	Pre = 2.59 (0.59) Post = 2.62 (0.59)	$F = 0.081$ $p = .776$	0.09
Third- and Fourth-Grade Students' Perspective					
Student autonomy and influence	Classroom Climate Inventory	Pre = 1.66 (0.37) Post = 1.78 (0.42)	Pre = 1.64 (0.37) Post = 1.60 (0.37)	$F = 24.310$ $p < .001^*$	0.41
Classroom supportiveness	Classroom Climate Inventory	Pre = 2.34 (0.38) Post = 2.28 (0.40)	Pre = 2.21 (0.40) Post = 2.11 (0.41)	$F = 1.485$ $p = .223$	0.11
Fifth-Grade Students' Perspective					
Student autonomy and influence	Classroom Climate Inventory	Pre = 1.51 (0.66) Post = 1.45 (0.58)	Pre = 1.88 (0.54) Post = 1.85 (0.51)	$F = 0.098$ $p = .755$	<0.01
Classroom supportiveness	Classroom Climate Inventory	Pre = 2.16 (0.72) Post = 1.94 (0.79)	Pre = 2.92 (0.65) Post = 2.63 (0.78)	$F = 0.419$ $p = .518$	0.09

*Indicates $p < .05$ based on results of repeated measures ANOVA tests.

Changes in classroom climate were assessed through the perceptions of both participating teachers and their students. A series of repeated measures analyses were conducted. The results displayed in Table 13.5 indicate that third- and fourth-grade treatment students' perceptions of their autonomy and influence in the classroom increased significantly from pre- to posttest in comparison to the perceptions of third- and fourth-grade control students ($F = 24.310$, $p < .001$). This comparative gain was meaningful ($d = 0.41$). No significant differences were found between the fifth-grade treatment and control group teachers on any of the classroom climate measures; likewise, no differences were found between fifth-grade treatment and control students on these measures.

Repeated measures statistical analyses indicated that third- and fourth-grade treatment students experienced statistically significant reductions in their frustration levels from pre- to posttest as compared to the third-

Table 13.6. Student Wellness Qualities Measured and Results

Wellness Quality Measured	Scale	Treatment Group Mean (SD)	Control Group Mean (SD)	ANOVA (Time*Group)	Cohen's <i>d</i>
Third- and Fourth-Grade Students					
Aggression	EATQ-R SF	Pre = 1.40 (0.42) Post = 1.44 (0.43)	Pre = 1.56 (0.53) Post = 1.60 (0.52)	$F = 0.004$ $p = .949$	< 0.01
Attention	EATQ-R SF	Pre = 1.77 (0.26) Post = 1.76 (0.26)	Pre = 1.73 (0.33) Post = 1.75 (0.30)	$F = 0.362$ $p = .547$	0.06
Depressive mood	EATQ-R SF	Pre = 1.68 (0.48) Post = 1.68 (0.49)	Pre = 1.75 (0.53) Post = 1.71 (0.53)	$F = 1.142$ $p = .286$	0.09
Fear	EATQ-R SF	Pre = 2.22 (0.45) Post = 2.15 (0.51)	Pre = 2.22 (0.51) Post = 2.14 (0.50)	$F = 0.054$ $p = .817$	< 0.01
Frustration	EATQ-R SF	Pre = 2.05 (0.47) Post = 1.99 (0.47)	Pre = 2.12 (0.47) Post = 2.15 (0.50)	$F = 4.854$ $p = .028^*$	0.18
Perceptual sensitivity	EATQ-R SF	Pre = 2.31 (0.57) Post = 2.36 (0.58)	Pre = 2.27 (0.59) Post = 2.37 (0.57)	$F = 0.680$ $p = .410$	0.06
Fifth-Grade Students					
Aggression	EATQ-R SF	Pre = 1.45 (0.84) Post = 1.36 (0.80)	Pre = 0.91 (0.71) Post = 0.78 (0.63)	$F = 0.242$ $p = .623$	0.06
Attention	EATQ-R SF	Pre = 3.06 (0.49) Post = 3.02 (0.52)	Pre = 3.28 (0.54) Post = 3.35 (0.48)	$F = 1.861$ $p = .174$	0.19
Depressive mood	EATQ-R SF	Pre = 2.06 (0.72) Post = 1.94 (0.74)	Pre = 1.81 (0.64) Post = 1.79 (0.56)	$F = 1.073$ $p = .301$	0.14
Fear	EATQ-R SF	Pre = 1.92 (0.78) Post = 1.62 (0.87)	Pre = 1.97 (0.81) Post = 1.61 (0.74)	$F = 0.308$ $p = .579$	0.06
Frustration	EATQ-R SF	Pre = 2.42 (0.72) Post = 2.28 (.74)	Pre = 2.15 (0.74) Post = 1.99 (0.80)	$F = 0.062$ $p = .803$	< 0.01
Perceptual sensitivity	EATQ-R SF	Pre = 2.67 (0.70) Post = 2.52 (0.76)	Pre = 2.55 (0.59) Post = 2.58 (0.77)	$F = 2.307$ $p = .130$	0.21
Pleasure sensitivity	EATQ-R SF	Pre = 1.84 (1.07) Post = 1.69 (1.01)	Pre = 2.38 (1.01) Post = 2.24 (1.12)	$F = 0.011$ $p = .916$	< 0.01

*Indicates $p < .05$ based on results of repeated measures ANOVA tests.

and fourth-grade control students ($F = 4.854$, $p = .028$), though this difference was not considered meaningful as indicated by the computed effect size ($d = 0.18$). No other statistically significant or meaningful differences between treatment and control group students' growth were identified. Table 13.6 provides a summary of these results.

Statistically significant differences in 2008 ELA and mathematics achievement were found between treatment and control group students in

Table 13.7. Student Academic Outcomes Results

	<i>Treatment Group Mean (SD)</i>	<i>Control Group Mean (SD)</i>	<i>ANOVA (Time*Group)</i>	<i>Cohen's d</i>
Average Daily Attendance (ADA)				
Third grade	Pre = 97.63 (3.16) Post = 97.67 (3.40)	Pre = 92.05 (6.35) Post = 92.50 (6.25)	$F = 0.617$ $p = .433$	0.11
Fourth grade	Pre = 95.53 (4.05) Post = 95.78 (4.16)	Pre = 93.82 (6.09) Post = 94.48 (5.26)	$F = 1.410$ $p = .236$	0.06
Fifth grade	Pre = 94.61 (5.96) Post = 94.67 (4.88)	Pre = 95.51 (4.08) Post = 95.86 (3.75)	$F = 0.414$ $p = .520$	0.09
New York State English Language Arts (NYSELA) Achievement Test – Scale Score				
Third grade ^a	664.72 (22.36)	648.15 (35.17)	$t = 4.533$ $p < .001^*$	0.53
Fourth grade	Pre = 671.84 (41.46) Post = 672.35 (39.35)	Pre = 654.41 (30.73) Post = 655.87 (30.86)	$F = 0.164$ $p = .685$	0.04
Fifth grade	Pre = 660.70 (31.26) Post = 663.52 (21.89)	Pre = 678.41 (40.91) Post = 690.40 (46.49)	$F = 6.200$ $p = .013^*$	0.31
New York State Mathematics (NYS Math) Achievement Test – Scale Score				
Third grade ^a	707.84 (32.51)	676.95 (30.026)	$t = 7.508$ $p < .001^*$	1.00
Fourth grade	Pre = 695.10 (37.80) Post = 695.45 (40.44)	Pre = 678.04 (32.09) Post = 676.75 (39.58)	$F = 0.0441$ $p = .507$	0.06
Fifth Grade	Pre = 678.96 (35.20) Post = 679.15 (31.04)	Pre = 704.52 (35.38) Post = 706.20 (35.97)	$F = 0.191$ $p = .662$	0.06

*Indicates $p < .05$ based on results of repeated measures ANOVA tests.

^aNYC students do not begin achievement testing until third grade; therefore, no preintervention data are available for this outcome.

third-grade, with treatment students significantly outperforming control group students ($t_{239} = 4.533$, $p < .001$ for ELA; $t_{248} = 7.508$, $p < .001$ for math). These differences were also found to be meaningful ($d = 0.53$ and $d = 1.00$, respectively). The analyses did not include initial differences in achievement, however, as preintervention data were not available for third-grade students.³ No other educationally meaningful differences were found for other subject areas or grade levels, although a statistically significant difference was found for fifth-grade ELA achievement, in the direction opposite of that hypothesized.⁴ Table 13.7 provides a summary of the academic outcome findings.

Results of Within-Group Analyses (Treatment Only)

In addition to testing for differences between treatment and control groups, variations *within* the treatment group were examined so that differential impacts of the intervention could be explored, including the possibility that the intervention had a differential impact for students who might be considered “high risk” in comparison to the rest of the sample. These “high risk” students were identified through their scores on the pretest (i.e., students who scored particularly high or low on measured wellness⁵ factors as defined below) and, therefore, may be considered temperamentally predisposed to responding maladaptively to stress. To identify these students, the following procedure was followed: for all negative wellness factors (e.g., aggression, frustration, depressive mood), a cutoff score of one standard deviation above the mean pretest score was established. All treatment students with pretest scores above this cutoff were identified as “high-risk” on that particular factor. For all positive wellness factors (e.g., attention, perceptual sensitivity, pleasure sensitivity), a cutoff score of one standard deviation below the mean presurvey score was established. All treatment students with pretest scores below this cutoff were identified as “high-risk” on that particular factor.

Repeated measures analyses conducted to examine the equality of means across “high-risk” status groups and time revealed that, in almost all cases, significantly greater treatment effects were observed for the “high-risk” treatment student group than for the non-high-risk group. For all measured student wellness factors for third- and fourth-grade students and for five of the six measured student wellness factors for fifth-grade students, “high-risk” treatment students were found to have made significantly greater gains from pre- to posttest than their non-high-risk treatment student counterparts. Table 13.8 provides a summary of these findings.

It is important to consider two statistical phenomena that may potentially limit the severity of these findings: *regression to the mean* and *restriction of range*. The statistical phenomenon known as *regression to the mean* states that if participants are assessed on two successive occasions, samples far from the mean on the first occasion will tend to be closer to the mean on the second occasion. In addition, at least some of the found difference must be attributed to the issue of *restriction of range* associated with intentionally selecting out students with high or low scores, as the restricted range of scores allows little room to change in one direction.

DISCUSSION AND CONCLUSION

Overall, this study provides important findings for the educational community. The results indicate that teachers perceived lower levels of stress

Table 13.8. Summary Table for High-Risk Analyses

<i>Student Wellness Quality Measured</i>	<i>Scale</i>	<i>High-Risk Mean (SD)</i>	<i>Non-High-Risk Mean (SD)</i>	<i>ANOVA (Time*Group)</i>	<i>Cohen's d</i>
Third- and Fourth-Grade Students					
Aggression	EATQ-R SF	Pre = 2.23 (0.31) Post = 1.93 (0.53)	Pre = 1.27 (0.26) Post = 1.37 (0.35)	$F = 44.969$ $p < .001^*$	0.75
Attention	EATQ-R SF	Pre = 1.33 (0.13) Post = 1.67 (0.27)	Pre = 1.85 (0.19) Post = 1.78 (0.25)	$F = 84.431$ $p < .001^*$	1.03
Depressive mood	EATQ-R SF	Pre = 2.47 (0.21) Post = 2.02 (0.54)	Pre = 1.53 (0.35) Post = 1.62 (0.46)	$F = 52.786$ $p < .001^*$	0.81
Fear	EATQ-R SF	Pre = 3.00 (0.00) Post = 2.55 (0.35)	Pre = 2.13 (0.39) Post = 2.10 (0.51)	$F = 23.946$ $p < .001^*$	0.55
Frustration	EATQ-R SF	Pre = 2.74 (0.16) Post = 2.31 (0.43)	Pre = 1.91 (0.37) Post = 1.92 (0.45)	$F = 45.947$ $p < .001^*$	1.41
Perceptual sensitivity	EATQ-R SF	Pre = 1.38(0.22) Post = 2.00 (0.61)	Pre = 2.51 (0.40) Post = 2.44 (0.55)	$F = 67.554$ $p < .001^*$	1.59
Fifth-Grade Students					
Aggression	EATQ-R SF	Pre = 2.59 (0.37) Post = 1.95 (0.73)	Pre = 1.10 (0.59) Post = 1.18 (0.73)	$F = 36.186$ $p < 0.001^*$	1.68
Attention	EATQ-R SF	Pre = 2.34 (0.24) Post = 2.77 (0.43)	Pre = 3.26 (0.42) Post = 3.19 (0.52)	$F = 24.171$ $p < .001^*$	0.67
Depressive mood	EATQ-R SF	Pre = 3.11 (0.35) Post = 2.69 (0.62)	Pre = 1.84 (0.56) Post = 1.78 (0.66)	$F = 6.027$ $p = .015^*$	0.42
Fear	EATQ-R SF	Pre = 3.10 (0.30) Post = 2.56 (0.64)	Pre = 1.71 (0.63) Post = 1.46 (0.80)	$F = 2.994$ $p = 0.086$	0.29
Frustration	EATQ-R SF	Pre = 3.35 (0.20) Post = 2.82 (0.74)	Pre = 2.18 (0.59) Post = 2.14 (0.68)	$F = 10.287$ $p = .002^*$	0.54
Perceptual Sensitivity	EATQ-R SF	Pre = 1.47 (0.28) Post = 2.30 (0.85)	Pre = 2.85 (0.56) Post = 2.55 (0.75)	$F = 30.606$ $p < .001^*$	0.94
Pleasure sensitivity	EATQ-R SF	Pre = 0.29 (0.32) Post = 0.94 (0.91)	Pre = 2.19 (0.85) Post = 1.86 (0.96)	$F = 20.039$ $p < .001^*$	0.76

*Indicates $p < .05$ based on results of repeated measures ANOVA tests.

after their participation in the program. Although the general stressful external circumstances that initially caused the teachers who joined the study did not change, teachers who participated in the program nevertheless experienced significantly reduced feelings of stress. Additionally, they experienced increased mindfulness and improved relationships with colleagues. In effect then, one might argue that the teachers who partici-

pated in the program were able to adopt a more resilient mind-set by learning to apply stress management strategies and coping skills to alter their internal responses to environmental stressors, and to call on the support of colleagues when necessary. Given that one of the key reasons that the teaching profession is so stressful is that teachers often are isolated, the results that indicate that participants feel more connected to their colleagues are particularly promising. According to Murray (2005), the ability of new teachers to foster positive relationships with their students and their colleagues can be the fundamental difference in whether they persist in their teaching careers, and the most important factor for schools to consider with regard to retention is the quality of the relationships between new teachers and their colleagues. Evidence shows that teachers who perceive a high level of relational trust with their colleagues may be better equipped to manage their environment. Furthermore, Bryk and Schneider (2002) found that schools that are high in relational trust are more likely to make improvements in student achievement.

The present study also examined the impact of changes in teachers on the climate of the classrooms and to the wellness of their students. There is evidence that changes in the well-being of teachers can create classroom environments in which students have more autonomy and influence. This, in turn, can increase students' sense of engagement, creating a greater feeling of community in treated teachers' classrooms. Furthermore, changes in the teachers, along with direct intervention through the use of the curriculum, can reduce students' levels of frustration. Although these results are interesting and important to note, the brief nature of the intervention may have impacted the magnitude of the findings. The results indicate that the impact on classroom climate and on students' wellness is not as vast as the impact on the teachers themselves. This may be because the intervention for the teachers was stronger in both proximity and duration than for the students. Increasing the strength and, more importantly, the duration of the intervention would likely increase the impact that the program could have on teachers' classrooms' climate and their students' wellness.

The within-treatment analyses provided the most useful results with regard to effectiveness of the program on specific populations. Analyses comparing "high-risk" students to the rest of the treatment group suggest that the most vulnerable students may gain the greatest benefits from the program. That is, teaching strategies for better self-regulation to children who are temperamentally highly reactive may be especially helpful to them in counteracting maladaptive coping responses. These results for students are consistent with previous research with adults, which found that mindfulness-based practices are particularly successful at increasing the capacity for positive coping in adults who have temperaments that

tend toward negative mind-states (Feltman, Robinson, & Ode, 2009). These findings are important considering the difficulties these students may face and the low rates of success they often have in school. Early intervention with these “high-risk” children may indeed give them usable strategies to more effectively cope with stress. In addition, the findings support earlier research, which tells us that children with a wider range of possible responses to stress have increased protective factors in the face of trying life circumstances (Carson & Bittner, 1994).

Results of analyses of academic outcome data did not support a link between the intervention and academic gains. No statistically significant differences were found between groups on pre- and postgains in ELA or math achievement test scores or in attendance rates. With such a short intervention period, especially for program activities directly aimed at students, academic impacts were not expected to be large. In general, however, more research should be conducted on the relationship between social emotional outcomes and academic outcomes.

Notwithstanding the multiple important findings, this study had a number of methodological limitations. For instance, the study had limited statistical power due to the sample size. Also, despite random assignment of teachers to treatment condition, some initial differences existed between the treatment and control group teachers and their students. It is also necessary to note three possible limitations of the instrumentation: (a) the teacher presurvey was retrospective (i.e., the effect of asking teachers to think back to how they were feeling in the previous June when they completed the presurvey), (b) all instruments were self-perception (i.e., self-report) surveys, and (c) the student survey used in this study was comprised of select sections of a published survey (that were altered in the third- and fourth-grade version), rather than a complete battery. Finally, it should be considered that the duration and strength of treatment may need to be increased to see certain changes in student wellness across all grades. That is, treatment may need to be introduced at the beginning of the school year rather than midyear, and it may take more time for changes in teachers’ wellness to reach the classroom and affect individual students.

While this study provided interesting and important preliminary results, much research remains to be done. For example, further research is needed to examine whether increased strength and duration of treatment would demonstrate greater impact. It is also important to explore whether these results can be generalized to other groups of teachers, including those outside of the NYC area. Future research also could include preassessments of adults’ levels of resilience and could examine the impact of the program on individuals who begin treatment with varying levels of resilience. Finally, as mentioned earlier, more research is

needed to examine the relationship between social emotional and academic outcomes for students.

Overall, this study found that engagement in contemplative practices has positive effects on the health and well-being of teachers, that these effects may extend to their students through direct and indirect interventions, and that this impact may be especially pronounced for students who are at risk of reacting to stress in ways that are destructive. Given the challenges teachers and students face today, mindfulness-based educational practices hold promise to provide the space, time and skills needed for building teachers’ resilience in the face of challenging experiences.

NOTES

1. Funded by the Fetzer Institute.
2. Teachers were offered two site visits by the trainer during the spring. In some cases, only one visit was made
3. New York City students do not begin achievement testing until third grade.
4. This finding may be due to the larger proportion of identified English language learners (ELL) in the treatment group (31%) than the control group (22%).
5. Scale scores from EATQ-R SF.

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